Dated: Date of Delivery

RATINGS: (See "CREDIT RATINGS") Fitch...AAA Moody's...Aa1 S&P...AAA

Due: July 1, as shown on inside front cover

In the opinion of Bond Counsel, under current law and subject to conditions described in the section "TAX EXEMPTION," interest on the 2022 Bonds (1) is not included in gross income for federal income tax purposes, (2) is not an item of tax preference for purposes of the federal alternative minimum tax, (3) may have to be taken into account by applicable corporations (as defined in Section 59(k) of the Code) for the alternative minimum tax imposed on such corporations for tax years beginning after December 31, 2022, and (4) is exempt from income taxation by the Commonwealth of Virginia. A holder may be subject to other federal tax consequences as described in the section "TAX EXEMPTION."

UPPER OCCOQUAN SEWAGE AUTHORITY (Virginia) \$48,830,000 Regional Sewerage System Revenue Bonds

Series 2022

The Regional Sewerage System Revenue Bonds, Series 2022 (the "2022 Bonds"), of the Upper Occoquan Sewage Authority ("UOSA") are being issued (a) to finance improvements to UOSA's regional advanced wastewater treatment system, (b) to fund, in part, a debt service reserve fund for UOSA's Bonds, including the 2022 Bonds, (c) to finance capitalized interest and (d) to pay costs of issuing the 2022 Bonds. The 2022 Bonds are being issued pursuant to a Trust Agreement as described herein, are secured by a pledge of the net revenues of UOSA's regional sewerage system as described herein, will bear interest from their date of delivery, payable semiannually on January 1 and July 1 in each year, commencing July 1, 2023, at rates, and will be in the principal amounts payable on July 1 of each year as set forth on the inside front cover of this Official Statement.

The 2022 Bonds are issuable only in book—entry form registered in the name of Cede & Co., as the nominee for The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the 2022 Bonds. Individual purchases will be in principal amounts of \$5,000 or integral multiples of \$5,000. The 2022 Bonds will be available to purchasers only under the book—entry system maintained by DTC through brokers and dealers who are, or act through, DTC Participants. Purchasers will not receive delivery of the 2022 Bonds. As long as any purchaser is the beneficial owner of a 2022 Bond, the purchaser must maintain an account with a broker or dealer who is, or acts through, a DTC Participant in order to receive payments of principal and interest on the 2022 Bonds. Principal of and interest on the 2022 Bonds will be paid by U.S. Bank Trust Company, National Association, as Trustee under the Trust Agreement, to DTC, or its nominee, which will then remit the payments to the DTC Participants for subsequent disbursement to the beneficial owners of the 2022 Bonds. See Appendix K – "BOOK-ENTRY ONLY SYSTEM."

The 2022 Bonds will be limited obligations of UOSA payable solely from the net revenues and other property pledged and assigned to the Trustee under the terms of the Trust Agreement. Neither the Commonwealth of Virginia (the "Commonwealth") nor any of its political subdivisions, including UOSA, will be obligated to pay the principal of or interest on the 2022 Bonds or other costs incident to them except from the net revenues or other property pledged for such purpose. Neither the faith and credit nor the taxing power of the Commonwealth or any county, city, town or political subdivision of the Commonwealth will be pledged to the payment of the principal of or interest on the 2022 Bonds. The issuance of the 2022 Bonds will not directly, indirectly or contingently obligate the Commonwealth or any county, city, town or other political subdivision of the Commonwealth to levy any taxes or to make any appropriation for their payment. UOSA has no taxing power. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2022 BONDS - Limited Obligations."

The 2022 Bonds are offered for delivery when, as and if issued, subject to the approval of legality by Hunton Andrews Kurth LLP, Richmond, Virginia, Bond Counsel, and to certain other conditions. Certain legal matters will be passed on for UOSA by its General Counsel, Odin, Feldman & Pittleman, P.C., Reston, Virginia. It is expected that the 2022 Bonds will be available for delivery through the facilities of DTC in New York, New York on or about December 15, 2022.

THIS COVER PAGE CONTAINS INFORMATION FOR QUICK REFERENCE ONLY. IT IS NOT A SUMMARY OF THIS ISSUE. INVESTORS MUST READ THE ENTIRE OFFICIAL STATEMENT TO OBTAIN INFORMATION ESSENTIAL TO MAKING AN INFORMED INVESTMENT DECISION.

The date of this Official Statement is December 1, 2022.

MATURITIES, AMOUNTS, RATES, YIELDS, PRICES & CUSIPS

UPPER OCCOQUAN SEWAGE AUTHORITY

\$48,830,000 Regional Sewerage System Revenue Bonds, Series 2022

Due July 1,	Amount	Interest Rate	Yield	Price	CUSIP**
2025	\$ 780,000	5.000%	2.520%	106.073	916277QJ8
2026	815,000	5.000	2.550	108.251	916277QK5
2027	860,000	5.000	2.570	110.358	916277QL3
2028	900,000	5.000	2.590	112.371	916277QM1
2029	945,000	5.000	2.620	114.227	916277QN9
2030	990,000	5.000	2.640	116.047	916277QP4
2031	1,040,000	5.000	2.650	117.861	916277QQ2
2032	1,095,000	5.000	2.660	119.608	916277QR0
2033	1,150,000	5.000	2.710^{*}	119.144	916277QS8
2034	1,205,000	5.000	2.850^{*}	117.854	916277QT6
2035	1,265,000	5.000	2.970^{*}	116.762	916277QU3
2036	1,330,000	5.000	3.110^{*}	115.503	916277QV1
2037	1,395,000	5.000	3.200^{*}	114.702	916277QW9
2038	1,465,000	5.000	3.290^{*}	113.908	916277QX7
2039	1,540,000	4.000	3.650^{*}	102.797	916277QY5
2040	1,600,000	4.000	3.700^{*}	102.392	916277QZ2
2041	1,665,000	4.000	3.800^{*}	101.587	916277RA6
2042	1,730,000	4.000	3.850^{*}	101.187	916277RB4
2043	1,800,000	4.000	3.890^{*}	100.868	916277RC2
2044	1,875,000	4.000	3.920^{*}	100.630	916277RD0
2045	1,950,000	4.000	3.950^{*}	100.392	916277RE8
2046	2,025,000	4.000	4.000	100.000	916277RF5

\$4,295,000 4.000% Term Bond due July 1, 2048, priced at 99.000% to yield 4.063% CUSIP No. 916277RH1

\$7,115,000 4.000% Term Bond due July 1, 2051, priced at 98.325% to yield 4.1000% CUSIP No. 916277RL2

\$8,000,000 4.000% Term Bond due July 1, 2054, priced at 97.890% to yield 4.120% CUSIP No. 916277RP3

^{*} Yield reflects Bonds priced to first optional call date of July 1, 2032.

^{**}A registered trademark of the American Bankers Association ("ABA"), used by Standard & Poor's in its operation of the CUSIP Service Bureau for the ABA. The above CUSIP (Committee on Uniform Securities Identification Procedures) numbers have been assigned by an organization not affiliated with UOSA, and UOSA 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. UOSA 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.

UPPER OCCOQUAN SEWAGE AUTHORITY

14631 Compton Road Centreville, Virginia 20121 (703) 830-2200

DIRECTORS

Shahram Mohsenin, Chairman Nancy Vehrs, Vice Chairman Jeanette M. Rishell, Secretary Gary Fields, Treasurer Tony H. DaWood Calvin D. Farr, Jr. Michael McGrath Glenn Simpson

SENIOR STAFF

Robert W. Angelotti, Executive Director Brian L. Owsenek, Deputy Executive Director Nina S. Andgren, Director of Operations & Maintenance Robert A. Canham, Jr., Director of Treatment Process Kevin D. Wolfe, Director of Finance

GENERAL COUNSEL Odin, Feldman & Pittleman, P.C.

BOND COUNSEL Hunton Andrews Kurth LLP

FINANCIAL ADVISOR

Davenport & Company LLC

INDEPENDENT PUBLIC ACCOUNTANTS PBMares LLP

The 2022 Bonds are exempt from registration under the Securities Act of 1933, as amended. The 2022 Bonds are also exempt from registration under the securities laws of the Commonwealth of Virginia.

No dealer, salesman or any other person has been authorized by UOSA to give any information or to make any representation with respect to the 2022 Bonds, 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. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there will be no sale of the 2022 Bonds by any person in any jurisdiction in which it is unlawful for the person to make such offer, solicitation or sale. This Official Statement is not to be construed as a contract or agreement between UOSA or the holders of any of the 2022 Bonds.

The information set forth in this Official Statement has been obtained from UOSA and other sources that are believed to be reliable, but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, as to information from other sources, UOSA. The information and the expressions of opinion in this Official Statement are subject to change without notice, and neither the delivery of this Official Statement nor any sale of the 2022 Bonds will create any implication that there has been no change in the affairs of UOSA since the date of this Official Statement or the earliest date as of which the information or the expressions of opinion are given.

The Trustee has neither reviewed nor participated in the preparation of this Official Statement.

THIS OFFICIAL STATEMENT MAY CONTAIN STATEMENTS THAT, 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 IMPORTANT FACTORS AFFECTING UOSA'S BUSINESS AND FINANCIAL RESULTS COULD CAUSE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE STATED IN THE FORWARD-LOOKING STATEMENTS HEREIN.

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UPPER OCCOQUAN SEWAGE AUTHORITY

(Virginia) \$48,830,000 Regional Sewerage System Revenue Bonds Series 2022

INTRODUCTION

General

The purpose of this Official Statement, including the cover and Appendices, is to set forth information relating to the Upper Occoquan Sewage Authority ("UOSA"), its regional sewerage system (the "System"), and the above—referenced bonds (together, the "2022 Bonds"). The Virginia local governments that are members of UOSA are the Counties of Fairfax and Prince William and the Cities of Manassas and Manassas Park (the "Member Jurisdictions"). See Appendices D through G for descriptions of the sewerage systems of the Member Jurisdictions. UOSA operates under the trade name of Upper Occoquan Service Authority. The Member Jurisdictions' obligations with respect to UOSA, including their obligations to pay an aggregate amount equal to debt service on the 2022 Bonds, are set forth in a Restated and Amended Service Agreement (the "Service Agreement"), most recently restated and amended as of December, 2007, as further supplemented and amended in 2015. The Service Agreement provides that each of the Member Jurisdictions will pay promptly, when due, charges of UOSA billed to it; provided, however, that the charges are payable solely from revenues received by each Member Jurisdiction from the users of its sewerage system and available to it for such purposes. Under the Service Agreement each of the Member Jurisdictions agrees to fix and collect from the users of its sewerage system charges sufficient to make the payments required by it. See "UPPER OCCOQUAN SEWAGE AUTHORITY – Service Agreement" and Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT."

The 2022 Bonds are being issued pursuant to the Constitution and laws of the Commonwealth of Virginia (the "Commonwealth"), including the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended (the "Act"), and other applicable provisions of law. The 2022 Bonds are being issued under a Restated Agreement of Trust dated as of December 1, 1995 (the "Restated Agreement of Trust"), between UOSA and U.S. Bank Trust Company, National Association, as successor trustee (the "Trustee"), as previously supplemented and as further supplemented by the Sixteenth Supplemental Restated Agreement of Trust dated as of December 1, 2022 (the "Sixteenth Supplemental"), between UOSA and the Trustee in connection with the issuance of the 2022 Bonds. The Restated Agreement of Trust, as previously supplemented and as further supplemented by the Sixteenth Supplemental, is referred to in this Official Statement as the "Trust Agreement." See Appendix B – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT."

Certain capitalized terms used in this Official Statement are defined in Appendix A – "DEFINITIONS OF CERTAIN TERMS." This Official Statement, including its Appendices, contains descriptions of the Service Agreement, the Trust Agreement, the 2022 Bonds, and other documents. Such descriptions do not purport to be complete, and are qualified in their entirety by reference to the documents themselves, which should be reviewed for complete details of their terms and conditions. Copies of such documents are available upon request made to the Director of Finance, Upper Occoquan Sewage Authority, 14631 Compton Road, Centreville, Virginia 20121 (Telephone No. 703–830–2200).

Recent Developments

UOSA's operations did not experience any material effects from the COVID-19 pandemic.*

^{*} This statement has been added since the Preliminary Official Statement dated November 22, 2022.

PLAN OF FINANCE

Proceeds of the 2022 Bonds will be used, together with other funds, (a) to finance improvements to UOSA's regional advanced wastewater treatment system, (b) to fund, in part, a debt service reserve fund for UOSA's Bonds, including the 2022 Bonds, (c) to finance capitalized interest and (d) to pay costs of issuing the 2022 Bonds.

DESCRIPTION OF THE 2022 BONDS

General

The 2022 Bonds will be issued in the aggregate principal amount of \$48,830,000, will be dated their date of delivery (the "Closing Date"), will bear interest from such date, payable on January 1 and July 1, commencing July 1, 2023, at the rates, and will mature on July 1 in the years and principal amounts set forth on the inside front cover of this Official Statement. Interest is payable to the registered owner of a bond at his address as it appears on the 15th day of the month preceding each interest payment date on registration books kept by the Trustee. The 2022 Bonds will be issued as fully registered bonds, in book—entry form only, registered in the name of Cede & Co., as nominee for DTC. Individual purchases will be in principal amounts of \$5,000 and integral multiples of \$5,000. Individual purchasers will not receive delivery of physical certificates. See Appendix K – "BOOK–ENTRY ONLY SYSTEM."

The 2022 Bonds will be limited obligations of UOSA as described more fully in "SECURITY AND SOURCES OF PAYMENT FOR THE 2022 BONDS – Limited Obligations."

Optional Redemption

The 2022 Bonds maturing on or before July 1, 2032, are not subject to optional redemption prior to maturity. The 2022 Bonds maturing on or after July 1, 2033, are subject to redemption prior to maturity at the option of UOSA on or after July 1, 2032, in whole or in part (in integral multiples of \$5,000) at any time, upon payment of 100% of the principal amount of 2022 Bonds to be redeemed plus interest accrued and unpaid to the date fixed for redemption.

Mandatory Sinking Fund Redemption

The 2022 Bonds maturing on July 1, 2048, are required to be redeemed prior to maturity in part upon payment of 100% of the principal amount thereof plus interest accrued to the redemption date on July 1 in years and amounts, as follows:

Year	Amount
2047	\$2,105,000
2048*	2,190,000

^{*} Final maturity.

The 2022 Bonds maturing on July 1, 2051, are required to be redeemed prior to maturity in part upon payment of 100% of the principal amount thereof plus interest accrued to the redemption date on July 1 in years and amounts, as follows:

Year	Amount	
2049 2050 2051*	\$2,280,000 2,370,000 2,465,000	

^{*} Final maturity.

The 2022 Bonds maturing on July 1, 2054, are required to be redeemed prior to maturity in part upon payment of 100% of the principal amount thereof plus interest accrued to the redemption date on July 1 in years and amounts, as follows:

Year	Amount
2052	\$2,565,000
2053	2,665,000
2054*	2,770,000
* Final maturity.	

Selection of 2022 Bonds for Redemption

If less than all of the 2022 Bonds of a particular maturity are called for redemption, the particular 2022 Bonds to be redeemed shall be selected by DTC pursuant to its rules and procedures or, if the book-entry system is discontinued, shall be selected by the Trustee by lot in such manner as the Trustee in its discretion may determine.

Notice of Redemption

The Trustee shall cause notice of the call for any such redemption identifying the 2022 Bonds to be redeemed to be sent as required by the Trust Agreement. Such notice shall contain any conditions to such redemption, including, without limitation, any condition that funds in an amount necessary to effect any redemption be received by the Trustee prior to the proposed redemption date.

Transfer and Exchange of Bonds

Upon surrender for registration of transfer or exchange of any 2022 Bond at the principal corporate trust office of the Trustee, UOSA will execute, and the Trustee will authenticate and deliver in the name of the transferee or transferees, a new 2022 Bond or Bonds of like date and tenor, of the same series, of the same maturity and of any authorized denomination for the aggregate principal amount which the registered owner of the 2022 Bond or Bonds is entitled to receive, subject in each case to such reasonable regulations as UOSA or the Trustee may prescribe. All 2022 Bonds presented for registration of transfer, exchange or payment must be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and substance reasonably satisfactory to UOSA and the Trustee, duly executed by the registered owner or by the owner's duly authorized attorney—in—fact or legal representative.

New 2022 Bonds delivered upon any transfer or exchange will be valid obligations of UOSA evidencing the same debt as the 2022 Bonds surrendered and will be secured by the Trust Agreement and entitled to its benefits to the same extent as the 2022 Bonds surrendered. Registrations of transfers or exchanges will be made by the Trustee within such time periods as are customary in the municipal securities industry.

SECURITY AND SOURCES OF PAYMENT FOR THE 2022 BONDS

Pledged Funds; Application of Revenues

The payment of principal of and interest on the 2022 Bonds will be secured by a pledge of the net revenues of the System, specifically including charges paid by the Member Jurisdictions pursuant to the Service Agreement, all amounts in the Construction Fund, the Bond Fund and the Debt Reserve Fund and all other property of any kind mortgaged, pledged or hypothecated by UOSA or anyone on its behalf or with its written consent as additional security under the Trust Agreement. The pledge of the net revenues of the System will be subject to the right of UOSA to pay the cost of operations and maintenance and the cost of replacements and improvements through deposits to the Operating Fund and the Reserve Maintenance Fund, respectively, which Funds are held by UOSA and are not pledged to the payment of the 2022 Bonds. See Appendix B – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT." The 2022 Bonds will be secured by the pledge of the net revenues of the System and other property on a parity with the outstanding 2010B Bonds, 2011A Bond, 2011B Bond, 2013A Bonds, 2016A Bonds, 2016B

Bonds, 2019 Bonds, 2020 Bonds and any Additional Bonds issued by UOSA in the future. See "- Additional Bonds," below, and "OUTSTANDING DEBT."

Limited Obligations

The 2022 Bonds and the interest on them will be limited obligations of UOSA payable solely from the net revenues of the System and other property pledged and assigned to the Trustee under the terms of the Trust Agreement to secure payment of the 2022 Bonds. Neither the Commonwealth nor any of its political subdivisions, including UOSA and the Member Jurisdictions, will be obligated to pay the principal of or interest on the 2022 Bonds or other costs incident to them except from the net revenues or other property pledged for such purpose. Neither the faith and credit nor the taxing power of the Commonwealth or any of its counties, cities, towns or other political subdivisions, including the Member Jurisdictions, will be pledged to the payment of the principal of or interest on the 2022 Bonds. The issuance of the 2022 Bonds will not directly, indirectly or contingently obligate the Commonwealth or any of its counties, cities, towns or other political subdivisions, including the Member Jurisdictions, to levy any taxes or to make any appropriation for their payment. UOSA has no taxing power.

Revenue Covenant

So long as any of the Bonds are outstanding, the Trust Agreement provides that UOSA will (1) fix and collect charges for the use of and for the services furnished by the System and will revise those charges as may be necessary to produce in each Fiscal Year funds sufficient to pay (a) the cost of operation and maintenance of the System, including reasonable reserves, (b) the cost of replacements and necessary improvements which do not increase the capacity or scope of the System, including reasonable reserves, and (c) the principal of, premium, if any, and interest on the Bonds and any Subordinate Bonds, when due, including any amount necessary to be paid into the Debt Reserve Fund to restore the balance to the amount of the Required Reserve, as defined in the Trust Agreement; (2) bill the Member Jurisdictions in advance for charges no less frequently than quarterly; and (3) bill the Member Jurisdictions in advance for all charges for payment of debt service on the Bonds and any Subordinate Bonds. If any charges are not paid within thirty days after presentation of a bill, the unpaid charges will accrue interest at the highest rate of interest payable by UOSA on any of the Bonds then outstanding until the unpaid charges and interest have been paid in full. UOSA may enforce payment by any remedy available at law or in equity.

Service Agreement

UOSA's charges for debt service, including any amounts required to replenish the Debt Reserve Fund, are required by the Service Agreement to be paid by each Member Jurisdiction generally in proportion to the Member Jurisdiction's allocation of capacity in UOSA's treatment plant, or otherwise as specifically provided for in the Service Agreement. See "UPPER OCCOQUAN SEWAGE AUTHORITY - Service Agreement."

Debt Reserve Fund

The Trust Agreement requires that there be on deposit in the Debt Reserve Fund at all times an amount equal to the aggregate maximum amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on all Bonds to be outstanding on the day following the day of determination (excluding Bond Anticipation Notes that by their terms provide for payment of interest accruing thereon to their maturity from the proceeds of the sale thereof) in the then current or any future Fiscal Year; provided such amount shall not exceed the sum of amounts determined for each series of Bonds (excluding Bond Anticipation Notes that by their terms provide for payment of interest accruing thereon to their maturity from the proceeds of the sale thereof) to be outstanding on the day following the day of determination as the least of (1) the maximum amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on such series of Bonds in the first Fiscal Year in which it is outstanding or any future Fiscal Year, (2) 125% of the average amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on such series of Bonds in the first Fiscal Year in which it is outstanding and all future Fiscal Years, or (3) 10% of the original face amount of such series of Bonds (the "Required Reserve"). Determinations of the amount equal to the least of (1), (2) or (3) for each series shall be set as of the date of issuance thereof and not changed thereafter, notwithstanding reductions in the principal amount of such series by redemption or maturity. A complete definition of "Required Reserve" including provisions for Balloon Indebtedness, Variable Rate Indebtedness, Tender Indebtedness, Bonds for

which there is a binding commitment, letter of credit or other credit arrangement providing for the extension of such Bonds beyond their original maturity date exists, Cross-over Refunding Bonds, Hedge Agreements and surety bonds, can be found in Appendix B – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT."

The Debt Reserve Fund is required to be used to make transfers to the Bond Fund to the extent necessary to pay when due the principal of and interest on the Bonds if the amount on deposit in the Bond Fund is insufficient for that purpose.

In the event the balance in the Debt Reserve Fund falls below the Required Reserve, the Trustee is required to transfer funds to the Debt Reserve Fund to restore the Required Reserve first, to the extent and in the manner provided in the Trust Agreement, from the Bond Fund. If for any period of five consecutive months the balance in the Debt Reserve Fund is less than the Required Reserve, the Trustee is required to notify UOSA which is required to deliver to the Trustee for deposit in the Debt Reserve Fund, as soon as practicable but in any event within ten days, funds from the Reserve Maintenance Fund or from any other available source in an amount sufficient to restore the balance in the Debt Reserve Fund to the Required Reserve, or such lesser amount as may be available.

Under the Service Agreement, UOSA is required to include as part of its charges to the Member Jurisdictions for debt service any amounts required to be deposited in the Debt Reserve Fund. See "UPPER OCCOQUAN SEWAGE AUTHORITY – Service Agreement" and Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT."

In the event the balance in the Debt Reserve Fund exceeds the Required Reserve, at least semiannually, on January 1 and July 1, the excess is required to be transferred to the Bond Fund to be deposited, as directed by UOSA, in the Interest Account, the Principal Account or the Sinking Fund Account, to be credited against future deposits to such accounts.

Additional Bonds

On the conditions set forth in the Trust Agreement, UOSA may issue one or more series of additional bonds ("Additional Bonds"), equally and ratably secured under the Trust Agreement with any Bonds then outstanding and any series of Additional Bonds issued thereafter, without preference, priority or distinction of any Additional Bonds over any other Bonds. Additional Bonds may be issued (1) to pay the cost of planning, designing, engineering, construction and equipping of improvements, extensions, additions or replacements to the System that are of such nature as to be chargeable to fixed capital account by generally accepted accounting practices, (2) to refund any of the Bonds or other indebtedness of UOSA, or (3) for any combination of such purposes. See Appendix B – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT."

Limitations on Bondholders' Remedies

If an event of default occurs under the Trust Agreement, the Trustee may, and upon the request of the owners of twenty—five percent in aggregate principal amount of Bonds then outstanding and upon indemnification as provided in the Trust Agreement will, proceed to protect and enforce its rights and the rights of the owners of the Bonds by mandamus or other suit, action or proceeding at law or in equity, including any action for specific performance of any agreement contained in the Trust Agreement. The mandamus remedy, however, may be impracticable and difficult to enforce. Furthermore, the right to enforce payment of the Bonds may be limited by bankruptcy, insolvency, reorganization, moratorium and similar laws and equitable principles, which may limit the specific enforcement of certain remedies. See "Default and Remedies on Default" in Appendix B – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT."

SYSTEM

The system that UOSA currently owns and operates consists of an advanced water reclamation plant with a capacity of 54 million gallons per day ("mgd") and a regional system of interceptor sewer lines, pump stations and force mains that delivers wastewater from the Member Jurisdictions to the treatment plant (collectively with the water reclamation plant, the "System"). After achieving substantial completion of Contract 54, the expansion of the water

reclamation plant, UOSA received its Certificate to Operate at a capacity of 54 mgd from the Virginia Department of Environmental Quality (DEQ) on January 3, 2005. See "UPPER OCCOQUAN SEWAGE AUTHORITY - Capital Improvement Program," "- Operating Permits" and "Project 60."

The UOSA Water Reclamation Plant, which provides state-of-the-art treatment, fills a unique role in the water supply industry. UOSA discharges into the Occoquan Reservoir (the "Reservoir"), a principal water supply source for northern Virginia. Although the current average daily flow of approximately 37 mgd discharged by UOSA comprises only eight percent of the annual average flow into the Reservoir, UOSA contributes as much as 90 percent of the flow during drought periods. The safe yield of the Reservoir during low flow periods is 65 mgd. UOSA's current average daily flow of 37 mgd increases the safe yield of the Reservoir to 102 mgd, and after achieving flows at its full 54 mgd capacity, UOSA's contribution to the Reservoir will result in an ultimate safe yield for the Reservoir of approximately 107 mgd.

The major treatment processes employed in UOSA's plant are conventional preliminary and primary treatment, secondary treatment with biological nitrogen removal ("BNR"), chemical clarification, two–stage recarbonation with intermediate settling, multi–media filtration, activated carbon adsorption, chlorination, and dechlorination. UOSA processes its biosolids in anaerobic digesters and uses the resultant methane production to produce electricity and supply twenty percent of the plant's electrical requirements. UOSA then dewaters its undigested biosolids using centrifuges and processes the dewatered sludge through its Rotary Dryer System ("RDS") to produce a marketable fertilizer–grade pellet that meets the highest EPA standards for biosolids. A contractor markets the pellets to end users. During periods when the RDS is out of service for maintenance, the biosolids are lime–stabilized and land applied by contract. Lime residuals are disposed of in a landfill on-site. The plant is located on a 470-acre site in the southern part of Fairfax County. The site will permit the ultimate development of a facility with an estimated capacity of 85 mgd. See "UPPER OCCOQUAN SEWAGE AUTHORITY – Capital Improvement Program."

The delivery system of UOSA includes approximately 144,000 feet of gravity sewer lines and 79,000 feet of force mains. The delivery system includes nine pump stations, each with a line source of power as well as on–site power generating facilities. Eight pump stations are provided with emergency retention facilities. The delivery system utilizes flow-measuring devices for the purpose of allocating the operating costs of UOSA to the Member Jurisdictions.

For a discussion of UOSA's current capital planning, see "UPPER OCCOQUAN SEWAGE AUTHORITY – Capital Improvement Program."

SOURCES AND USES OF FUNDS

The proceeds received from the sale of the 2022 Bonds are expected to be applied as follows:

Sources:

Par Amount of Bonds	\$48,830,000.00
Net Original Issue Premium	2,103,635.00
Total	\$50,933,635.00
Uses:	
Deposit to Construction Fund	\$47,446,355.00(1)
Deposit to Debt Reserve Fund	2,885,800.00
Underwriter's Discount	226,417.73
Costs of Issuance	375,062.27
Total	\$50,933,635.00
Costs of Issuance	375,062.27

⁽¹⁾ Includes \$1,146,355 in funded interest.

OUTSTANDING DEBT

UOSA has previously issued several series of Bonds secured by the Trust Agreement, as described below. UOSA issued the 1995 Bonds (consisting of the 1995A Bonds and the 1995B Bonds) for the purpose of financing treatment plant improvements and refunding portions of earlier UOSA bonds issued to finance the cost of additions, extensions and improvements to the System. The 1995A Bonds and 1995B Bonds are no longer outstanding.

UOSA issued the 2004 Bonds, the 2005 Bonds and the 2007A Bonds, in each case, to refinance a portion of the 1995A Bonds. The 2004 Bonds, the 2005 Bonds and the 2007A Bonds are no longer outstanding.

UOSA issued the 2007B Bonds to finance the cost of additions, extensions, and improvements to the System. All of the 2007B Bonds have been defeased and refinanced.

UOSA issued the 2010 Bonds (consisting of the 2010A Bonds and the 2010B Bonds) to finance a portion of the costs of the expansion of certain of UOSA's interceptor and pump station delivery systems, nutrient reduction projects and miscellaneous plant and hydraulic improvements. The outstanding principal amount of the 2010B Bonds at the Closing Date will be \$67,810,000. The 2010A Bonds are no longer outstanding.

UOSA issued the 2011 Bonds (consisting of the 2011A Bond and the 2011B Bond) to finance the ESCO Project and the Phase 1 Nutrient Project. The outstanding principal amounts of the 2011A Bond and the 2011B Bond at the Closing Date will be \$3,204,890 and \$8,017,033, respectively.

UOSA issued the 2013A Bonds for the purpose of refunding the 2005 Bonds. The outstanding principal amount of the 2013A Bonds at the Closing Date will be \$65,265,000.

UOSA issued the 2013B Bond for the purpose of refunding the 2003 Bonds. The 2013B Bond is no longer outstanding.

UOSA issued the 2014 Bonds for the purpose of refunding the 2007A Bonds and a portion of the 2007B Bonds. The 2014 Bonds have been defeased and are payable from and secured by a separate escrow fund.

UOSA issued the 2016A Bonds to finance improvements to UOSA's regional advanced wastewater treatment system. The outstanding principal amount of the 2016A Bonds at the Closing Date will be \$19,410,000.

UOSA issued the 2016B Bonds for the purpose of refunding a portion of the 2007B Bonds. The outstanding principal amount of the 2016B Bonds at the Closing Date will be \$41,030,000.

UOSA issued the 2019 Bonds to finance improvements to UOSA's regional advanced wastewater treatment system. The outstanding principal amount of the 2019 Bonds at the Closing Date will be \$52,440,000.

UOSA issued the 2020 Bonds for the purpose of refunding the 2014 Bonds. The outstanding principal amount of the 2020 Bonds at the Closing Date will be \$194,450,000.

Prior to the issuance of the 2022 Bonds, the outstanding principal amount of UOSA Bonds is \$452,116,271.

The following table sets forth UOSA's annual debt service on the Bonds outstanding upon the issuance of the 2022 Bonds. This table has been updated since the Preliminary Official Statement dated November 22, 2022, to reflect the issuance of the 2022 Bonds.

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UPPER OCCOQUAN SEWAGE AUTHORITY ANNUAL DEBT SERVICE⁽¹⁾

Year Ending June 30,	2010B Bonds ⁽²⁾	2011A Bond	2011B Bond	2013A Bonds	2016A Bonds	2016B Bonds	2019 Bonds	2020 Bonds	2022 Bonds	Total
2023	\$ 4,745,791	\$ 341,062	\$ 782,347	\$ 19,682,658	\$ 1,121,600	\$ 1,532,500	\$ 2,693,238	\$ 6,906,806	\$ 1,146,355	\$ 38,952,357
2024	4,746,215	341,062	782,347	19,683,005	1,120,350	1,532,500	2,694,488	6,906,083	2,105,550	39,911,600
2025	4,747,212	341,062	782,347	19,685,803	1,123,100	1,532,500	2,693,238	6,909,752	2,885,550	40,700,564
2026^{*}	4,743,481	341,062	782,347	-	1,119,600	1,532,500	2,694,488	27,553,468	2,881,550	41,648,496
2027	4,745,671	341,062	782,347	-	1,120,100	1,532,500	2,697,988	27,555,531	2,885,800	41,660,999
2028	4,743,340	341,062	782,347	-	1,119,350	1,532,500	2,693,488	27,548,718	2,882,800	41,643,605
2029	4,746,378	341,062	782,347	-	1,122,350	1,532,500	2,696,238	27,553,093	2,882,800	41,656,768
2030	4,744,317	341,062	782,347	-	1,123,850	1,532,500	2,695,738	10,758,468	2,880,550	24,858,832
2031	4,747,033	341,062	782,347	-	1,123,850	1,532,500	2,696,988	10,769,781	2,881,050	24,874,611
2032	4,743,085	341,062	782,347	-	1,122,350	1,532,500	2,694,188	10,761,481	2,884,050	24,861,063
2033	4,745,213	170,531	782,347	-	1,120,950	1,532,500	2,694,188	10,765,803	2,884,300	24,695,832
2034	4,743,042	-	391,174	-	1,123,550	1,532,500	2,693,588	10,761,525	2,881,800	24,127,179
2035	4,746,573	-	-	-	1,119,950	11,197,500	2,695,438	1,307,700	2,881,550	23,948,711
2036	4,745,433	-	-	-	1,122,750	11,190,900	2,694,550	1,312,373	2,883,300	23,949,306
2037	4,744,620	-	-	-	1,119,800	11,194,100	2,695,650	1,311,663	2,881,800	23,947,633
2038	4,743,050	-	-	-	1,121,250	11,196,100	2,695,250	1,310,698	2,882,050	23,948,398
2039	4,746,020	-	-	-	1,121,950	-	2,693,350	12,659,478	2,883,800	24,104,598
2040	4,743,140	-	-	-	1,121,900	-	2,694,950	12,663,578	2,882,200	24,105,768
2041*	4,507,081	-	-	-	1,121,100	-	2,694,900	-	2,883,200	11,206,281
2042	4,395,000	-	-	-	1,119,550	-	2,698,200	-	2,881,600	11,094,350
2043	4,565,000	-	-	-	1,122,250	-	2,694,700	-	2,882,400	11,264,350
2044	-	-	-	-	1,124,050	-	2,694,550	-	2,885,400	6,704,000
2045	-	-	-	-	1,119,950	-	2,697,600	-	2,885,400	6,702,950
2046	-	-	-	-	1,120,100	-	2,693,700	-	2,882,400	6,696,200
2047	-	-	-	-	1,119,350	-	2,698,000	-	2,881,400	6,698,750
2048	-	-	-	-	1,122,700	-	2,695,200	-	2,882,200	6,700,100
2049	-	-	-	-	-	-	2,695,450	-	2,884,600	5,580,050
2050	-	-	-	-	-	-	2,693,600	-	2,883,400	5,577,000
2051	-	-	-	-	-	-	2,694,650	-	2,883,600	5,578,250
2052	-	-	-	-	-	-	2,693,450	-	2,885,000	5,578,450
2053	-	-	-	-	-	-	-	-	2,882,400	2,882,400
2054		-	-	-	-	-	-	-	2,880,800	2,880,800
	\$98,876,695	\$3,581,153	\$8,996,993	\$59,051,465	\$29,157,650	\$63,168,600	\$80,851,038	\$215,315,995	\$89,740,655	\$648,740,244

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^{*} The amounts of the 2026 payment of the 2013A Bonds and the 2041 payment of the 2020 Bonds are each net of the related portion of the Debt Reserve Fund that is to be used for a portion of such payment.

⁽¹⁾ This table has been updated since the Preliminary Official Statement dated November 22, 2022, to reflect the issuance of the 2022 Bonds. Debt service shown is combined principal and interest. Does not include the 2014 Bonds, which are payable from and secured by a separate escrow fund. Totals may not foot due to rounding.

⁽²⁾ Debt service shown is net of 35% Interest Subsidy Payments for Build America Bonds (Direct Pay). The amounts actually paid will be more in years when interest subsidy payments are sequestered.

The following table shows each Member Jurisdiction's estimated total share of the aggregate debt service of UOSA's outstanding Bonds. This table has been updated since the Preliminary Official Statement dated November 22, 2022, to reflect the issuance of the 2022 Bonds.

 ${\bf UPPER\ OCCOQUAN\ SEWAGE\ AUTHORITY} \\ {\bf ESTIMATED\ ALLOCATION\ OF\ ANNUAL\ DEBT\ SERVICE\ TO\ MEMBER\ JURISDICTIONS^*} \\$

Fiscal Year	Fairfax County	Prince William County	City of Manassas	City of Manassas Park	TOTAL
2023	\$ 20,587,564	\$ 11,900,500	\$ 3,480,475	\$ 1,837,463	\$ 37,806,001
2024	21,435,239	12,691,071	3,836,178	1,949,112	39,911,600
2025	21,751,419	12,987,981	3,970,066	1,991,099	40,700,564
2026**	22,225,546	13,265,874	4,114,030	2,043,047	41,648,496
2027	22,356,232	13,245,760	4,023,992	2,035,014	41,660,998
2028	22,348,390	13,239,507	4,021,596	2,034,112	41,643,605
2029	22,353,171	13,244,964	4,023,740	2,034,893	41,656,768
2030	10,184,933	9,537,373	3,845,017	1,291,509	24,858,832
2031	10,191,800	9,543,224	3,847,303	1,292,284	24,874,610
2032	10,186,510	9,537,805	3,845,190	1,291,557	24,861,062
2033	10,118,059	9,476,899	3,818,318	1,282,555	24,695,831
2034	9,878,908	9,269,052	3,727,212	1,252,006	24,127,178
2035	9,810,558	9,203,038	3,694,103	1,241,012	23,948,711
2036	9,809,560	9,203,995	3,694,585	1,241,164	23,949,305
2037	9,810,157	9,202,575	3,693,948	1,240,952	23,947,633
2038	9,809,879	9,203,220	3,694,250	1,241,049	23,948,398
2039	9,878,459	9,260,962	3,716,564	1,248,612	24,104,598
2040	9,879,046	9,261,325	3,716,735	1,248,662	24,105,768
2041**	4,104,492	4,514,195	1,956,487	631,106	11,206,281
2042	4,152,053	4,457,712	1,863,239	621,345	11,094,350
2043	4,218,990	4,527,519	1,888,200	629,641	11,264,350
2044	2,261,110	2,786,657	1,254,829	401,404	6,704,000
2045	2,262,355	2,785,184	1,254,220	401,192	6,702,950
2046	2,259,556	2,782,717	1,253,091	400,836	6,696,200
2047	2,260,909	2,783,449	1,253,447	400,946	6,698,750
2048	2,260,088	2,784,840	1,254,027	401,146	6,700,100
2049	2,261,155	2,075,077	945,705	298,113	5,580,050
2050	2,259,917	2,073,946	945,187	297,950	5,577,000
2051	2,260,426	2,074,407	945,400	298,017	5,578,250
2052	2,260,500	2,074,492	945,432	298,026	5,578,450
2053	1,159,750	1,082,656	487,092	152,902	2,882,400
2054	1,159,106	1,082,055	486,821	152,818	2,880,800
	\$297,755,836	\$231,160,028	\$85,496,480	\$33,181,545	\$647,593,888

^{*} This table has been updated since the Preliminary Official Statement dated November 22, 2022, to reflect the issuance of the 2022 Bonds. Debt service shown is combined principal and interest. Totals may not foot due to rounding. The responsibility for allocated debt service payments among Member Jurisdictions is not affected by their agreements to transfer capacity among themselves. See "UPPER OCCOQUAN SEWAGE AUTHORITY – Service Agreement – Allocation of Plant Capacity."

^{**} The amounts of the 2026 payment of the 2013A Bonds and the 2041 payment of the 2020 Bonds are each net of the related portion of the Debt Reserve Fund that is to be used for a portion of such payment.

UPPER OCCOQUAN SEWAGE AUTHORITY

General

UOSA is a public body politic and corporate organized under the Act. UOSA was created by the concurrent actions of the governing bodies of Fairfax County, Prince William County, the Town of Manassas (now the City of Manassas), and the Town of Manassas Park (now the City of Manassas Park) and was chartered by the State Corporation Commission of Virginia on April 1, 1971. UOSA was formed to acquire, finance, construct, operate and maintain facilities for the abatement of pollution resulting from sewage in its service area in order to protect water quality in the Occoquan Watershed. In 2007, UOSA adopted "Upper Occoquan Service Authority" as its trade name.

The Act

The Act authorizes UOSA, among other things, to (1) acquire, construct, improve, extend, operate and maintain a sewer system and sewage disposal system, (2) issue its bonds, payable solely from revenues, to pay all or part of the cost of a sewer system or sewage disposal system, (3) fix, revise, charge and collect rates, fees and charges for the use of and for the services of any system operated by UOSA, and (4) enter into contracts with any unit, including counties, cities and other authorities, relating to the furnishing of services of UOSA. UOSA is subject in all respects to the jurisdiction of the Virginia Department of Environmental Quality under the provisions of the State Water Control Law.

Member Jurisdictions

The Member Jurisdictions of UOSA are the Counties of Fairfax and Prince William and the Cities of Manassas and Manassas Park (collectively, the "Member Jurisdictions"). See the descriptions of the sewage systems of the Member Jurisdictions in Appendices D, E, F and G.

In 1983, Prince William County created the Prince William County Service Authority (the "Service Authority") and subsequently transferred to the Service Authority, among other things, all of the County's sewerage system, including the portion of its system located in the UOSA service area. The Service Authority currently operates and sets the rates and charges for the sewerage system in the County. The Service Authority has assumed the obligation to pay the amounts due from the County to UOSA under the Service Agreement. The Service Authority has agreed for the benefit of UOSA to (1) deliver all sewage it collects in the UOSA service area to UOSA for treatment up to the County's maximum allocated capacity in the UOSA treatment plant, (2) fix and collect rates and charges sufficient to make the payments required to be made by the County to UOSA under the Service Agreement, (3) conduct its operations relating to sewage collected in the UOSA service area in accordance with the Service Agreement, and (4) neither commit or fail to perform any act which would constitute a breach of the Service Agreement if done by the County.

Governance and Management

UOSA is governed by an eight–person Board of Directors (the "Board") consisting of members appointed by the governing body of each of the Member Jurisdictions for four–year terms, as follows:

Directors	Jurisdiction Represented	Occupation	Term Expires
Shahram Mohsenin, Chairman	Fairfax County	Director, Wastewater Planning & Monitoring Division, Fairfax County	March 2023
Nancy Vehrs, Vice Chairman	Prince William County	Retired, Fairfax County Clerk	March 2025
Jeanette M. Rishelle, Secretary	City of Manassas Park	Mayor, City of Manassas Park	March 2023
Gary Fields, Treasurer	City of Manassas Park	Director of Finance, City of College Park	March 2025

Tony H. Dawood	City of Manassas	Utilities Director, City of Manassas	March 2023
Calvin D. Farr, Jr.	Prince William County	General Manager, Prince William County Service Authority (PWCSA)	March 2023
Michael McGrath	Fairfax County	Wastewater Treatment Division Director, Fairfax County	March 2025
Glenn Simpson	City of Manassas	Finance Manager, City of Manassas Utilities	March 2025

UOSA currently employs approximately 183 persons. The Executive Director is responsible to the Board of Directors for the day—to—day management and operations of UOSA. Reporting directly to the Executive Director is the Deputy Executive Director who performs a wide variety of policy, managerial, technical, and organizational tasks as assigned by the Executive Director, and functions as the Executive Director in his absence. UOSA is organized into seven Divisions that report to the Executive Office: (1) Finance, (2) Operations and Maintenance, (3) Treatment Process, (4) Human Resources, (5) Regulatory Affairs, (6) Engineering & Technology and (7) Capital Improvements.

The Finance Division is responsible for financial management and control, purchasing and general administration. The Operations and Maintenance Division is responsible for preventive and corrective maintenance of the plant and delivery system equipment, facilities and grounds, and delivery system operation, including pump stations, interceptors and force mains. The Treatment Process Division is responsible for all liquid and solids processes from receipt of wastewater to the release of the final reclaimed water and the distribution or disposal of solids. This responsibility includes the analysis and control of all treatment processes. The Engineering and Technology Division is responsible for overseeing all of UOSA's process engineering, IT, and process automation efforts. The Capital Improvements Section has the responsibility for capital project management, including design, pilot studies and construction, and technical contacts with the Member Jurisdictions, and local, state and federal regulatory agencies on technical issues. The Regulatory Affairs Division is responsible for regulatory, laboratory, safety and security programs.

The following individuals oversee the day-to-day management and operations of UOSA:

Robert W. Angelotti became UOSA's Executive Director on February 5, 2021, after he served as the Deputy Executive Director of Technical Services for the previous four years. After working as a civil engineer for a land development consultant and as an instrument technician with an environmentally focused water quality laboratory, Mr. Angelotti joined UOSA in 1985 as a staff engineer and served as UOSA's Pretreatment Program and Regulatory Affairs Coordinators, Safety Officer, as well as I/I Abatement, Odor Control and Biosolids Program Managers. In 1989 he was promoted to become Systems Analysis Manager responsible for treatment plant and collection system process engineering, operations research and industrial computing networks contributing to the management of daily operations of the treatment plant. After serving in this capacity for eight years, he became Technical Support Group Manager overseeing all of UOSA's engineering and IT efforts. In 2000, Mr. Angelotti was appointed Director of the Technical Services Division, was the Senior Project Manager for the Contract 54 expansion while overseeing and administering all other capital improvements, laboratory operations, acting as the chief information officer and directing UOSA's business computing systems and process control engineering functions. Mr. Angelotti received his Bachelor of Science in Civil Engineering and a Master of Science in Environmental Engineering from Virginia Tech. He is a registered Professional Engineer and Certified Wastewater Operator in the Commonwealth and has served on a number of state and national committees advancing the knowledge, practice and research of potable water reuse systems.

Brian L. Owsenek became UOSA's Deputy Executive Director on January 9, 2017. Mr. Owsenek joined UOSA in 1998, having previously been employed as an engineering consultant on Department of Defense water treatment research and development projects. Mr. Owsenek originally joined UOSA to support control systems integration associated with the Project 54 construction effort and was promoted to Deputy Director of Treatment Process Division in 2001. After twelve years as Deputy Director, he was promoted to Director of Treatment Process in 2013, where he was responsible for permit compliance, water resource recovery and the day—to—day activities of plant operations and process control. Mr. Owsenek received his Bachelor of Science in Mechanical Engineering from Virginia Tech and a Master of Science in Mechanical Engineering from Texas A&M University. He is a registered

Professional Engineer and has a Class 1 Wastewater Works License, a Class 2 Waste Management Facility License, and a U.S. patent related to membrane processes for water treatment.

Nina S. Andgren is the Director of UOSA's Operations and Maintenance Division. Ms. Andgren was promoted to Director of Operation and Maintenance in February 2021. She oversees staff in six departments: Delivery Systems, Electrical Systems, Facilities Management, Industrial Controls, Mechanical Systems, and Support Systems. Ms. Andgren started her engineering career in 1999, after receiving her Master of Science in Civil Engineering at Lund Institute of Technology (Sweden). She worked at the Public Works in Gothenburg as a Project Engineer and later as a Supervisor overseeing the operation of the city's sewer system. In 2003, Ms. Andgren immigrated to Virginia. She started her career in the U.S. as a consultant, where she worked on a program management team overseeing a major upgrade to a waste water treatment facility in Northern Virginia. In January 2006, Ms. Andgren joined Upper Occoquan Service Authority as their Maintenance Engineer. She was appointed to Support Systems Manager in November 2014, and promoted to Deputy Director of Operations and Maintenance in November 2019.

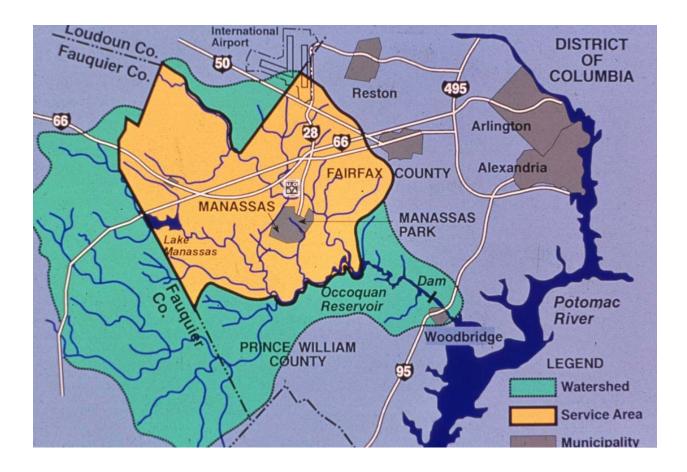
Robert A. Canham, Jr. is the Director of UOSA's Treatment Process Division. Prior to joining UOSA, Mr. Canham practiced Civil/Environmental engineering for ten years for an engineering consulting firm. His assignments included planning, design, construction, commissioning and operation and maintenance of public utility infrastructure. Mr. Canham has over twenty-three years' experience in engineering and management of advanced wastewater treatment plants and water reclamation facilities for the public sector. Mr. Canham is an accomplished training instructor with twenty-five years' experience in the water and wastewater industry at both the college and utility level. Mr. Canham joined UOSA in 2013 as the Deputy Director of the Treatment Process Division and was appointed the Division Director at the start of 2017 where he oversees staff in the Liquids, Solids, Process, Operations Support, Training and Administrative Departments. Mr. Canham earned his Bachelor of Science degree in Civil Engineering and Master of Science degree in Environmental Engineering from Virginia Tech.

Kevin D. Wolfe became UOSA's Director of Finance on July 8, 2019. Prior to joining UOSA, Mr. Wolfe had worked in a variety of financial management positions including Assistant Division Controller for a Fortune 500 public company. These positions included responsibilities for accounting, financial and managerial reporting, financial analysis and cross-functional team development. Mr. Wolfe joined UOSA in 2012 as the Financial Officer and was appointed as the Controller in 2015. Mr. Wolfe received his Bachelor of Science in Finance, Forensic Accounting and Fraud Investigation Certificate, and Executive MBA from West Virginia University.

Service Area

UOSA's service area is located in Northern Virginia in the western portion of the Washington, D.C. metropolitan area. The service area encompasses approximately 246 square miles and includes the Cities of Manassas and Manassas Park and portions of the Counties of Fairfax and Prince William. The service area is predominately residential in character, although commercial and light industrial development has increased significantly during the past few years. Below is a map outlining UOSA's service area.

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Service Agreement

General. The Service Agreement between UOSA and the Member Jurisdictions governs the use and allocation of the capacity and costs related to the System. See Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT."

The Service Agreement provides that UOSA will establish charges at levels necessary to provide funds, together with other available funds, sufficient at all times to pay (1) the cost of the operation and maintenance of the System, including reasonable reserves; (2) the cost of replacements and necessary improvements that do not increase the capacity or scope of the System, including reasonable reserves; and (3) the principal of, premium, if any, and interest on the outstanding indebtedness of UOSA, as it becomes due, and any required reserves. The Service Agreement further provides that each of the Member Jurisdictions will pay promptly, when due, charges of UOSA billed to it; provided, however, that the charges are payable solely from revenues received by each Member Jurisdiction from the users of its sewerage system and available to it for such purposes. Under the Service Agreement each of the Member Jurisdictions agrees to fix and collect from the users of its sewerage system charges sufficient to make the payments required by it. See the discussion relating to Prince William County and Prince William County Service Authority in "UPPER OCCOQUAN SEWAGE AUTHORITY – Member Jurisdictions."

Payments under the Service Agreement are unsecured contractual obligations of each Member Jurisdiction payable solely from revenues received by the Member Jurisdiction from its sewerage system and available to it for such purposes.

The Service Agreement by its terms does not obligate or require, nor does it restrict the rights of, a Member Jurisdiction to establish any priority of payment with respect to its obligations to UOSA under the Service Agreement or other obligations or expenses of its system under the terms of any resolution or agreement related to debt of the Member Jurisdiction. Nevertheless, each Member Jurisdiction remains obligated to fix and collect from the users of its sewerage system charges sufficient to make the payments required by it under the terms of the Service Agreement.

Fairfax County currently has outstanding certain senior revenue bonds in the principal amount of approximately \$489,190,000 secured by a pledge of the revenues of its sewage system. See the table "Debt Service Coverage" in Appendix D – "SEWAGE SYSTEM OF FAIRFAX COUNTY, VIRGINIA." Under the terms of the resolution securing these revenue bonds, the County may elect to treat the "debt service component" of its payments to UOSA under the Service Agreement with respect to Bonds of UOSA on a parity with or subordinate to the County's sewer revenue bonds now outstanding and which may be issued under the resolution in the future. The County's payments to UOSA under the Service Agreement with respect to the outstanding Bonds have been treated by the County as subordinate to the County's sewer revenue bonds now outstanding and which may be issued in the future.

Prince William County Service Authority currently has outstanding certain revenue bonds in the principal amount of approximately \$55,960,000 secured by a pledge of the revenues of its water and sewerage system. Under the terms of the indenture securing these revenue bonds, the Service Authority may elect to treat the "debt service component" of Prince William County's payments to UOSA under the Service Agreement, which the Service Authority has agreed to pay, as an operating expense or on a parity with or subordinate to the Service Authority's revenue bonds now outstanding or which may be issued under the indenture in the future. The Service Authority has indicated to UOSA that it currently intends to treat its payments to UOSA under the Service Agreement as an operating expense of the Service Authority. This treatment could be changed by the Service Authority at any time in the future with respect to the Service Authority's bonds now outstanding or which may be issued in the future.

The Cities of Manassas and Manassas Park currently have no indebtedness outstanding that is secured by a pledge of the revenues of their sewerage systems.

Allocation of Plant Capacity. The current capacity of UOSA's treatment plant is allocated among the Member Jurisdictions for purposes of determining the right of the Member Jurisdictions to deliver sewage to UOSA for treatment as follows:

UPPER OCCOQUAN SEWAGE AUTHORITY ALLOCATION OF PLANT CAPACITY

Current Capacity

Member Jurisdiction	MGD	Percentage
Fairfax County	27.5999	51.11%
Prince William County ¹	15.7971	29.25
City of Manassas	7.6893	14.24
City of Manassas Park	2.9137	5.40
Total	54.0000	100.00%

⁽¹⁾ See the discussion relating to Prince William County and Prince William County Service Authority in "UPPER OCCOQUAN SEWAGE AUTHORITY – Member Jurisdictions."

Under Section 5.4 of the Service Agreement, any Member Jurisdiction may reallocate any portion of its allocated plant capacity to any other Member Jurisdiction on such terms as may be mutually agreeable, subject to the approval of UOSA. Certain Member Jurisdictions have reallocated capacity pursuant to this provision. However, pursuant to Section 5.4 of the Service Agreement a reallocation of capacity cannot alter the respective obligations of the Member Jurisdictions under the Service Agreement to pay UOSA's charges for debt service and for replacements and necessary improvements, as set forth in the Service Agreement and described below.

If, at the request of a Member Jurisdiction, DEQ grants an increase in the certified capacity of UOSA's treatment plant, the increase will be allocated to the Member Jurisdiction requesting it and the respective proportionate obligations of the Member Jurisdictions to pay charges for replacements and necessary improvements and for debt service will be adjusted accordingly.

Allocation of Operation and Maintenance Charges. The Service Agreement provides that UOSA's charges to the Member Jurisdictions for the operation and maintenance of the System, including reasonable reserves, will be allocated to each Member Jurisdiction for any particular year in proportion to the ratio that the Member Jurisdiction's actual sewage flow for that year bears to the total annual sewage flow actually received at UOSA's treatment plant during such year.

Allocation of Replacement Charges. The Service Agreement provides that UOSA's charges to the Member Jurisdictions for the costs of replacement and necessary improvements to the System will be allocated to each Member Jurisdiction in proportion to the ratio that its maximum capacity allocation bears to the total maximum capacity allocation of all Member Jurisdictions. Such charges can vary depending upon UOSA's plant capacity.

Partial Cash Funded Project. Subject to certain conditions, one or more Member Jurisdictions may choose to deposit cash to fund all or a portion of (1) that Member Jurisdiction's cost of a project to be funded by Bonds and (2) its proportionate share of the fixed costs of borrowing. If such deposit is elected, the Member Jurisdiction must deposit with the Trustee on or before issuance of the Bonds, cash in the amount identified. The Member Jurisdiction will continue to be obligated to make payments to UOSA to restore the balance in any debt service reserve with respect to the Bonds for such project.

Allocation of Debt Service. The Service Agreement provides that UOSA's charges to the Member Jurisdictions for debt service, including amounts required to replenish the Debt Reserve Fund, on Bonds issued to finance the cost of (1) UOSA's plant and (2) UOSA's delivery system, are allocated to each Member Jurisdiction based upon specific agreement as to its use of such portion.

The allocations to the Member Jurisdictions of charges for debt service and for replacements and necessary improvements are summarized in the following table.

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UPPER OCCOQUAN SEWAGE AUTHORITY ALLOCATION OF DEBT SERVICE PAYMENTS (%)1

Costs for Facilities: 27 MGD to 54 MGD

	Capacity			_				Aggr	egate ⁴
	Costs for			Flat Branch			Costs of		
	Facilities up to			Delivery System	Nutrient		Replacements and		
	27 MGD	Plant	Delivery	Upgrades Beyond	Reduction	Hydraulic	Necessary	Prior to	After
	in Capacity	Expansion	Expansion	54 MGD	Facilities	Improvements	Improvements ³	2022 Bonds	2022 Bonds
Fairfax County	30.83%	65.50%	51.11%	_	45.5554%	28.52%	51.11%	46.89%	45.92%
Prince William County ²	33.03	26.40	29.25	90.00%	32.9576	57.13	29.25	35.40	35.71
City of Manassas	21.19	3.70	14.24	10.00	16.0913	12.44	14.24	12.62	13.24
City of Manassas Park	14.95	4.40	5.40	_	5.3957	1.91	5.40	5.10	5.13

Ger Goutstanding Debt. for a specific amount breakdown, by Member Jurisdiction and year, of the debt service for the 2022 Bonds to be issued and the other outstanding Bonds.

Ger Goutstanding Bonds of the debt service for the 2022 Bonds to be issued and the other outstanding Bonds.

Ger Goutstanding Bonds of the debt service for the 2022 Bonds to be issued and the other outstanding Bonds.

Ger Goutstanding Bonds of the debt service for the 2022 Bonds to be issued and the other outstanding Bonds.

⁽³⁾ This percentage is the overall capacity allocation as of the date of calculation (here stated as of January 3, 2005 - the current allocation).

⁽⁴⁾ Calculated by (a) multiplying the percentages for each type of cost times the debt service amounts in each issue attributable to the portion of that issue financing or refinancing such costs and (b) then changing the total amount so derived to a percentage of all debt service.

Operating Permits

Virginia Pollution Discharge Elimination System Permit. The UOSA permit standards are the most stringent in the Commonwealth because UOSA reclaims water to supplement the downstream drinking water supply. Virginia Permit No. VA0024988 (the "Permit") provides authorization for UOSA to operate its collection and treatment system under the Virginia Pollution Discharge Elimination System ("VPDES"). The Virginia Department of Environmental Quality (DEQ) issues the VPDES Permit. The current Permit became effective June 1, 2018, with an expiration date of May 31, 2023. UOSA is currently preparing a submission for routine renewal and is not aware of any complicating factors that would affect renewal.

UOSA has completed an expansion of its Water Reclamation Plant from 32 mgd to 54 mgd ("Contract 54") and has only a few small remaining projects to complete the expansion of its Delivery System to a 54 mgd or greater capacity to accommodate population growth in the Member Jurisdictions. See "- Capital Improvement Program," below. After completing the work required for Substantial Completion of Contract 54, DEQ issued UOSA's Certificate to Operate at a flow rate of 54 mgd on January 3, 2005.

UOSA's compliance with its permit requirements from the time 54 mgd treatment facilities became available has been excellent. UOSA has been 100 percent in compliance with its VPDES permit conditions for over fourteen years, and full compliance is expected to continue.

General Permit for Total Nitrogen and Total Phosphorous Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia. To control the nutrients entering the Chesapeake Bay watershed, DEQ has been issuing Nutrient General Permits to public owned treatment works within the Chesapeake watershed. UOSA's most recent Nutrient General Permit (VAN000000) became effective on January 1, 2022, and expires on December 31, 2026. UOSA will have to complete a nutrient removal retrofit of its existing facilities to continue to be compliant with nitrogen limitations in the future. See "- Capital Improvement Program," below.

Stationary Source Permit to Modify and Operate. UOSA was issued a Stationary Source Permit to Modify and Operate as a minor air source; State Operating Permit Number 71770. This permit was last amended on April 17, 2017. UOSA has been in full compliance with this permit since its inception in 2009 and full compliance is expected to continue.

Historical Information Regarding the System

The following table summarizes the annual average daily flows of the System in recent years:

Upper Occoquan Sewage Authority Annual Average Daily Flow Data (mgd)

Fairfax County	Prince William County	City of Manassas	City of Manassas Park	Total
12 608	11 167	6 206	1 374	31.355
12.411	10.944	6.326	1.298	30.979
13.533	12.545	6.807	1.457	34.342
12.885	12.080	6.536	1.349	32.850
12.749	12.205	6.465	1.408	32.827
12.010	11.703	5.977	1.313	31.003
12.594	12.706	6.038	1.348	32.686
14.581	14.534	7.034	1.677	37.826
12.621	12.710	6.170	1.389	32.890
13.210	13.882	6.785	1.495	35.372
12.454	13.397	6.371	1.343	33.565
	County 12.608 12.411 13.533 12.885 12.749 12.010 12.594 14.581 12.621 13.210	County County 12.608 11.167 12.411 10.944 13.533 12.545 12.885 12.080 12.749 12.205 12.010 11.703 12.594 12.706 14.581 14.534 12.621 12.710 13.210 13.882	County County Manassas 12.608 11.167 6.206 12.411 10.944 6.326 13.533 12.545 6.807 12.885 12.080 6.536 12.749 12.205 6.465 12.010 11.703 5.977 12.594 12.706 6.038 14.581 14.534 7.034 12.621 12.710 6.170 13.210 13.882 6.785	County County Manassas Manassas Park 12.608 11.167 6.206 1.374 12.411 10.944 6.326 1.298 13.533 12.545 6.807 1.457 12.885 12.080 6.536 1.349 12.749 12.205 6.465 1.408 12.010 11.703 5.977 1.313 12.594 12.706 6.038 1.348 14.581 14.534 7.034 1.677 12.621 12.710 6.170 1.389 13.210 13.882 6.785 1.495

Source: Upper Occoquan Sewage Authority

Capital Improvement Program

In February of 2022, UOSA's Board of Directors endorsed a Capital Improvement Program ("CIP") Update that addresses UOSA's capital requirements over the next ten years, including the expanded plant processes necessary to accommodate the additional growth within the City of Manassas and Prince William County. By virtue of this plan, UOSA is well positioned for the future by supplying treatment plant capacity that meets regulatory requirements and meets the need for future growth. This is accomplished through an updated and renewed collection and delivery system sized for build-out, by expanding processes to accommodate projected growth, and by providing for the renewal and replacement of aging plant assets. The primary project categories within this plan, which are discussed below, include: (1) the Project 54 delivery system projects; (2) the expansion of certain delivery system elements beyond Project 54; (3) a nutrient reduction project to comply with regulatory requirements designed to restore the Chesapeake Bay; (4) a renewal and replacement program to properly sustain aging assets; and (5) Plant expansion projects to 60 mgd and 66 mgd. As of January 1, 2022, UOSA had approximately \$34.1 million on deposit in its construction account to address its CIP obligations.

UOSA completed an expansion of its water reclamation plant and received a DEQ Certificate to Operate to a 54 mgd capacity in January 2005. This plant expansion is referred to as "Contract 54," and is part of a family of projects referred to collectively as "Project 54." All Project 54 plant projects have been completed. Project 54 work in the current CIP Update will focus on completing the expansion of the capacity of the delivery system to 54 mgd at an expected cost of \$23.4 million.

In 2007, two of UOSA's Member Jurisdictions, Prince William County and the City of Manassas, indicated that additional capacity beyond their allocated share of the existing 54 mgd would be necessary to accommodate anticipated growth in their respective jurisdictions. Prince William County and the City of Manassas met those capacity needs by acquiring two mgd, in the case of Prince William County, and one mgd, in the case of the City of Manassas, in additional capacity from Fairfax County. In 2011, Fairfax County sold an additional two mgd in capacity to Prince William County. In 2019, Fairfax County sold an additional 0.5 mgd in capacity to the City of Manassas. Any such reallocation of capacity by the Member Jurisdictions does not alter each of their respective obligations under the Service Agreement to pay UOSA's charges for debt service and for replacements and necessary improvements as described in "- Service Agreement." An analysis of the UOSA delivery system by UOSA suggests approximately \$1.7 million in additional costs will be required to expand a portion of the delivery system to address projected flows from Prince William County and the City of Manassas that will exceed the 54 mgd requirements for this portion of the delivery system. These delivery system components are being sized for "build-out" to take advantage of the low cost of installing larger pipes now compared to the alternative of expensive dig and replace projects in the future. The Service Agreement authorizes and allocates these additional costs.

The Commonwealth's mandated Chesapeake Bay restoration program requires UOSA to expand its nutrient removal capability with a capital project to comply with this program. The project is being completed in phases. The Phase 1 Nutrient Project has been completed. Engineering on the Phase 2 Nutrient Project is underway and construction expected to be completed by 2025 at an estimated cost of approximately \$28.6 million. The nutrient removal capital costs may be eligible for partial grant funding by the Commonwealth, subject to eligibility rules at the time, and assuming the Commonwealth's continued support for this grant program. The Phase 1 Nutrient Project was funded by a low interest loan from the Commonwealth along with the 35 percent grant funding mentioned above.

Recent Master Planning efforts have indicated that a UOSA Plant Expansion will be necessary by year 2030 as both influent flow and loadings are expected to exceed capacity limits as they are currently defined. Plant expansion expenses from 2022 through 2031 are anticipated to be approximately \$190.8 million.

Finally, UOSA, in keeping with its strong asset management program, contemplates that certain aging plant infrastructure, consisting of facilities that were originally placed in service in 1978, 1987, 1993, and 2003, will require replacement and improvement to extend their useful life. Expenditures from calendar year 2022 through 2031 are anticipated to be approximately \$454.4 million. The existing Service Agreement authorizes such expenditures; however, additional debt will be necessary to fund this program.

Project 60

UOSA is in the process of amending (and restating) its Service Agreement to provide for an expansion from 54 mgd to 60 mgd in order to accommodate the expected future capacity needs of Prince William County and the City of Manassas. Amendment of the Service Agreement requires the approval of all four Member Jurisdictions, which UOSA expects to occur by early next calendar year. Any expansion is dependent upon further studies and a re-rating analysis of the current facility. Preliminary design is currently planned to start at the beginning of calendar year 2025. The costs of an expansion from 54 mgd to 60 mgd will be shared equally by Prince William County and the City of Manassas. None of the proceeds of the 2022 Bonds will finance such an expansion.

Five-Year Summary of Revenues and Expenditures

The table set forth below summarizes revenues, expenses and changes in retained earnings of UOSA for the Fiscal Years ended June 30, 2018, 2019, 2020, 2021 and 2022, and is derived from audited financial statements of UOSA. The table should be read in conjunction with UOSA's audited financial statements for the Fiscal Year ending June 30, 2022, attached as Appendix H.

	2018	2019	2020	2021	2022
Operating Revenues:	\$ 28,768,098	\$ 30,236,345	\$ 30,622,512	\$ 32,486,897	\$31,886,427
Operating Expenses Depreciation Expense	28,158,026 30,509,501	29,525,587 28,309,856	30,962,210 28,531,473	32,749,614 29,781,996	30,231,445 29,462,594
Total Operating Expenses	58,667,527	57,835,443	59,493,683	62,531,610	59,694,039
Operating Gain (Loss)	\$(29,899,429)	\$(27,599,098)	\$(28,871,171)	\$(30,044,713)	\$(27,807,612)
Non-Operating Revenues (Expenses):					
Interest Income Federal Build America Bonds Subsidy Bond Issuance Costs Gain (Loss) on Sale of Assets	\$ 89,362 1,406,857 (111,790)	\$ 148,342 1,388,875 - (283,851)	\$ 131,784 1,369,585 (629,277) (156,560)	\$ 27,723 1,343,681 (1,641,470) (92,198)	\$17,493 1,310,668 - (814,456)
Other Revenues in Excess of Expenses from Restricted Accounts:	992	670 3,646,415	550 3,071,286	(4,490,187)	(4,836,790)
Total Non-Operating Revenues, Net	\$ 3,229,382	\$ 4,900,451	\$ 3,787,368	\$ (4,852,451)	\$(4,323,085)
Net Loss before Capital Contributions	\$(26,670,047)	\$(22,698,647)	\$(25,083,803)	\$(34,897,164)	\$(32,130,697)
Capital Contributions Change in Net Position Total Net Position, beginning of year	\$ 17,830,318 (8,839,729) \$ 63,833,951	\$ 18,696,500 (4,002,147) \$ 50,852,386	\$ 19,301,263 (5,782,540) \$ 46,850,239	\$ 21,107,329 (13,789,835) \$ 41,067,699	\$24,964,139 (7,166,558) \$27,277,864
Cumulative Effect of Change in Accounting Principal	\$ (4,141,836)	-	-	-	-
Total Net Position, end of year	\$ 50,852,386	\$ 46,850,239	\$ 41,067,699	\$ 27,277,864	\$20,111,306

Source: Upper Occoquan Sewage Authority

Management Discussion and Analysis

Fiscal Year 2022 Results. As of June 30, 2022, UOSA's Operations and Maintenance ("O&M") expenditures were 4.7%, or \$1,526,147 below budget, as a result of decreased costs in seven out of nine budgeted O&M expense categories. Significant favorable variances were reflected in Personnel Services, Electrical Power, Contract Services, Chemicals and Facilities Operations. Personnel Services costs were lower than anticipated due to a higher vacancy rate and lower retiree expense than planned. Electrical Power costs were under budget due to lower pricing and usage than planned for the treatment plant. Contract Services were lower than anticipated due to higher credits than planned for biosolids disposal as well as lower requirements for several line items. Chemical costs were lower than anticipated

due to less usage than planned. Facilities Operations costs were lower than anticipated primarily due to lower pricing and usage for natural gas.

Fiscal Year 2023 Budget. UOSA's adopted Annual Budget for Fiscal Year 2023 is \$77.4 million, comprised of \$37.8 million (49%) in capital financing costs, \$34.7 million (45%) in operating costs, \$4.6 million (6%) in reserve maintenance expenses, and \$0.3 million (0.4%) in reserve funding.

- The average daily flow projection for Fiscal Year 2023 is 37.0 mgd. This represents an increase of 0.6 mgd or 1.65% over the Fiscal Year 2022 budget.
- UOSA's Capital Improvement Program includes \$434 million in forecasted capital projects for plant renewal and improvements, delivery system improvements and expansion, plant expansion, and nutrient removal through 2031. Estimated spending for calendar year 2023 is \$31.2 million.
- The next bond issuances are planned for 2024, 2027 and 2029, which will fund the CIP through 2031.
- The Fiscal Year 2023 budget reflects efforts to reduce costs by securing fixed pricing for Electrical Power and Natural Gas, and the continued use of a cogeneration facility that will produce power from digester gas.
- UOSA's favorable loss experience and risk management efforts resulted in a continuation of the 5.0% premium reduction from VRSA Insurance for Liability, Automobile and Public Officials Liability Insurance.

For analysis of UOSA's financial results for Fiscal Years 2022 and 2021, see UOSA's audited financial statements attached as Appendix H.

Rate Regulation

The Act provides that UOSA is authorized to fix and revise from time to time rates, fees and other charges for the use of and for the services furnished or to be furnished by any sewerage system or sewage disposal system, operated or maintained by it on account of which UOSA has issued revenue bonds. The rates, fees and charges are, under the Act, to be fixed and revised so as to provide funds, with other funds available for such purposes, sufficient at all times to (1) pay the cost of maintaining, repairing and operating the utility system on account of which revenue bonds of UOSA have been issued, including reserves for such purposes and for replacement, depreciation and necessary extensions, (2) pay the principal of and interest on the revenue bonds when due and reserves for them, and (3) provide a margin of safety for making such payments. The Act requires UOSA to charge and collect the rates, fees and charges so fixed or revised.

The Act states that the rates, fees and charges of UOSA are subject to the jurisdiction of the State Corporation Commission and any applicable regulation. However, the State Corporation Commission, on November 15, 1963, in Case No. 16516, ruled that it had no jurisdiction to review or revise rates of authorities such as UOSA, except that, upon the application of a bondholder, the Commission may require that rates be sufficient to comply with the above statutory requirements. That decision was not appealed. Subject to the foregoing, UOSA's Board of Directors has the sole power to set rates, subject to a statutory requirement for a public hearing.

Financial Management

The Director of Finance is responsible for the financial management of UOSA and for establishing a system of internal accounting controls. The accounting records of UOSA are maintained on the accrual basis with revenues recorded when earned and expenses recorded when incurred. The accounting and reporting policies of UOSA conform with generally accepted governmental accounting principles.

The Board of Directors of UOSA adopts an annual budget for operations and maintenance based on projected wastewater flow. The annual budget is amended during the Fiscal Year as determined to be necessary by the Board of Directors. The charges to the Member Jurisdictions under the Service Agreement, based on the budget and monthly

flows, are adjusted upon completion of the annual audit of UOSA's records for any deficit or available surplus in the operating account.

In accordance with the terms and conditions of the Service Agreement, UOSA bills the charges to the Member Jurisdictions quarterly, in advance, for operations and maintenance, debt service, and selected other services performed for the Member Jurisdictions. The operations and maintenance charges are established for each Member Jurisdiction based on the ratio of the Member Jurisdiction's annual flow, as metered through the points of delivery, to the total annual flow received at UOSA's treatment plant. The reserve maintenance charges reflect the allocation of treatment plant capacity to each Member Jurisdiction as a percent of the total plant capacity. Debt service charges reflect each jurisdiction's subscribed percentage of capacity for each capital project. See "- Service Agreement" and Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT." Other services are billed to the Member Jurisdictions based on specific agreements between the parties.

UOSA was awarded a Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada for its Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2021. This was the thirty-third consecutive time UOSA has received the Certificate of Achievement for Excellence in Financial Reporting. The Report was judged by an impartial panel to meet the highest standards of the award program, including demonstrating a constructive "spirit of full disclosure" to clearly communicate financial posture. The Certificate of Achievement is the highest form of recognition in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by UOSA and its management.

COLLECTION SYSTEMS OF MEMBER JURISDICTIONS

General

UOSA accepts sewage for treatment from the sewage collection systems of its Member Jurisdictions located in UOSA's service area. The sewage collection systems of the Member Jurisdictions serve a total of approximately 485,379 connections, of which approximately 108,493 are in the UOSA service area, all as of June 30, 2022. The obligations of the Member Jurisdictions to make payments to UOSA under the Service Agreement are limited to the revenues received by the Member Jurisdictions from their respective sewerage systems and available to them for such purpose. The following is a brief description of each of these systems. For additional information, see the descriptions of the Member Jurisdictions contained in Appendices D, E, F and G.

Fairfax County

The Fairfax County sewage collection system serves 377,614 connections, of which 50,832 are in UOSA's service area. Wastewater generated in the County is treated at one County–owned treatment facility, five interjurisdictional treatment facilities (including UOSA), and one private treatment facility. The County's system is administered by the Fairfax County Department of Public Works under the control of the Board of Supervisors.

Prince William County

The sewage collection system in Prince William County is operated by the Prince William County Service Authority. See "UPPER OCCOQUAN SEWAGE AUTHORITY – Member Jurisdictions." The sewage collection system of the Service Authority serves 91,086 connections, of which 40,982 are in UOSA's service area. The Service Authority operates two sewage treatment plants of its own to provide treatment capacity for areas of Prince William County located outside of UOSA's service area. The Service Authority's system is administered by it under the control of its Board of Directors.

City of Manassas

The sewage collection system in the City of Manassas serves 11,453 connections. All of the system is located in UOSA's service area. The City's system is administered by the Department of Public Works and is under the control of the Manassas City Council.

City of Manassas Park

The sewage collection system in the City of Manassas Park serves 5,226 connections. All of the system is located in UOSA's service area. The City's system is administered by the City Manager through the Department of Public Works and is under the control of the Manassas Park City Council.

UPPER OCCOQUAN SEWAGE AUTHORITY MEMBER JURISDICTION COLLECTION SYSTEMS

Collection System	Approximate No. of Connections (as of June 30, 2022)	FY 2022 Average Daily Flow (mgd)
Fairfax County	50,832	12.46
Prince William County Service Authority	40,982	13.40
City of Manassas	11,453	6.37
City of Manassas Park	5,226	1.34
Subtotal for UOSA	108,493	33.57
Other Fairfax County	326,782	85.66
Other Prince William	50,104	30.40
Subtotal Non-UOSA	376,886	116.06
Totals	485,379	149.63

LITIGATION

There is no litigation now pending or threatened (1) to restrain or enjoin the issuance, sale, execution or delivery of the 2022 Bonds, or (2) contesting the validity of the 2022 Bonds, or any proceeding of UOSA taken with respect to their issuance and sale, the existence or powers of UOSA, or the title of any officer of, UOSA with respect to his or her position, or (3) which would have a material adverse effect on the Service Agreement, the boundaries of, or effluent from, the service area of UOSA or the operations or financial condition of UOSA.

CREDIT RATINGS

The 2022 Bonds have been rated "AAA" by Fitch Inc. ("Fitch"), "Aa1" by Moody's Investors Service, Inc. ("Moody's"), and "AAA" by Standard & Poor's Ratings Services ("Standard & Poor's"). Further explanation of the significance of these ratings may be obtained from Fitch, Moody's and Standard & Poor's, as the case may be. The ratings are not a recommendation to buy, sell or hold the 2022 Bonds and should be evaluated independently. There is no assurance that the ratings will not be withdrawn or revised downward by Fitch, Moody's or Standard & Poor's. Such action may have an adverse effect on the market price of the 2022 Bonds.

INDEPENDENT AUDITORS

The financial statements and schedules included as Appendix H to this Official Statement have been audited by PBMares LLP, independent auditors, as indicated in their report with respect thereto. PBMares LLP will not be reviewing this Official Statement or any other matters in connection with the issuance of the 2022 Bonds.

LEGALITY FOR INVESTMENT

Under the Act, the 2022 Bonds are securities in which all public officers and public bodies of the Commonwealth and its political subdivisions, all insurance companies and associations, all savings banks and savings institutions, including savings and loan associations, may legally invest funds in their control. No representation is made as to the eligibility of the 2022 Bonds for investment or for any other purpose under the laws of any other state.

CERTAIN LEGAL MATTERS

Certain legal matters relating to the authorization and validity of the 2022 Bonds are subject to the approving opinion of Hunton Andrews Kurth LLP, Bond Counsel, which will be furnished at the expense of UOSA upon delivery of the 2022 Bonds. This opinion will be limited to matters relating to the authorization and validity of the 2022 Bonds and to the tax status of interest on them as described in "TAX EXEMPTION." The proposed form of the opinion of Bond Counsel is included as Appendix I to this Official Statement. Bond Counsel has not been engaged to investigate the financial resources of UOSA or its ability to provide for payment of the 2022 Bonds, and Bond Counsel's opinion will make no statement as to such matters or as to the accuracy or completeness of this Official Statement or any other information that may have been relied on by anyone in making a decision to purchase 2022 Bonds. Certain legal matters will be passed on for UOSA by its general counsel, Odin, Feldman & Pittleman, P.C., and for each of the Member Jurisdictions by its respective County or City Attorney.

TAX EXEMPTION

Opinion of Bond Counsel

In the opinion of Bond Counsel and in accordance with customary opinion practice, under current law, interest, including accrued original issue discount ("OID"), on the 2022 Bonds (a) is not included in gross income for Federal income tax purposes, (b) is not an item of tax preference for purposes of the Federal alternative minimum tax, (c) may have to be taken into account by applicable corporations (as defined in Section 59(k) of the Code) for the alternative minimum tax imposed on such corporations for tax years beginning after December 31, 2022, and (d) is exempt from income taxation by the Commonwealth. Except as discussed below regarding OID, no other opinion will be expressed by Bond Counsel regarding the tax consequences of the ownership of or the receipt or accrual of interest on the 2022 Bonds.

Bond Counsel's opinion is given in reliance upon certifications by representatives of UOSA as to certain facts relevant to both the opinion and requirements of the Internal Revenue Code of 1986, as amended (the "Code"), and is subject to the condition that there is compliance subsequent to the issuance of the 2022 Bonds with all requirements of the Code that must be satisfied in order for interest thereon to remain excludable from gross income for Federal income tax purposes. UOSA has covenanted to comply with the provisions of the Code regarding, among other matters, the use, expenditure and investment of the proceeds of the 2022 Bonds and the timely payment to the United States of any arbitrage rebate amounts with respect to the 2022 Bonds. Failure by UOSA to comply with such covenants, among other things, could cause interest, including accrued OID, on the 2022 Bonds to be included in gross income for Federal income tax purposes retroactively to their date of issue.

Customary practice in the giving of legal opinions includes not detailing in the opinion all of the assumptions, limitations and exclusions that are a part of the conclusions therein. See "Statement on the Role of Customary Practice in the Preparation and Understanding of Third-Party Legal Opinions," 63 Bus. Law. 1277 (2008), and "Legal Opinion Principles," 53 Bus. Law. 831 (May 1998). Purchasers of the 2022 Bonds should seek advice or counsel concerning such matters as they deem prudent in connection with their purchase of Bonds.

Bond Counsel's opinion represents its legal judgment based in part upon the representations and covenants referenced therein and its review of current law, but is not a guarantee of result or binding on the Service or the courts. Bond Counsel assumes no duty to update or supplement its opinion to reflect any facts or circumstances that may come to Bond Counsel's attention after the date of its opinion or to reflect any changes in law or the interpretation thereof that may occur or become effective after such date.

Alternative Minimum Tax

Individuals – Bond Counsel's opinion states that under current law interest on the 2022 Bonds is not an item of preference and is not subject to the alternative minimum tax on individuals.

Applicable Corporations – Bond Counsel's opinion also states that under current law interest on the 2022 Bonds may have to be taken into account by applicable corporations (as defined in Section 59(k) of the Code) for the

alternative minimum tax imposed on such corporations for tax years beginning after December 31, 2022. Under current law, an "applicable corporation" generally is a corporation with average annual adjusted financial statement income for a 3-taxable-year period ending after December 31, 2021, that exceeds \$1 billion.

Original Issue Discount

The initial offering prices of the 2022 Bonds maturing in the years 2048, 2051 and 2054 (the "OID Bonds"), will be less than their stated principal amount. In the opinion of Bond Counsel, under current law, the difference between the stated principal amount and the initial offering price of each maturity of OID Bonds to the public (excluding bond houses and brokers) at which a substantial amount of such maturity of such Bonds is sold will constitute OID. The offering prices set forth on the inside cover of this Official Statement for the OID Bonds are expected to be the initial offering prices to the public at which a substantial amount of each maturity of such Bonds are sold.

Under the Code, for purposes of determining the holder's adjusted basis in an OID Bond, OID treated as having accrued while the holder holds the 2022 Bond will be added to the holder's basis. OID will accrue on a constant yield-to-maturity method. The adjusted basis will be used to determine taxable gain or loss upon the sale or other disposition (including redemption or payment at maturity) of an OID Bond.

Prospective purchasers of the OID Bonds should consult their own tax advisors with respect to the calculation of accrued OID and the state and local tax consequences of owning or disposing of such Bonds.

Original Issue Premium

Bonds purchased, whether upon issuance or otherwise, for an amount (excluding any amount attributable to accrued interest) in excess of their principal amount will be treated for Federal income tax purposes as having amortizable bond premium. A holder's basis in such a Bond must be reduced by the amount of premium which accrues while such Bond is held by the holder. No deduction for such amount will be allowed, but it generally will offset interest on the 2022 Bonds while so held. Purchasers of such Bonds should consult their own tax advisors as to the calculation, accrual and treatment of amortizable bond premium and the state and local tax consequences of holding such Bonds.

Other Tax Matters

In addition to the matters addressed above, prospective purchasers of the 2022 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 financial institutions, property and casualty insurance companies, S corporations, foreign corporations subject to the branch profits tax, recipients of Social Security or Railroad Retirement benefits and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations. Prospective purchasers of the 2022 Bonds should consult their tax advisors as to the applicability and impact of such consequences.

Prospective purchasers of the 2022 Bonds also should consult their own tax advisors as to the status of interest on the 2022 Bonds under the tax laws of any state other than Virginia.

The Internal Revenue Service (the "Service") has a program to audit state and local government obligations to determine whether the interest thereon is includible in gross income for Federal income tax purposes. If the Service does audit the 2022 Bonds, under current Service procedures, the Service will treat UOSA as the taxpayer and the owners of the 2022 Bonds will have only limited rights, if any, to participate.

There are many events that could affect the value and liquidity or marketability of the 2022 Bonds after their issuance, including but not limited to public knowledge of an audit of the 2022 Bonds by the Service, a general change in interest rates for comparable securities, a change in Federal or state income tax rates, Federal or state legislative or regulatory proposals affecting state and local government securities and changes in judicial interpretation of existing law. In addition, certain tax considerations relevant to owners of Bonds who purchase Bonds after their issuance may

be different from those relevant to purchasers upon issuance. Neither the opinion of Bond Counsel nor this Official Statement purports to address the likelihood or effect of any such potential events or such other tax considerations and purchasers of the 2022 Bonds should seek advice concerning such matters as they deem prudent in connection with their purchase of Bonds.

SALE AT COMPETITIVE BIDDING

After competitive bidding on December 1, 2022, the 2022 Bonds were awarded to Raymond James & Associates, Inc. (the "Underwriter"). The Underwriter has supplied the information as to the offering prices and yields on the 2022 Bonds set forth on the inside cover page hereof. If all of the 2022 Bonds are resold to the public at such public offering prices or yields, the Underwriter has informed UOSA that it anticipates total underwriting compensation of \$226,417.73 (0.463686% of the principal amount). The Underwriter may change the public offering prices or yields from time to time.

FINANCIAL ADVISOR

Davenport & Company LLC, Richmond, Virginia, is serving as financial advisor to UOSA with respect to the sale of the 2022 Bonds. As financial advisor, it has assisted UOSA in matters relating to the planning, structuring and issuance of the 2022 Bonds and provided other advice.

CONTINUING DISCLOSURE UNDER RULE 15c2-12

Current Undertaking

Rule 15c2-12 requires any underwriter of the 2022 Bonds to determine, as a condition to purchasing the 2022 Bonds, that UOSA has undertaken to provide certain continuing disclosure (the "Undertaking") as required by Rule 15c2-12. In the Undertaking as set forth in the Trust Agreement, UOSA on its own behalf and on behalf of the Member Jurisdictions (as "Obligated Persons" under Rule 15c2-12) has agreed, for the benefit of the Beneficial Owners of the 2022 Bonds, to provide or cause to be provided, directly or through an intermediary, certain financial information, including audited financial statements prepared in accordance with generally accepted accounting principles for governmental units as prescribed by the Governmental Accounting Standards Board, and operating data not later than June 30 of the next Fiscal Year (the "Annual Reports") and to provide notice of the occurrence of certain enumerated events. The Annual Reports and notices of material events will be filed in an electronic format, directly or through an intermediary, with the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system ("EMMA").

UOSA's obligation to provide information related to the Member Jurisdictions will be supported by a Disclosure Agreement dated as of December 1, 2022 (the "Disclosure Agreement"), between UOSA and each of the Member Jurisdictions. The specific nature of the information to be contained in the Annual Reports or the notices of material events is referenced in "FORM OF THE DISCLOSURE AGREEMENT," which is attached to this Official Statement as Appendix J.

Prior Undertakings

Except as described in this subsection "Prior Undertakings," UOSA has complied in all material respects with its prior continuing disclosure undertakings under Rule 15c2-12 during the last five years. UOSA timely filed its annual financial information for Fiscal Year 2018 on EMMA, but inadvertently failed to link such filing to the CUSIP numbers for its 2014 Bonds, 2016A Bonds and 2016B Bonds. UOSA has since linked the annual financial information for Fiscal Year 2018 to the CUSIP numbers for the 2014 Bonds, 2016A Bonds and 2016B Bonds.

Information on the past performance by the Member Jurisdictions in meeting their respective continuing disclosure obligations can be found at the end of each of the respective appendices. See "Continuing Disclosure Obligations" in Appendices D through G.

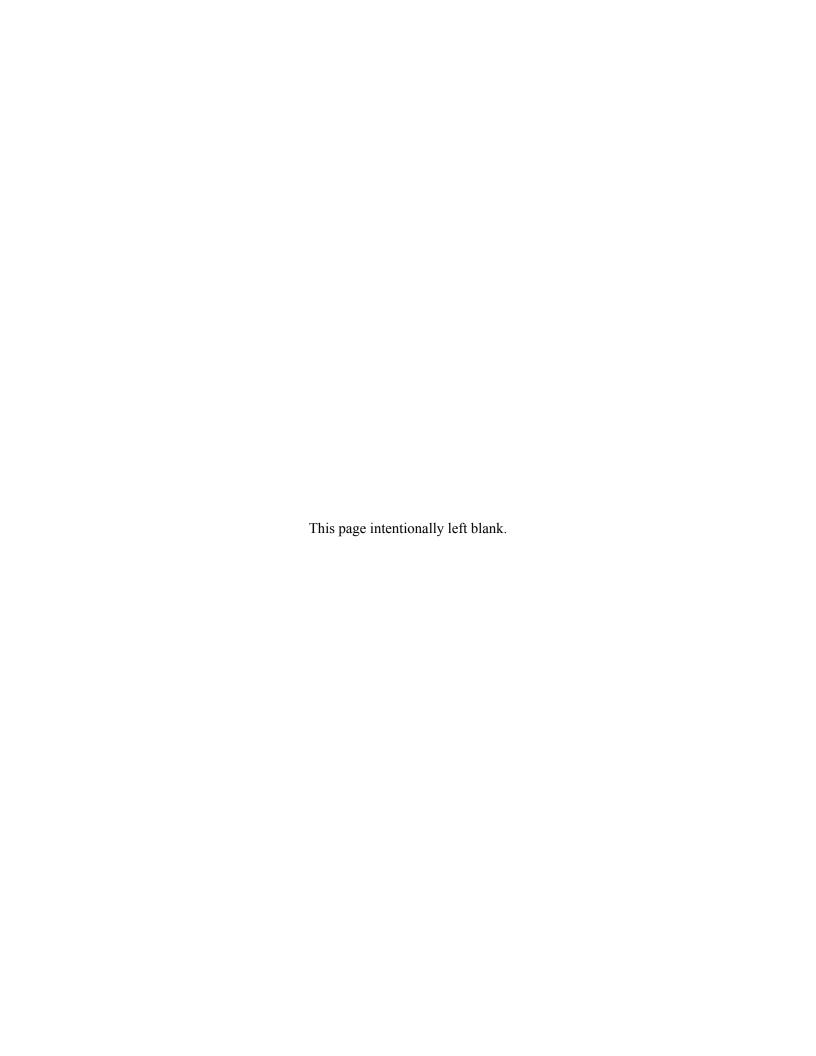
AUTHORIZATION OF OFFICIAL STATEMENT

The Board of Directors of UOSA has duly authorized the execution and delivery of this Official Statement by the Executive Director of UOSA, who has deemed it final as of its date.

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By:	Robert W. Angelotti	
-	Executive Director	

APPENDIX A DEFINITIONS OF CERTAIN TERMS



DEFINITIONS OF CERTAIN TERMS

- "Act" means the Virginia Water and Sewer Authorities Act (Chapter 28, Title 15.1, Code of Virginia of 1950, as amended).
- "Additional Bonds" means any Bonds or Bond Anticipation Notes issued pursuant to the Trust Agreement and secured on a parity with Outstanding Bonds by a pledge of certain revenues derived from the ownership or operation of the System.
 - "Annual Budget" means the annual budget of UOSA as referenced in the Trust Agreement.
- "Annual Reports" means certain financial information including audited financial statements prepared in accordance with generally accepted accounting principles for governmental units as prescribed by the Governmental Accounting Standards Board and operating data.
- "Authorized Representative of UOSA" means such person or persons as may be designated to act on behalf of UOSA by certificate signed by its Chairman, Vice Chairman or Executive Director and filed with the Trustee.
- "Balloon Indebtedness" means indebtedness 25% or more of the principal of which matures on the same date and such amount is not required to be amortized by payment or redemption prior to such date. If any indebtedness consists partially of Variable Rate Indebtedness and partially of indebtedness bearing interest at a fixed rate, the portion constituting Variable Rate Indebtedness and the portion bearing interest at a fixed rate shall be treated as separate issues for purposes of determining whether any such indebtedness constitutes Balloon Indebtedness.
 - "Beneficial Owners" means individual purchasers of beneficial ownership in the 2022 Bonds.
 - "Bondholder" or "holder" means the registered owner of any Bond.
- "Bond Owner" means registered owners of the 2022 Bonds, whether Cede & Co. or, if the book-entry system is discontinued, the Beneficial Owners.
- "Bonds" means the 2010B Bonds, the 2011A Bond, the 2011B Bond, the 2013A Bonds, the 2016A Bonds, the 2016B Bonds, the 2019 Bonds, the 2020 Bonds, the 2022 Bonds and any Additional Bonds.
- "Bond Anticipation Notes" means any note or notes issued in anticipation of the issuance of Additional Bonds that have been authorized by UOSA.
- "Bond Counsel" means Hunton Andrews Kurth LLP, or its successor, or such other attorney or firm of attorneys nationally recognized on the subject of municipal bonds selected by UOSA and reasonably acceptable to the Trustee.
 - "Bond Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.
- "Business Day" means a day of the year, other than a Saturday or a Sunday, on which banks located in Richmond, Virginia, or New York, New York, are not required or authorized to remain closed and on which the New York Stock Exchange is not closed.
- "Code" means the Internal Revenue Code of 1986, as amended, including applicable regulations, rulings and revenue procedures promulgated thereunder.
- "Construction Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.
- "Consulting Engineer" means the firm of CH2M Hill, Inc., Denver, Colorado, or its successor, or such other engineering firm or individual engineer as may be employed by UOSA as Consulting Engineer.

"Cost", when used with respect to the System, means the purchase price of any sewer system or sewage disposal system or the cost of acquiring all of the capital stock of the corporation owning such system and the amount to be paid to discharge all of its obligations in order to vest title to such system or any part thereof in UOSA, the cost of improvements, the cost of all lands, properties, rights, easements, franchises and permits acquired, the cost of all machinery and equipment, financing charges, interest prior to and during construction and for one year after completion of construction, any deposit to any bond interest and sinking fund reserve account, the cost of engineering and legal services, plans, specifications, surveys, estimates of costs and of revenues, other expenses necessary or incident to the determining of the feasibility or practicability of any such acquisition, improvements or construction, administrative expenses and such other expenses as may be necessary or incident to the financing of the System or any portion thereof or improvements, extensions, additions or replacements thereof or the placing of the same in operation by UOSA. Any obligation or expense incurred by UOSA in connection with any of the foregoing items of Cost and any obligation or expense incurred by UOSA prior to the issuance of Bonds for engineering studies and for estimates of cost and of revenues and for other technical and professional services which may be utilized in the acquisition, improvement or construction may be regarded as a part of the Cost.

"Cross-over Date" means, with respect to Cross-Over Refunding Bonds, the date on which the principal portion of the related Cross-over Refunded Bonds is to be paid or redeemed from the proceeds of such Cross-over Refunding Bonds.

"Cross-over Refunded Bonds" means Bonds refunded by Cross-over Refunding Bonds.

"Cross-over Refunding Bonds" shall mean Bonds issued for the purpose of refunding other Bonds if the proceeds of such Cross-over Refunding Bonds are irrevocably deposited in escrow to secure the payment on the applicable redemption date or maturity date of the refunded Bonds, and the earnings of such escrow deposit are required to be applied to pay interest either on such refunding Bonds or such refunded Bonds until the Cross-over Date.

"Debt Reserve Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.

"DEQ" means the Virginia Department of Environmental Quality.

"Disclosure Agreement" means a Disclosure Agreement dated as of December 1, 2022, between UOSA and the Member Jurisdictions.

"DTC" means The Depository Trust Company, New York, New York.

"DTC Participant" means participants through which DTC holds securities and facilitates the clearance and settlement of securities transactions through electronic book entry changes in the accounts of such participants.

"Event of Default" means any of the events enumerated as such in the Trust Agreement (see Appendix B).

"Fiscal Year" means the twelve-month period beginning on July 1 of one year and ending on June 30 of the following year or such other twelve-month period as shall be designated by the Board of Directors of UOSA.

"Hedge Agreement" means an interest rate swap, cap, collar, floor, forward or other hedging agreement, arrangement or security however denominated, expressly identified pursuant to its terms as being entered into in connection with and in order to hedge interest rate fluctuations on all or a portion of any Bonds where (1) interest on such Bonds or such portion of such Bonds is payable at a variable rate for any future period of time or is calculated at a varying rate per year, and (2) a fixed rate is specified as payable by UOSA in such Hedge Agreement or such Bonds which, taken together with the Hedge Agreement, results in a net fixed rate payable by UOSA for such period of time (the "Hedge Fixed Rate"), assuming UOSA and the party(ies) with whom UOSA has entered into the Hedge Agreement make all payments required to be made by the terms of the Hedge Agreement; provided no such hedging agreement may be entered into by UOSA unless any termination or similar payment which may be payable by UOSA thereunder is expressly subordinated to the obligation of UOSA on the Bonds.

"Interest Liability Swap" means a contract pursuant to which a party (the "Counterparty") has agreed to make payments to UOSA during a particular period equal to the interest payable on specified Bonds or on a specified notional amount at the actual rate or rates or, if on a notional amount at a stated rate or rates, payable thereon and, in consideration therefor, the party obligated on the Bonds or otherwise executing the agreement agrees to make payments to the Counterparty equal to the interest required to be paid on the specified Bonds or stated to be due on the notional amount during the period calculated as if the specified Bonds or notional amount bore an assumed rate of interest specified in the contract.

"Member Jurisdictions" means the City of Manassas, the City of Manassas Park, Fairfax County and Prince William County.

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

"Net Proceeds", when used with respect to any insurance recovery with respect to the System, means the gross proceeds from such insurance recovery remaining after payment of attorneys' fees, fees and expenses of the Trustee and all other expenses incurred in collection of such gross proceeds.

"Operating Expenses" means all current expenses directly attributable to the ownership or operation of the System, including, without intending to limit or restrict any proper definition of such expenses under any applicable laws or generally accepted accounting principles, reasonable and necessary usual expenses of registration, operation, maintenance and repair, costs for billing and collecting the rates, fees and charges for the use of or the services furnished by the System, insurance and surety bond premiums, legal, engineering and auditing expenses, and expenses and compensation of the Trustee, but shall not include any allowance for depreciation or deposits or transfers to the Reserve Maintenance Fund, the Bond Fund or the Debt Reserve Fund or expenditures for capital improvements and extensions to the System.

"Operating Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.

"Operating Revenues" means all revenues derived from the ownership or operation of the System to pay the cost of operation and maintenance of the System.

"Opinion of Counsel" means a written opinion of any attorney or firm of attorneys acceptable to the Trustee, who may be counsel for UOSA but shall not be a full time employee of either UOSA or the Trustee.

"Outstanding" means, when used as descriptive of obligations, that such obligations have been issued under the Trust Agreement, are payable from revenues of the System and have not been defeased, redeemed, paid or had other obligations issued in exchange therefor.

"Permit" means Virginia Permit No. VA0024988, issued by the DEQ.

"Project 54" means the improvements to increase the capacity of UOSA's System to 54 mgd.

"Rebate Amount" means the excess of (1) the future value of all nonpurpose receipts with respect to a series of Bonds over (2) the future value of all nonpurpose payments with respect to such series, in each case calculated pursuant to the requirements of Section 148 of the Code, or such other amount of arbitrage required to be rebated to the United States of America under Section 148 of the Code.

"Required Reserve" shall mean the aggregate maximum amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on all Bonds to be outstanding on the day following the day of determination (excluding Bond Anticipation Notes that by their terms provide for payment of interest accruing thereon to their maturity from the proceeds of the sale thereof) in the then current or any future Fiscal Year; provided such amount shall not exceed the sum of amounts determined for each series of Bonds (excluding Bond Anticipation Notes that by their terms provide for payment of interest accruing thereon to their maturity from the proceeds of the sale thereof) to be outstanding on the day following the day of determination as the least of (1) the

maximum amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on such series of Bonds in the first Fiscal Year in which it is outstanding or any future Fiscal Year, (2) 125% of the average amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on such series of Bonds in the first Fiscal Year in which it is outstanding and all future Fiscal Years, or (3) 10% of the original face amount of such series of Bonds. Determinations of the amount equal to the least of (1), (2) or (3) for each series shall be set as of the date of issuance thereof and not changed thereafter, notwithstanding reductions in the principal amount of such series by redemption or maturity.

If any Outstanding Bonds constitute Balloon Indebtedness or Variable Rate Indebtedness or if any Bonds proposed to be issued would constitute Balloon Indebtedness or Variable Rate Indebtedness, then, for purposes of determining the maximum amount payable on account of principal of and interest on such Bonds, such Bonds that are or would be Balloon Indebtedness shall be treated as if the principal amount of such Bonds were to be amortized in substantially equal annual installments of principal and interest over a term of 25 years; and the interest rate used for such computation in the event such Bonds are or would be Variable Rate Indebtedness shall be the lesser of (1) the rate quoted in the 30-year revenue bond index published by The Bond Buyer no more than two weeks prior to the date of calculation, or if that index is no longer published, another similar index selected by UOSA, or if UOSA fails to select a replacement index, an interest rate equal to 90% (110% if the Bonds are intended to have interest thereon be subject to Federal income taxation) of the yield for outstanding United States Treasury bonds having an equivalent maturity as the Bonds on the date of issuance, or if there are no such Treasury bonds having equivalent maturities, 90% (110% if the Bonds are intended to have interest thereon be subject to Federal income taxation) of the lowest prevailing prime rate of any of the five largest commercial banks in the United States of America ranked by assets, or (2) any maximum interest rate specified at the time of issuance of such indebtedness.

If any Outstanding Bonds constitute Tender Indebtedness or if any Bonds proposed to be issued would constitute Tender Indebtedness, then, for purposes of determining the amounts of principal and interest due in any Fiscal Year on such Bonds, the options or obligations of the owners of such Bonds to tender the same for purpose of payment prior to their stated maturity or maturities shall be treated as a principal maturity occurring on the first date on which owners of such Bonds may or are required to tender such Bonds, except that any such option or obligation to tender Bonds shall be ignored and not treated as a principal maturity if (1) such Bonds are rated in one of the two highest long-term rating categories (without regard to any rating refinement or gradation by numerical modifier or otherwise) by Moody's or by Standard & Poor's or such Bonds are rated in the highest short-term note or commercial paper rating categories by Moody's or by Standard & Poor's, and (2) any obligation UOSA may have, other than its obligation on such Bonds, to reimburse any person for having extended a credit or liquidity facility or a bond insurance policy, or similar arrangement, shall be subordinated to or on a parity with the obligation of UOSA on such Bonds.

For any Bonds for which a binding commitment, letter of credit or other credit arrangement providing for the extension of such Bonds beyond their original maturity date exists, the computation of maximum amount payable on account of principal and interest on such Bonds shall, at the option of UOSA, be made on the assumption that such Bonds will be amortized in accordance with such credit arrangement.

Upon issuance of Cross-over Refunding Bonds, the maximum amount payable on account of principal and interest on such Bonds shall be calculated assuming the Cross-over Refunded Bonds are redeemed on the Cross-over Date.

Except for Hedge Agreements, Interest Liability Swaps are to be disregarded in calculating the Required Reserve. Upon incurrence of a Hedge Agreement, all calculations, including for the maximum amount on account of principal and interest on the Bonds subject to the Hedge Agreement, shall be made using the Hedge Fixed Rate for the applicable period and such Bonds shall not be Variable Rate Indebtedness for such period.

In calculating the amount available in the Debt Reserve Fund or any required deposit into the Debt Reserve Fund under the Trust Agreement, amounts in such fund represented by a surety bond, insurance policy, letter of credit or comparable financial instrument shall only be regarded to the extent of the debt service amount payable thereunder (*i.e.*, the maximum amount payable on account of principal of (whether at maturity or by mandatory sinking fund redemption) and interest on the related series of Bonds during any Fiscal Year in which such series of Bonds will be outstanding).

"Reserve Maintenance Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.

"Rule" means Rule 15c2-12 of the SEC under the 1934 Act.

"SEC" means the Securities and Exchange Commission.

"Service Agreement" means the Restated Service Agreement between UOSA and the Member Jurisdictions, dated as of May 15, 1972, and executed in restated form in February 1991, and amended and restated in December, 2007, as amended and as it may be amended from time to time pursuant to the Trust Agreement, relating to the allocation of sewage treatment capacity between the Member Jurisdictions, the rates, fees and charges of UOSA for sewage treatment, the payment of such rates, fees and charges by the Member Jurisdictions and other matters with respect to the establishing of an equitable basis for sharing the cost of planning, designing, engineering, constructing and operating the System.

"Standard & Poor's" means Standard & Poor's Corporation, New York, New York, or its successors.

"State Repository" means any municipal securities information repository that may be established by the Commonwealth of Virginia.

"Subordinate Bonds" means any bonds, notes or other obligations of UOSA (1) which are secured by a pledge of revenues of the System expressly made subordinate to the pledge of revenues securing the Bonds, and (2) which are expressly excluded from a pledge of moneys on deposit in the Debt Reserve Fund.

"System" means UOSA's regional advanced wastewater treatment system consisting of a regional system of trunk or interceptor sewers, including power supply and pumping facilities, flow measurement devices and retention basins and an advanced waste treatment plant, including administration building, plant office, laboratory building, retention and ballast basins, power supply and necessary appurtenances and equipment, as the same may at any time exist.

"Tender Indebtedness" means any indebtedness a feature of which is an option or a requirement on the part of the holders of such indebtedness to tender all or a portion of such indebtedness for purchase or redemption prior to the stated maturity date of such indebtedness.

"Trust Agreement" means the Restated Agreement of Trust dated as of December 1, 1995, between UOSA and the Trustee, as previously supplemented and amended and as further supplemented and amended by a Sixteenth Supplemental Restated Agreement of Trust dated as of December 1, 2022, between UOSA and the Trustee.

"Trustee" means U.S. Bank Trust Company, National Association (successor to Crestar Bank and SunTrust Bank), Richmond, Virginia, or its successors serving as trustee under the Trust Agreement.

"Undertaking" means the Continuing Disclosure Undertaking of UOSA under the Rule.

"UOSA" means Upper Occoquan Sewage Authority, a public body politic and corporate of the Commonwealth of Virginia duly created pursuant to the Act by the Council of the City of Manassas (formerly the Town of Manassas), the Council of the City of Manassas Park (formerly the Town of Manassas Park), the Board of Supervisors of Fairfax County and the Board of County Supervisors of Prince William County and by a certificate of incorporation issued by the State Corporation Commission of Virginia on April 1, 1971.

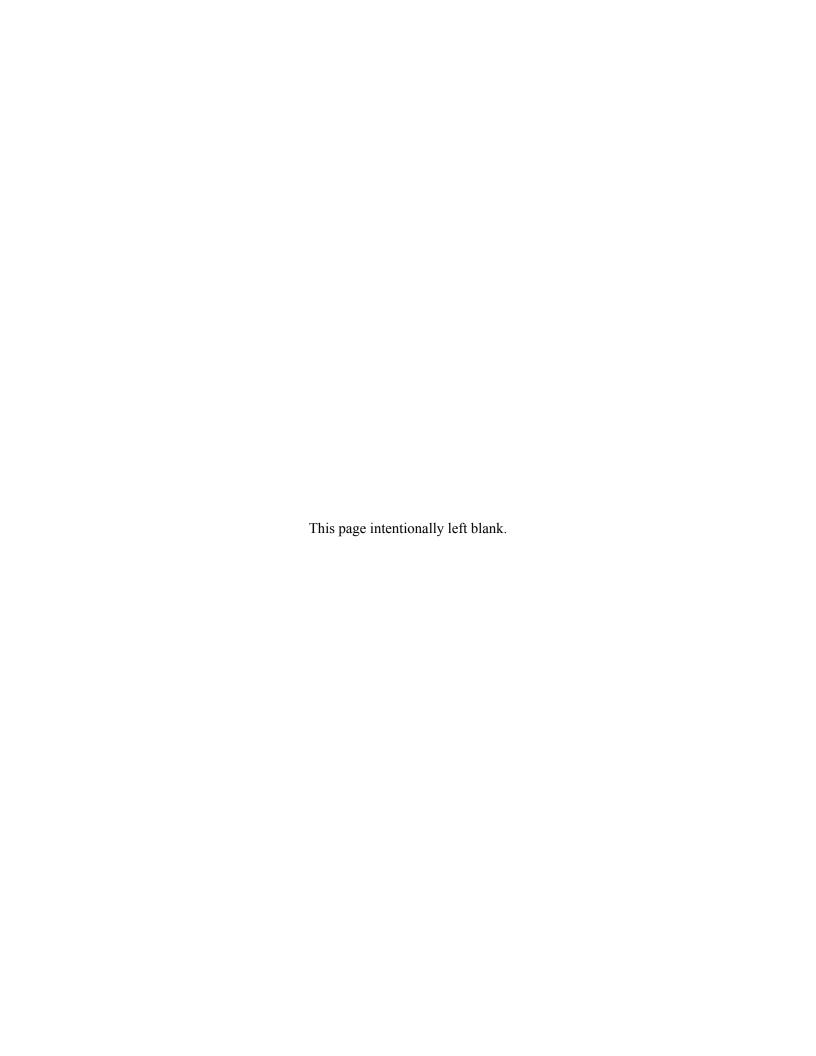
"Variable Rate Indebtedness" means any indebtedness the interest rate on which is not established at the time of issuance at a fixed or constant rate and has not previously been converted to a fixed or constant rate, provided that (1) any such liquidity provider shall be rated by Moody's or by Standard & Poor's within its highest short-term rating category, (2) any accelerated principal payments or any interest in excess of the bond interest rate due to such liquidity provider shall be subordinate to or on a parity with the payment of debt service on Bonds and (3) any two or more

series of Bonds which are issued on the same date, the interest on which when such series are considered in the aggregate shall be a fixed or constant rate shall not be considered Variable Rate Indebtedness.

- "1934 Act" means the Securities and Exchange Act of 1934, as amended.
- "2010B Bonds" means UOSA's \$79,975,000 Regional Sewerage System Revenue Bonds, Series of 2010B (Taxable Build America Bonds).
- "2011A Bond" means UOSA's \$6,100,000 Taxable Regional Sewerage System Revenue Bond, Series 2011A.
- "2011B Bond" means UOSA's \$13,934,552 Taxable Regional Sewerage System Revenue Bond, Series 2011B.
- "2013A Bonds" means UOSA's \$101,615,000 Taxable Regional Sewerage System Revenue Refunding Bonds, Series 2013A.
 - "2016A Bonds" means UOSA's \$20,915,000 Regional Sewerage System Revenue Bonds, Series 2016A.
- "2016B Bonds" means UOSA's \$41,030,000 Regional Sewerage System Revenue Refunding Bonds, Series 2016B.
 - "2019 Bonds" means UOSA's \$52,440,000 Regional Sewerage System Revenue Bonds, Series 2019.
- "2020 Bonds" means UOSA's \$199,755,000 Regional Sewerage System Revenue Refunding Bonds (Federally Taxable), Series 2020.
 - "2022 Bonds" means UOSA's \$48,830,000 Regional Sewerage System Revenue Bonds, Series 2022.
- "2022 Cost of Issuance Fund" means the fund of such name established under the Trust Agreement and held by the Trustee.
 - "2022 Interest Payment Date" means each January 1 or July 1 on which interest is payable on 2022 Bonds.

APPENDIX B

SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT



SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT

The following is a summary of certain provisions of the Restated Agreement of Trust dated as of December 1, 1995, as previously supplemented and amended and as further supplemented and amended by a Sixteenth Supplemental Restated Agreement of Trust dated as of December 1, 2022 (collectively, the "Trust Agreement"), between UOSA and U.S. Bank Trust Company, National Association (successor to Crestar Bank and SunTrust Bank), as Trustee (the "Trustee"). This summary does not purport to be comprehensive and definitive and is qualified by reference to the Trust Agreement, copies of which may be obtained at the corporate trust office of the Trustee in Richmond, Virginia, or the office of UOSA in Centreville, Virginia.

Application of 2022 Bond Proceeds. Certain proceeds of the 2022 Bonds will be deposited in the 2022 Construction Account and used to finance improvements to UOSA's regional advanced wastewater treatment system. Certain proceeds of the 2022 Bonds will be deposited in the Debt Reserve Fund. Certain proceeds of the 2022 Bonds will be deposited in the 2022 Cost of Issuance Fund to be used to pay issuance expenses with respect to the 2022 Bonds.

Payment of Bonds and Other Obligations; Limited Obligations. UOSA shall promptly pay when due the principal of (whether at maturity or call for redemption or otherwise) and premium, if any, and interest on the Bonds at the places, on the dates and in the manner provided in the Bonds and the Trust Agreement; provided, however, that such obligations are not general obligations of UOSA but are limited obligations payable solely, except to the extent payable from proceeds of Bonds, income from investments, certain reserves and proceeds of insurance, from certain revenues derived from the ownership or operation of the System. The Bonds and the premium, if any, and the interest thereon shall not be deemed to constitute a debt or a pledge of the faith and credit of the Commonwealth of Virginia or any political subdivision thereof, including UOSA and the Member Jurisdictions. Neither the Commonwealth of Virginia nor any political subdivision thereof, including UOSA and the Member Jurisdictions, shall be obligated to pay the principal of or premium, if any, or interest on the Bonds or other costs incident thereto except from the revenues pledged therefor, and neither the faith and credit nor the taxing power of the Commonwealth of Virginia or any political subdivision thereof, including UOSA and the Member Jurisdictions, is pledged to the payment of the principal of or premium, if any, or interest on the Bonds or other costs incident thereto.

Provision for Bonds. The Trust Agreement makes provisions for the issuance of the 2022 Bonds, the registration and transfer of the 2022 Bonds, the redemption of the 2022 Bonds and all other terms pertaining to the 2022 Bonds, as described in the section in the Official Statement "Description of the 2022 Bonds."

Revenue Covenant; Enforcement of Charges. So long as any of the Bonds are Outstanding, UOSA will (a) fix, charge and collect such charges for the use of and for the services furnished by the System and will, from time to time and as often as shall appear necessary, revise such charges so as to produce in each Fiscal Year funds sufficient at all times to pay (1) the cost of operation and maintenance of the System, including reasonable reserves therefor, (2) the cost of replacements and necessary improvements which do not increase the capacity or scope of the System, including reasonable reserves therefor, and (3) principal of and premium, if any, and interest on the Bonds and any Subordinate Bonds, as the same become due, including any amount necessary to be paid into the Debt Reserve Fund to restore the balance therein to the amount of the Required Reserve, provided that interest with respect to Bonds that are Variable Rate Indebtedness shall be calculated at not less than the lesser of the actual maximum interest rate on such Bonds during the preceding 12 months or the maximum interest rate specified at the time of issuance of such Bonds; (b) bill the Member Jurisdictions in advance for all charges for payment of principal of and premium, if any, and interest on the Bonds and any Subordinate Bonds and (c) bill the Member Jurisdictions for all other charges described in subsection (a) no less frequently than quarterly. If any charges for the use of and for the services furnished by the System shall not be paid within 30 days after presentation, such unpaid charges shall accrue interest at the highest rate of interest payable by UOSA on any of the Bonds then Outstanding until such unpaid charges and the interest thereon have been paid in full. UOSA may enforce payment by any remedy available at law or in equity.

Pledge of Revenues. UOSA pledges all revenues derived by UOSA from the use of and the services furnished by the System, specifically including charges paid by the Member Jurisdictions under the Service Agreement, and all moneys in the Bond Fund and the Debt Reserve Fund are hereby pledged to the payment of the principal of and interest on the Bonds, subject only to the right of UOSA to deposit revenues derived to pay the cost of operation and maintenance and the cost of replacements and improvements in the Operating Fund and the Reserve Maintenance Fund, respectively. The lien and trust so created are for the benefit of the Bondholders and for their additional security until all the Bonds have been paid. In the event that UOSA derives undesignated revenues that are less than the total amount fixed and charged as provided above, UOSA shall apply such revenues and shall be deposited, first to the Operating Fund and second to the Reserve Maintenance Fund as provided in the sections herein "Operating Fund" and "Reserve Maintenance Fund." The balance of such undesignated revenues shall be transferred to the Trustee for deposit in the Bond Fund as provided in the section herein "Bond Fund."

Establishment of Funds. The following trust funds are established by the Trust Agreement:

- (a) Operating Fund, to be held by UOSA;
- (b) Reserve Maintenance Fund, to be held by UOSA;
- (c) Bond Fund, in which there are established an Interest Account, a Principal Account and a Sinking Fund Account, all to be held by the Trustee;
 - (d) Debt Reserve Fund, to be held by the Trustee;
 - (e) Construction Fund, to be held by the Trustee; and
 - (f) Cost of Issuance Fund, to be held by the Trustee.

Operating Fund. All revenues derived by UOSA to pay the cost of operation and maintenance of the System shall be deposited in the Operating Fund as received. UOSA shall pay the Operating Expenses from the Operating Fund as the same become due and in accordance with the Annual Budget. There shall be on deposit in the Operating Fund on the first day of each calendar quarter, an amount which shall not be less than the sum of (a) the Operating Expenses for the next succeeding six months as provided in the Annual Budget and (b) the aggregate amount of all checks outstanding and unpaid drawn upon the Operating Fund. There may be included in determining the amount on deposit in the Operating Fund any unpaid charges outstanding for not more than 30 days that are due from the Member Jurisdictions under the Service Agreement for the operation and maintenance of the System.

Reserve Maintenance Fund. All revenues derived by UOSA under the Service Agreement to pay the cost of replacements and necessary improvements to the System which do not increase its capacity or scope shall be deposited in the Reserve Maintenance Fund. UOSA shall use amounts in the Reserve Maintenance Fund (a) to pay the cost of such replacements and necessary improvements from the Reserve Maintenance Fund or (b) upon notification by the Trustee that the balance in the Debt Reserve Fund has been below the amount of the Required Reserve for a period of five months, for deposit in the Debt Reserve Fund to the extent necessary to restore the Required Reserves as provided in the section herein "Debt Reserve Fund." If at any time the balance in the Reserve Maintenance Fund is less than the greater of (1) \$2,000,000 or (2) the estimated cost of replacements and necessary improvements which do not increase the capacity or scope of the System set forth in the Annual Budget for the current Fiscal Year, or (3) such amount as shall be certified to UOSA and the Trustee in writing by the Consulting Engineer (but in no event an amount greater than any applicable limitation in the Service Agreement on the accumulation of reserves), UOSA shall charge and collect from the Member Jurisdictions in each Fiscal Year, for deposit in the Reserve Maintenance Fund, an amount equal to the difference between the amount on deposit therein and the greater of (1), (2) or (3) above; provided, however, that if the amount described in (3) is greater, UOSA shall charge and collect from the Member Jurisdictions the amount equal to such difference over a period not to exceed five Fiscal Years, so long as the amount on deposit in the Reserve Maintenance Fund at all times during such period is at least equal to the amount described in (2). Any funds on deposit in the Reserve Maintenance Fund in excess of such greater amount shall be transferred to the Interest Account in the Bond Fund. For the Annual Budget for the current Fiscal Year, the amount described in (2) above is \$4,000,000.

Bond Fund. All revenues derived by UOSA to pay the principal of and premium, if any, and interest on the Bonds shall be deposited in the Bond Fund as received and credited to the following accounts in the following order:

- (a) <u>Interest Account</u>. There shall be on deposit in the Interest Account at all times the amount of interest on the Bonds accrued to the last day of the current month. The Trustee shall pay interest on the Bonds from the Interest Account as the same becomes due.
- (b) <u>Principal Account</u>. There shall be on deposit in the Principal Account at all times the amount of principal on the Bonds (excluding (1) Bond Anticipation Notes with respect to which UOSA has authorized the issuance of Bonds to provide funds necessary to assure the payment thereof and (2) Balloon Indebtedness), if any, due during the next succeeding 12 months as accrued to the last day of the current month. The Trustee shall pay the principal of Bonds as such principal becomes due.
- (c) <u>Sinking Fund Account</u>. There shall be on deposit in the Sinking Fund Account at all times the amount of any sinking fund installment within the next succeeding 12 months with respect to any Bonds as accrued to the last day of the current month. The Trustee shall provide for redemption of Bonds from the Sinking Fund Account and the redemption of any Additional Bonds which may be issued as term bonds; provided, however, that at its option, to be exercised on or before the seventy-fifth day next preceding any such sinking fund payment date, UOSA may:
- (1) cause to be paid to the Trustee for deposit in the Sinking Fund Account such amount as UOSA may determine, accompanied by a certificate, signed by an Authorized Representative of UOSA, directing the Trustee to apply such amount on or before such seventy-fifth day to the purchase of Bonds that are issued as term bonds and are subject to such redemption and the Trustee shall thereupon use all reasonable efforts to expend such funds as nearly as may be practicable in the purchase of such Bonds at a price not exceeding the principal amount thereof plus accrued interest to such purchase date;
- (2) deliver to the Trustee for cancellation such Bonds which are issued as term bonds and are subject to such redemption in any aggregate principal amount desired; and
- (3) receive a credit against amounts required to be on deposit in the Sinking Fund Account for any Bonds which are issued as term bonds and are subject to such redemption which prior to such date have been redeemed (otherwise than through the operation of the sinking fund) and canceled by the Trustee and not theretofore applied as a credit against any sinking fund redemption obligation.

Each Bond so purchased, delivered or previously redeemed shall be credited by the Trustee at 100% of the principal amount thereof against the obligation of UOSA on such sinking fund redemption date and shall reduce accordingly the amount to be on deposit in the Sinking Fund Account. Any excess over such obligation shall be credited against future sinking fund redemption obligations in chronological order, and the principal amount of such Bonds to be redeemed by operation of the sinking fund and the amount to be on deposit in the Sinking Fund Account shall be accordingly reduced. Any funds received by the Trustee pursuant to subsection (c)(1) above but not expended as provided therein for the purchase of Bonds within seven days after said seventy-fifth day shall be retained in the Sinking Fund Account and shall thereafter be used only for a credit against future deposits to the Sinking Fund Account or, upon the direction of an Authorized Representative of UOSA, for transfer to the Interest Account to be used as a credit against transfers to be made thereto. In the event the balances in the accounts in the Bond Fund on any interest or principal payment date (whether at maturity or by sinking fund redemption) are insufficient for the purposes thereof, the Trustee shall transfer to such accounts such amounts as may be necessary therefor from the Debt Reserve Fund. In the event the balances in any account in the Bond Fund on any interest or principal payment date (whether at maturity or by sinking fund redemption) exceed the required amounts, such excess shall be transferred to any other account in the Bond Fund the balance of which is insufficient for the purposes thereof in the following order of priority: Interest Account, Principal Account and Sinking Fund Account. If there is no insufficiency in any account in the Bond Fund, such excess shall be transferred, if the Debt Reserve Fund does not then hold the Required Reserve, to the Debt Reserve Fund and otherwise shall be held in the account containing such excess to be credited against future deposits to such account or used as directed by UOSA to purchase, for cancellation, Bonds at or below their current redemption price.

Debt Reserve Fund. There shall be on deposit in the Debt Reserve Fund at all times the amount of the Required Reserve. There shall be deposited in the Debt Reserve Fund out of the proceeds of Bonds or from other sources an amount equal to the amount required to fund the Debt Reserve Fund up to the Required Reserve. The Debt Reserve Fund shall be used to make transfers to the Bond Fund to the extent necessary to pay the principal of (whether at maturity or call for redemption or otherwise) and interest on Bonds as the same become due if the amounts on deposit therein are insufficient therefor. In the event the balance in the Debt Reserve Fund shall fall below the Required Reserve, the Trustee shall transfer funds to the Debt Reserve Fund from the Bond Fund. If for any period of five consecutive months the balance in the Debt Reserve Fund shall be less than the Required Reserve, the Trustee shall so notify UOSA which shall deliver to the Trustee for deposit in the Debt Reserve Fund, as soon as may be practicable but in any event within 10 days, funds from the Reserve Maintenance Fund or from any other available source in an amount sufficient to restore the Required Reserve, or such lesser amount as may be available. In the event the balance in the Debt Reserve Fund shall exceed the Required Reserve, at least semiannually, on January 1 and July 1, the excess (if any can be attributed to amounts not represented by a surety bond, insurance policy, letter of credit or comparable financial instrument) shall be transferred to the Bond Fund to be deposited, as directed by UOSA in the Interest Account, the Principal Account or the Sinking Fund Account, to be credited against future deposits to such accounts.

In lieu of all or any portion of the required amounts to be on deposit in the Debt Reserve Fund, UOSA may cause to be deposited to the credit of the Debt Reserve Fund a surety bond or an insurance policy payable to the Trustee for the benefit of the holders of the Bonds, or a letter of credit, in each case entitling the Trustee to draw, in an aggregate amount equal to all or any portion of the difference between the Required Reserve and the amount then to the credit of the Debt Reserve Fund, if any; provided, however, that prior to such deposit of a surety bond, any insurance policy or a letter of credit, the Trustee shall have received prior written consent of the issuer of any municipal bond insurance policy in effect with respect to any Bonds as to the provider and structure of such surety bond, insurance policy or letters of credit. UOSA may, from time to time, substitute cash, surety bonds, insurance policies or letters of credit for any of such forms of security so long as such substituted security complies with the requirements of this section. Cash, if any, released from the Debt Reserve Fund as a result of a substitution pursuant to this section shall be (a) deposited in the Construction Fund, (b) used to purchase Bonds of the related series or to defease or redeem such Bonds subject to redemption at the option of UOSA, or (c) used as provided in an opinion of Bond Counsel to the effect that such use will not affect adversely the exclusion of interest on such Bonds from gross income for purposes of federal income taxation.

Any surety bond, insurance policy or letter of credit shall be payable (upon the giving of notice and the presentation of any certificates as required thereunder) on any date on which money shall be required to be transferred to the Bond Fund and such transfer cannot be met by the amount on deposit in the Bond Fund, any cash in the Debt Reserve Fund or provided from any other fund or under the Trust Agreement. In such event, the Trustee shall, not later than three days prior to such amounts being required, take all necessary action to draw money under such surety bond, insurance policy or letter of credit after use of any cash in the Debt Reserve Fund. If there are multiple surety bonds, insurance policies or letters of credit in the Debt Reserve Fund, draws shall be made ratably on each. The insurer providing such surety bond or insurance policy shall be an insurer whose municipal bond insurance policy insuring the payment, when due, of the principal of and interest on municipal bond issues result in such issues being rated in the highest long-term rating category by Moody's and by Standard & Poor's, or any insurer who has the highest claims paying ability rating accorded insurers by A.M. Best & Co., or by any comparable service. The issuer of any letter of credit shall be a bank or trust company whose long-term debt obligations are rated by Moody's and by Standard & Poor's within its two highest long-term rating categories and the letter of credit itself shall be rated within the two highest rating categories by Moody's and Standard & Poor's. Any such surety bond, insurance policy or letter of credit shall provide that the Trustee shall have the ability to draw on it immediately prior to its expiration or termination and, if arrangements satisfactory to the Trustee are not made for cash, a surety bond, an insurance policy or another letter of credit to be substituted therefor upon such expiration or termination, the Trustee is instructed to draw upon such surety bond, insurance policy or letter of credit prior to its expiration or termination in an amount equal to the lesser of its stated amount or the difference between the Required Reserve and the amount then to the credit of the Debt Reserve Fund, if any. Any surety bond, insurance policy or letter of credit shall provide that any fees in connection with such security be paid from available funds of UOSA.

If a disbursement is made pursuant to any such surety bond, insurance policy or letter of credit by direct payments by the provider of such surety bond, insurance policy or letter of credit, UOSA shall be obligated to first

reinstate the maximum limits of such surety bond, insurance policy or letter of credit by making any required repayment thereon, and to second, deposit to the credit of the Debt Reserve Fund moneys in the amount of any cash necessary such that in any event the amount of the Debt Reserve Fund equals the Required Reserve, as soon as practicable and in any event within one year by depositing one-twelfth of the required amount each month.

When the balances in the Bond Fund and the Debt Reserve Fund are sufficient to redeem all the Bonds then Outstanding, the balance in the Debt Reserve Fund shall be transferred to the Bond Fund to be held for redemption of the Bonds at the earliest practicable date and for no other purpose.

If (1) a series of Bonds is due for the final payment thereon within 12 months of the date of calculation, (2) there are amounts in the Debt Reserve Fund in excess of the Required Reserve for all other series of Bonds, calculated without including any surety bond, insurance policy, letter of credit or comparable financial instrument relating to the series of Bonds to be paid within 12 months, and (3) such excess amounts are sufficient to make all further payments of debt service on the series of Bonds with a final payment within 12 months, then all or part of such excess may be transferred to the Bond Fund to be deposited, as directed by UOSA, in the Interest Account, the Principal Account or the Sinking Fund Account to pay debt service on such series of Bonds.

Construction Fund. All proceeds received by or on behalf of UOSA from the sale of any Additional Bonds for construction purposes, together with all construction grants and reimbursements from the United States of America or the Commonwealth of Virginia, or any agency thereof, the proceeds of short-term borrowings for planning, designing, engineering, construction and equipping of the System and any other funds received by UOSA from any source for planning, designing, engineering, construction and equipping of the System, shall be paid into the Construction Fund to be used by the Trustee in the manner provided in the Trust Agreement for payment of the Cost. Amounts may be drawn from the Construction Fund upon submission by UOSA of a requisition therefor specifying the payee, amount and purpose of the payment.

When the improvements, extensions, additions and replacements to the System for which a series of Bonds were issued shall have been completed and the Trustee shall have received a certificate, signed by an Authorized Representative of UOSA, stating the date of completion and what items of the Cost thereof, if any, have not been paid and for the payment of which money should be reserved in the Construction Fund, the balance of any moneys remaining in the Construction Fund in excess of such amount to be reserved shall be (a) transferred to a separate account to be used, as directed by UOSA, to pay for preliminary studies of future expansions of the System that qualify as Costs, (b) used to purchase Bonds of such series or to redeem such Bonds subject to redemption at the option of UOSA, or (c) used as described in an opinion of Bond Counsel to the effect that such use will not affect adversely the exclusion of interest on such Bonds from gross income for purposes of federal income taxation.

2022 Cost of Issuance Fund. Proceeds of the 2022 Bonds deposited in the 2022 Cost of Issuance Fund will be used to pay issuance expenses with respect to the 2022 Bonds. Before any payment is made from the 2022 Cost of Issuance Fund, the Trustee shall have been presented with a requisition signed by an Authorized Representative of UOSA and stating (1) the name of the person, firm or corporation to whom such payment is to be made and (2) the amount to be paid. Any moneys from the proceeds of the 2022 Bonds remaining after payment of all issuance expenses with respect to the 2022 Bonds will be transferred to the 2022 Construction Account.

Limitation on Defeasance or Redemption of Bonds. UOSA shall not use any amounts received from any Member Jurisdiction, or any earnings thereon, as a prepayment of its debt service obligations under the Service Agreement to defease or redeem Bonds of any series unless one of the following occurs: (a) no Bonds of the related series to be defeased or redeemed will be Outstanding after such defeasance or redemption, (b) prior to such defeasance or redemption there shall be filed with the Trustee a certified copy of a resolution of the governing body of such Member Jurisdiction acknowledging that the obligation of such Member Jurisdiction under the Service Agreement to make payments to UOSA to restore the balance in the Debt Reserve Fund to the amount of the Required Reserve shall not be reduced or otherwise affected as a result of such prepayment and defeasance or redemption but shall continue to the same effect as if the Member Jurisdiction had not made a prepayment of its debt service obligations and UOSA had not defeased or redeemed Bonds, or (c) prior to such defeasance or redemption there shall be filed with the Trustee affirmation from each rating agency that has an outstanding rating on any of the Bonds that such defeasance or redemption will not affect adversely such outstanding rating.

Investment of Funds. Any moneys held in the Construction Fund, the Operating Fund and the Reserve Maintenance Fund shall be invested and reinvested by UOSA or, if the holder of any such fund is the Trustee, by the Trustee as directed by an Authorized Representative of UOSA, in Investment Obligations, subject to the limitations stated herein. "Investment Obligations" shall mean securities for the investment of public funds authorized by Title 2.2, Chapter 45 of the Code of Virginia of 1950, as amended, or other provision of law applicable to such investments.

Any moneys held in the Bond Fund and the Debt Reserve Fund shall be invested and reinvested by the Trustee as directed by an Authorized Representative of UOSA in investments authorized for investment of public sinking funds by Section 2.2-4500 of the Code of Virginia of 1950, as amended, or other provision of law applicable to such investments.

Any moneys identified by UOSA as being held for post-employment benefits may be invested pursuant to Section 15.2-1549 of the Code of Virginia of 1950, as amended, or other provision of law applicable to such investments.

Moneys in the funds created by the Trust Agreement may be invested in Investment Obligations of the following maturities:

- (I) <u>Construction Fund</u> not to exceed the dates on which such moneys are anticipated to be needed to pay Costs to be financed with the proceeds of any Bonds;
- (II) Operating Fund not to exceed the dates on which such moneys are anticipated to be needed to pay Operating Expenses;
 - (III) Reserve Maintenance Fund not to exceed seven years;
- (IV) <u>Bond Fund</u> not to exceed the date on which such moneys are anticipated to be needed to pay principal of or interest on the Bonds;
- (V) <u>Debt Reserve Fund</u> not to exceed the earlier of final maturity of all Bonds or ten years (five years for any amounts securing the 1995 Bonds).

Any such investments shall be held by or under the control of the holder of the funds created by the Trust Agreement and while so held shall be deemed a part of the fund in which such moneys were originally held, and the interest accruing from such investments and any profit realized thereon shall be credited to such funds and any loss resulting from such investments shall be charged to such funds; provided, however, that the interest accruing from the investment of moneys held in the Debt Reserve Fund and any profit realized thereon shall be deposited in the Interest Account in the Bond Fund. UOSA shall file with the Trustee and amend as appropriate a statement of when amounts in the Construction Fund are expected to be requisitioned. The Trustee shall sell and reduce a sufficient amount of such investments to cash whenever the cash balance in any fund is insufficient for the purposes thereof.

Investments shall be considered as maturing on the date on which they are redeemable without penalty at the option of the holder or the date on which UOSA or Trustee may require their repurchase pursuant to a repurchase agreement.

Operation and Maintenance. UOSA shall establish and enforce reasonable rules and regulations governing the use of and the services furnished by the System, maintain and operate the System in an efficient and economical manner pursuant to the Annual Budget, maintain the same in good repair and sound operating condition and make all necessary repairs, replacements and renewals. All compensation, salaries, fees and wages paid by UOSA in connection with the operation and maintenance of the System shall be reasonable. UOSA shall observe and perform all of the terms and conditions contained in the Act and comply with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to the System or UOSA.

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, UOSA shall 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 UOSA 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; provided, however, that UOSA may prepay in whole all Outstanding Bonds from such Net Proceeds and any other funds that may be available for such purpose, to the extent permitted by the redemption or defeasance provisions for the Bonds. The Trustee shall apply so much as may be necessary of the Net Proceeds received on account of any such damage, destruction, condemnation or loss of title to payment of the cost of such restoration, either on completion or as the work progresses. If such Net Proceeds are not sufficient to pay in full the cost of such restoration, UOSA shall pay so much of the cost as may be in excess of such Net Proceeds.

Consulting Engineer. UOSA shall employ as needed as Consulting Engineer an engineering firm or individual engineer of recognized standing and experience in the field of sanitary engineering.

Sale or Encumbrance. Neither the System nor any integral part thereof shall be leased, sold, encumbered or otherwise disposed of, unless the proceeds of such sale are sufficient to pay the principal of and premium, if any, and interest on all of the Bonds then Outstanding and such proceeds are used for such purpose; provided, however, that UOSA may grant easements, licenses or permits across, over or under parts of the System for streets, roads and utilities as will not adversely affect the use of the System and provided, further, that upon compliance with the provisions of the Trust Agreement UOSA may sell or otherwise dispose of any property constituting a part of the System which is no longer needed or useful therefor. No such property shall be sold or otherwise disposed of unless there is filed with the Trustee a certificate of UOSA, signed by an Authorized Representative of UOSA, stating that such property is no longer needed or useful in the operation of the System. At the direction of UOSA, any proceeds received from such sale or disposition not used to replace such property, may be deposited in the Construction Fund. Otherwise, all proceeds received from such sale or disposition not used to replace such property shall be deposited in the Debt Reserve Fund, to the extent deposits are required to increase the amount therein to the Required Reserve, and then to the Bond Fund. Any such deposits shall not reduce the amounts required to be deposited in such funds by other provisions of the Trust Agreement.

Creation of Liens. UOSA shall not create or suffer to be created any lien or charge upon the System or any part thereof or any lien or charge upon the revenues and other moneys pledged in the Trust Agreement ranking equally with or prior to the lien and charge of the Bonds, except as provided in the Trust Agreement. UOSA 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 60 days after the same become due and all governmental charges when the same become due which, if unpaid, might by law become a lien upon the System, the revenues of the System, or any part thereof; provided, however, UOSA may contest in good faith any such lien or charge, in which event it may permit such lien or charge to remain unsatisfied and undischarged during the period of such contest and any appeal therefrom, unless by such action in the opinion of the Trustee the lien of the Trust Agreement on any part of the revenues and other moneys pledged herein shall be endangered or any part of the System shall be subject to loss or forfeiture, in either of which events such lien or charge shall be promptly satisfied or secured by posting with the Trustee or an appropriate court of record a bond in form satisfactory to the Trustee.

Insurance. UOSA shall continuously maintain insurance against such risks as are customarily insured against by other public bodies owning and operating similar systems, paying as the same become due all premiums in respect thereto, including without limitation:

(a) Insurance to the extent of the full replacement cost of all insurable portions of the System against loss or damage by fire and lightning, with broad form extended coverage endorsements covering damage by windstorm, explosion, aircraft, smoke, sprinkler leakage, vandalism, malicious mischief and such other risks as are normally covered by such endorsements (limited only as may be provided in the standard form of such endorsements at the time in use in the Commonwealth of Virginia), provided that during the period of construction of any portion of the System, UOSA may provide in lieu of the insurance set forth above builders' risk or similar type of insurance to the full replacement cost of such portion. The determination of replacement cost shall be provided by UOSA to the Trustee upon the issuance or renewal of such policy.

- (b) Comprehensive general liability against liability for bodily injury, including death resulting therefrom, and for damage to property, including loss of use thereof, arising out of the ownership, maintenance or use of the System.
- (c) Unless UOSA qualifies as a self-insurer under the laws of the Commonwealth of Virginia, worker's compensation insurance with respect to the System.
- (d) Surety or fidelity bonds on all members and employees of UOSA who may handle funds appertaining to the System, such bonds to be in such amount as are customarily carried by other public bodies owning and operating similar facilities.
- (e) Comprehensive automobile liability insurance against liability for bodily injury, including death resulting therefrom, and for damage to property, including loss of use thereof, arising out of the ownership or operation of motor vehicles by UOSA.
- (f) Flood insurance covering all buildings, machinery and equipment forming a part of the System and located in any designated special flood or mudslide-prone areas, to the extent such coverage is reasonably necessary as determined by UOSA.

All such insurance shall be taken out and maintained in generally recognized responsible insurance companies qualified to do business in the Commonwealth of Virginia selected by UOSA and reasonably acceptable to the Trustee and may be written with deductible amounts 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 or placed pursuant to the requirements of the Virginia Surplus Lines Insurance Law (Article 5, Chapter 7.1, Title 38.1 of the Code of Virginia of 1950, as amended) or any successor provision of law, UOSA shall provide evidence reasonably satisfactory to the Trustee that such insurance is enforceable under the laws of the Commonwealth of Virginia. In each policy, other than policies of worker's compensation insurance, UOSA and the Trustee shall be name as insured or additional insured, provided that the builders' risk or similar type of insurance permitted by paragraph (a) above may list solely UOSA as an insured or an additional insured if the rights of UOSA under such policies are irrevocably assigned to the Trustee. The policies of insurance (except as required in paragraphs (b) and (c) above) shall require that all Net Proceeds resulting from any claim be paid to the Trustee. At the direction of an Authorized Representative of UOSA, the Trustee shall apply so much as may be necessary of the Net Proceeds of insurance received by it on account of any damage or destruction of the System by fire or other casualty (a) to payment of the cost of the replacement, repair, rebuilding or restoration of the property damaged or destroyed to substantially its same condition as prior to such damage or destruction, either on completion thereof or as the work progresses, with such alterations and additions as UOSA may determine as will not impair the capacity or character of the System or (b) to payment of the principal of and premium, if any, and interest on any Bonds then Outstanding. If the Net Proceeds payable under any one claim shall not exceed \$100,000 and UOSA is not in default under the Trust Agreement, such Net Proceeds shall be paid to UOSA. Unless a policy with such an undertaking is available only at a cost that UOSA, with the approval of the Trustee, determines to be unreasonable, each policy shall contain an undertaking by the insurer that such policy shall not be modified adversely to the interests of the Trustee or canceled without at least 30 days' prior notice to the Trustee.

All such policies shall be deposited with the Trustee, provided that in lieu of such policies there may be deposited with the Trustee a certificate or certificates of the respective insurers attesting the fact that the required insurance is in force and effect. UOSA shall furnish to the Trustee prior to the issuance of any Bonds under the Trust Agreement and annually thereafter a certificate of a person selected by UOSA and knowledgeable in the insurance business (other than an officer or employee of UOSA) reciting that all policies required to be in effect at that time are in full force and effect and that such policies and the insurance evidenced thereby comply with and satisfy all the requirements of the Trust Agreement. Prior to the expiration of any such policy, UOSA shall furnish the Trustee evidence satisfactory to the Trustee that the policy has been renewed or replaced or is no longer required by the Trust Agreement.

In lieu of separate policies UOSA may maintain blanket or umbrella policies having the same coverage required herein, in which event it shall deposit with the Trustee a certificate or certificates of the respective insurers evidencing such coverage and stating the amount of coverage provided with respect to the System or any part thereof.

To the extent losses for any damage to the System, however caused, are paid from the Net Proceeds of any insurance required by the Trust Agreement, no claim shall be made and no suit shall be brought against UOSA by the Trustee or anyone else claiming by, through or under it.

In lieu of insurance written by commercial insurance companies, UOSA may maintain a program of self-insurance or participate in group risk financing programs, including without limitation sponsored insurance programs, risk pools, risk retention groups, purchasing groups and captive insurance companies, and in state or federal insurance programs; provided, however, that UOSA shall obtain and maintain on file a favorable opinion of a qualified independent insurance consultant reasonably acceptable to the Trustee that such alternative is reasonably acceptable under the circumstances.

Books and Records; Annual Inspections and Reports. UOSA shall keep proper books of records and accounts, separate from any of its other records and accounts, showing complete and correct entries of all transactions relating to the System, and any Bondholder shall have the right at all reasonable times, and upon reasonable notice of not less than 10 days, to inspect the System and all records, accounts and data relating thereto. UOSA shall also cause a certified audit of its books and accounts to be made in accordance with generally accepted auditing standards applicable to governmental entities by an independent certified public accountant at the end of each Fiscal Year, which shall reflect in reasonable detail the financial condition and record of operation of the System and UOSA. Promptly upon receipt of the audit report, UOSA shall cause copies thereof to be filed with the Trustee and in the office of UOSA.

Limitations on Use of Bond Proceeds. UOSA shall take no action, nor shall it authorize any investment or use of the proceeds of the Bonds or take any other action, which would cause the Bonds to be "arbitrage bonds" within the meaning of Section 148 of the Code. Barring unforeseen circumstances, UOSA will not approve the use of the proceeds from the sale of the Bonds otherwise than in accordance with UOSA's non-arbitrage certificate given immediately prior to the issuance of the Bonds.

Enforcement of Service Agreement. UOSA shall faithfully observe and perform all covenants, conditions and agreements on its part contained in the Service Agreement and shall enforce the covenants, conditions and agreements of the Member Jurisdictions contained in the Service Agreement for the benefit of the Bondholders.

Default and Remedies on Default. Each of the following events shall be an Event of Default upon the conditions and subject to the limitations provided in Article XI of the Trust Agreement:

- (a) Default in the due and punctual payment of any interest on any Bond;
- (b) Default in the due and punctual payment of the principal of or premium, if any, on any Bond (whether at maturity or call for redemption or otherwise);
- (c) Subject to certain conditions, default in the observance or performance of any other covenant, condition or agreement on the part of UOSA under the Trust Agreement or in the Bonds;
- (d) Entry of an order or decree, with the consent or acquiescence of UOSA, appointing one or more receivers of the System or any part thereof or the revenues thereof, or if such order or decree has been entered without the acquiescence or consent of UOSA, failure to vacate or to discharge or to stay such order or decree on appeal within 60 days after the entry thereof; or
- (e) Institution of any proceeding, with the consent or acquiescence of UOSA, for the purpose of effecting a composition between UOSA and its creditors or for the purpose of adjusting the claims of such creditors, pursuant to any federal or state statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the revenues of the System.

The foregoing provisions are subject to the following limitations: if by reason of acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders of any kind of the government of the United States or of the Commonwealth of Virginia or any of their departments, agencies, political subdivisions or officials, or any civil

or military authority; insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; washouts; droughts; arrests; restraint of government and people; civil disturbances; explosions; breakage or accident to machinery, transmission pipes or canals; partial or entire failure of utilities; or any other cause or event not reasonably within the control of UOSA; UOSA is unable in whole or in part to carry out its agreements in the Trust Agreement, contained, other than the obligations on the part of UOSA to make the payments required by Article VI of the Trust Agreement, UOSA shall not as a result of such inability be deemed in default during the continuance of such inability, including a reasonable time for the removal of the effect thereof. UOSA agrees, however, to use its best efforts to remedy with all reasonable dispatch the cause or causes preventing it from carrying out its agreements, provided that the settlement of strikes, lockouts and other industrial disturbances shall be entirely within the discretion of UOSA, and UOSA shall not be required to make settlement of strikes, lockouts and other industrial disturbances by acceding to the demands of the opposing party or parties when such course is in the judgment of UOSA unfavorable to UOSA.

Upon the occurrence and continuation of an Event of Default the Trustee may proceed to protect and enforce its rights and the rights of the bondholders by mandamus or other suit, action or proceeding at law or in equity, including an action for specific performance of any covenant or agreement of UOSA herein contained.

Upon the occurrence and continuation of an Event of Default, if requested to do so by the holders of 25% in aggregate principal amount of Bonds then Outstanding and if indemnified as provided in the Trust Agreement, the Trustee shall exercise such one or more of the rights and powers as the Trustee, upon being advised by counsel, shall deem most expedient in the interests of the bondholders; provided, however, that nothing shall be construed to give the Trustee or any bondholder authority to compel a foreclosure or sale of the System or any part thereof.

No remedy conferred by the Trust Agreement upon or reserved to the Trustee or to the bondholders is intended to be exclusive of any other remedy, but each such remedy shall be cumulative and shall be in addition to any other remedy given to the Trustee or to the bondholders hereunder or now or hereafter existing at law or in equity or by statute.

No delay or omission to exercise any right or power accruing upon any default or Event of Default shall impair any such right or power or shall be construed to be a waiver of any such default or Event of Default or acquiescence therein, and every such right and power may be exercised from time to time and as often as may be deemed expedient.

No waiver of any default or Event of Default, whether by the Trustee or by the bondholders, shall extend to or shall affect any subsequent default or Event of Default or shall impair any rights or remedies consequent thereon.

Rights of Bondholders To Direct Proceedings. Anything in the Trust Agreement to the contrary notwithstanding, the holders of a majority in aggregate principal amount of Bonds then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of the Trust Agreement; provided, however, that such direction shall not be otherwise than in accordance with the provisions of law and of the Trust Agreement.

Application of Moneys. All moneys received by the Trustee pursuant to any right given or action taken under the provisions of the default article of the Trust Agreement, shall, after payment of the cost and expenses of the proceedings resulting in the collection of such moneys, the expenses, liabilities and advances incurred or made by the Trustee and its fees and the expenses of UOSA in carrying out the Trust Agreement, be deposited in the Bond Fund. All moneys in the Bond Fund shall be applied as follows:

(a) Unless the principal of all the Bonds shall have become due:

First — To the payment to the persons entitled thereto of all installments of interest then due on the Bonds, in the order of the maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment,

to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds; and

Second — To the payment to the persons entitled thereto of the unpaid principal of and premium, if any, on any of the Bonds which shall have become due (other than Bonds called for redemption for the payment of which moneys are held pursuant to the provisions of the Trust Agreement), in the order of their due dates, with interest on such Bonds at the respective rates specified therein from the respective dates upon which they become due and, if the amount available shall not be sufficient to pay in full Bonds due on any particular date, together with such interest, then first to the payment of such interest, ratably, according to the amount of such interest due on such date, and then to the payment of such principal, ratably, according to the amount of principal due on such date, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds.

(b) If the principal of all the Bonds shall have become due, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the Bonds, including to the extent permitted by law interest on overdue installments of interest, without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto, without any discrimination or privilege.

Whenever moneys are to be applied pursuant to the provisions of this section, such moneys shall be applied at such times and from time to time as the Trustee shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such moneys, it shall fix the date (which shall be an interest payment date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such dates shall cease to accrue. The Trustee shall give such notice as it may deem appropriate of the deposit with it of any such moneys and of the fixing of any such date, and shall not be required to make payment to the owner of any Bond until such Bond shall be presented to the Trustee for appropriate endorsement or for cancellation if fully paid.

Whenever the principal of and premium, if any, and interest on all Bonds have been paid as provided above and all expenses and charges of the Trustee have been paid, any balance remaining in the Bond Fund shall be paid to UOSA.

Limitations on Suits. No holder of any Bond shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of the Trust Agreement or for the execution of any trust hereof or any other remedy hereunder, unless (a) a default has occurred of which the Trustee has been notified or of which it is deemed to have notice, (b) such default has become an Event of Default and the holders of 25% in aggregate principal amount of Bonds then Outstanding have made written request to the Trustee and have offered it reasonable opportunity either to proceed to exercise the powers hereinbefore granted or to institute such action, suit or proceeding in its own name, (c) such holders have offered to the Trustee indemnity, and (d) the Trustee thereafter has failed or refused to exercise the powers hereinbefore granted or to institute such action, suit or proceeding in its own name or in the name of such holders. Such notification, request and offer of indemnity as set forth above, at the option of the Trustee, shall be conditions precedent to the execution of the powers and trusts of the Trust Agreement and to any action or cause of action for the enforcement of the Trust Agreement or for any other remedy thereunder, it being understood and intended that no one or more holders of the Bonds shall have any right in any manner whatsoever to affect, disturb or prejudice the Trust Agreement by its, his or their action or to enforce any right thereunder except in the manner therein provided, and that all proceedings at law or equity shall be instituted and maintained in the manner therein provided and for the equal benefit of the holders of all Bonds then Outstanding. Nothing in the Trust Agreement shall, however, affect or impair the right of any Bondholder to enforce, by action at law, payment of the principal of and premium, if any, and interest on any Bond at and after the maturity thereof, or upon the date fixed for redemption or the obligation of UOSA to pay the principal of and premium, if any, and interest on each of the Bonds issued to the respective holders thereof at the time, place, from the source and in the manner expressed in the Bonds and the Trust Agreement.

Waivers of Events of Default. The Trustee may in its discretion waive any Event of Default and its consequences and rescind any declaration of maturity of principal of and interest on the Bonds, and shall do so upon the written request of the holders of (a) a majority in aggregate principal amount of Bonds then Outstanding in respect of which default in the payment of principal and/or premium, if any, and/or interest exists, or (b) a majority in aggregate principal amount of Bonds then Outstanding in the case of any other default: provided, however, that there shall not be waived without the consent of the holders of all Bonds then Outstanding (1) any Event of Default in the payment of the principal of any Outstanding Bonds at the date of maturity specified therein, or (2) any default in the payment when due of the interest on any such Bonds unless, prior to such waiver or rescission, (A) there shall have been paid or provided for all arrears of payments of interest, all arrears of payments of principal and premium, if any, when due, and all expenses of the Trustee in connection with such default and (B) in case of any such waiver or rescission, or in case of the discontinuance, abandonment or adverse determination of any proceeding taken by the Trustee on account of any such default, the Trustee and the Bondholders shall be restored to their respective former positions and rights hereunder. No such waiver or rescission shall extend to any subsequent or other default, or impair any right consequent thereon.

Supplemental Trust Agreements. UOSA and the Trustee may, without the consent of, or notice to, any of the bondholders, enter into an agreement or agreements supplemental to the Trust Agreement as shall not be inconsistent with the terms and provisions of the Trust Agreement for any one or more of the following purposes:

- (a) To cure any ambiguity or formal defect or omission in the Trust Agreement;
- (b) To grant to or confer upon the Trustee for the benefit of the Bondholders any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Bondholders or the Trustee or either of them:
- (c) To add to the covenants and agreements of UOSA in the Trust Agreement other covenants and agreements to be observed by UOSA;
- (d) To modify, amend or supplement the Trust Agreement in such manner as required to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar Federal statute hereafter in effect, and, if they so determine, to add to the Trust Agreement such other terms, conditions and provisions as may be required by said Trust Indenture Act of 1939, as amended, or similar Federal statute or state securities law;
- (e) To provide for the issuance, sale and delivery of Additional Bonds as provided in and upon compliance with the Trust Agreement to provide for (1) the deposit and disbursement of the proceeds of such Additional Bonds, to pay the expenses of the issuance of such Additional Bonds and the Cost to be financed by means of such Additional Bonds or to refund another series of Bonds, as the case may be, (2) the payment of the principal of and premium, if any, and interest on such Additional Bonds, and (3) such other changes necessary in connection with the issuance of such Additional Bonds as shall not, in the opinion of the Trustee, prejudice in any material respect the rights of the Bonds then Outstanding; and
- (f) To make any other change in the Trust Agreement which, in the opinion of the Trustee, shall not prejudice in any material respect the rights of the holders of the Bonds then Outstanding.

In addition and subject to certain the terms and provisions, the holders of two-thirds in aggregate principal amount of Bonds then Outstanding shall have the right from time to time, anything contained in the Trust Agreement to the contrary notwithstanding, to consent to and approve the execution by UOSA and the Trustee of such other agreement or agreements supplemental to the Trust Agreement as shall be deemed necessary or desirable by UOSA for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in the Trust Agreement or in any supplemental agreement; provided, however, that nothing in the Trust Agreement shall permit, or be construed as permitting, without the consent and approval of the holders of all of the Bonds then Outstanding, (a) an extension of the maturity of the principal of or the interest on any Bond, or (b) a reduction in the principal amount of, or premium, if any, on any Bond or the rate of interest thereon, or (c) an extension of time or a reduction in amount of any payment required by any sinking fund that may be applicable to any Bonds, or (d) a privilege or priority of any Bond or Bonds over any other Bond or Bonds, or (e) a reduction in the aggregate principal amount of Bonds required for consent to such supplemental agreement.

If at any time UOSA shall request the Trustee to enter into any such supplemental agreement for any of the above purpose, the Trustee shall, upon being satisfactorily indemnified with respect to expenses, cause notice of the proposed execution of such supplemental agreement to be sent to each registered owner of Bonds then Outstanding by registered or certified mail to the address of such bondholder as it appears in the registration books. Such notice shall briefly set forth the nature of the proposed supplemental agreement and shall state that copies thereof are on file at the principal corporate trust office of the Trustee for inspection by all bondholders. If, within 60 days or such longer period as shall be prescribed by UOSA following the giving of such notice, the holders of two-thirds in aggregate principal amount of Bonds then Outstanding, or in the case of (a) through (e) above, the holders of all Bonds then Outstanding, shall have consented to the execution thereof as herein provided, no holder of any Bond shall have any right to object to any of the terms and provisions contained therein, or the operation thereof, or in any manner to question the propriety of the execution thereof, or to enjoin or restrain the Trustee or UOSA from executing the same or from taking any action pursuant to the provisions thereof. Upon the execution of any such supplemental agreement as in this section permitted and provided, the Trust Agreement shall be and be deemed to be modified and amended in accordance therewith.

Anything contained in the Trust Agreement to the contrary notwithstanding, UOSA and the Trustee may enter into any agreement supplemental to the Trust Agreement upon receipt of the consent of the holders of all Bonds then Outstanding.

Discharge of Trust Agreement. If (a) the Bonds secured by the Trust Agreement have become due and payable in accordance with their terms or otherwise as provided in the Trust Agreement or have been duly called for redemption or irrevocable instructions to call the Bonds for redemption have been given by UOSA to the Trustee, (b) the Trustee holds for such purpose cash or noncallable direct obligations of the United States of America the principal of and the interest on which will be sufficient (1) to redeem in all Bonds then Outstanding, (2) to pay at maturity all Bonds maturing prior to or simultaneously with such redemption, (3) to pay to the Trustee its reasonable fees and expenses and any other fees and expenses for which UOSA may be responsible under the Trust Agreement, including the costs and expenses of canceling and discharging the Trust Agreement, and (4) to make all payments required to any issuer of a municipal bond insurance policy in effect with respect to any Bonds or to the issuer or provider of any surety bond, insurance policy or letter of credit in the Debt Reserve Fund, and (c) UOSA has observed and performed all the covenants, conditions and agreements on the part of UOSA in the Trust Agreement and in the Bonds contained, then the Trustee shall, at the expense of UOSA, cancel and discharge the Trust Agreement and execute and deliver to UOSA such instruments in writing as shall be requisite to cancel the lien thereof, and assign and deliver to UOSA any property at the time subject to the Trust Agreement 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 principal of and premium, if any, and interest on the Bonds.

Bonds for the payment or redemption of which cash or noncallable direct obligations of the United States of America the principal of and interest on which will be, in the opinion of the Trustee, sufficient therefor shall have been deposited with the Trustee (whether upon or prior to the maturity or the redemption date of such Bonds) shall be deemed to be paid and no longer Outstanding; provided, however, that if such Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given or arrangements satisfactory to the Trustee shall have been made for the giving thereof.

Amendments to Service Agreement. The Service Agreement shall not be amended, modified or otherwise altered, without the consent of the holders of all Bonds then Outstanding, in any manner which:

- (a) Allows any Member Jurisdiction to withdraw from its obligations under the Service Agreement without such obligations being undertaken by another Member Jurisdiction or Member Jurisdictions;
- (b) Changes the manner of fixing and determining rates and charges for the use of and for the services furnished by the System as specified in the Service Agreement;
- (c) Causes UOSA to be in violation of any applicable statutes, regulations or rulings applicable to the System; or
 - (d) Prejudices in any material respect the rights of the holders of the Bonds then Outstanding.

Arbitrage Rebate. Except with respect to earnings on funds and accounts qualifying for exceptions to the rebate requirement of Section 148 of the Code, UOSA shall, for the 2010B Bonds, the 2011A Bond, the 2011B Bond, the 2013A Bonds, the 2014 Bonds, the 2016A Bonds, the 2016B Bonds, the 2019 Bonds, the 2022 Bonds and each series of Additional Bonds bearing interest at a tax-exempt rate, determine and pay, from any legally available source, the Rebate Amount to the United States of America, as and when due, in accordance with Section 148(f) of the Code, and shall retain records of all such determinations until six years after payment of the respective series of Bonds.

Within 50 days after the last day of the fifth bond year for each series of Bonds subject to rebate, unless such date is changed by UOSA prior to the date that any amount with respect to such series is paid or required to be paid to the United States of America as required by Section 148 of the Code (the "Initial Installment Computation Date"), and at least once every five years thereafter, UOSA shall cause the Rebate Amount for such series to be computed and shall deliver a copy of such computation (the "Rebate Amount Certificate") to the Trustee. Prior to any payment of the Rebate Amount to the United States of America as required by Section 148 of the Code, the Rebate Amount Certificate setting forth such Rebate Amount shall be prepared or approved by (1) a person with experience in matters of governmental accounting for federal income tax purposes, (2) a bona fide arbitrage rebate calculation reporting service, or (3) Bond Counsel.

Not later than 60 days after the Initial Installment Computation Date for a series of Bonds, UOSA shall pay to the United States of America at least 90% of the Rebate Amount for such series as set forth in the Rebate Amount Certificate prepared with respect to such installment computation date. At least once on or before 60 days after the installment computation date that is the fifth anniversary of the initial installment computation date and on or before 60 days after every fifth anniversary date thereafter until final payment of such series, UOSA shall pay to the United States of America not less than the amount, if any, by which 90% of the Rebate Amount set forth in the most recent Rebate Amount Certificate exceeds the aggregate of all such payments theretofore made to the United States of America pursuant to this section for such series. On or before 60 days after final payment of such series, UOSA shall pay to the United States of America the amount, if any, by which 100% of the Rebate Amount set forth in the Rebate Amount Certificate with respect to the date of final payment of such series exceeds the aggregate of all payments theretofore made hereunder. All such payments shall be made by UOSA from any legally available source.

Notwithstanding any provision of the Trust Agreement to the contrary, no such payment shall be made if UOSA receives and delivers to the Trustee an opinion of Bond Counsel to the effect that (a) such payment is not required under the Code in order to prevent a series of Bonds from becoming "arbitrage bonds" within the meaning of Section 148 of the Code or (b) such payment should be calculated and paid on some alternative basis under the Code, and UOSA complies with such alternative basis.

UOSA covenants with the holders of the Bonds as follows:

- (a) UOSA shall not permit the gross proceeds of any series of Bonds to be used in any manner that would result in either (1) 5% or more of such proceeds being considered as having been used in any trade or business carried on by any person other than a governmental unit as provided in Section 141(b) of the Code, (2) 5% or more of such proceeds being used with respect to any "output facility" (other than a facility for the furnishing of water) within the meaning of Section 141(b)(4) of the Code, or (3) 5% or more of such proceeds being considered as having been used directly or indirectly to make or finance loans to any person other than a governmental unit, as provided in Section 141(c) of the Code; provided, however, that if UOSA receives an opinion of Bond Counsel that compliance with any such covenant is not required to prevent the interest on such series of Bonds from being includable in the gross income of the registered owners thereof under existing law, UOSA need not comply with such restriction.
- (b) UOSA shall not take any other action that would adversely affect, and shall take all action within its power necessary to maintain, the exclusion of interest on all Bonds from gross income for federal income taxation purposes.

Additional Bonds. Subject to receipt by the Trustee of the documents listed below, UOSA may issue one or more series of Additional Bonds (a) to pay the Cost of planning, designing, engineering, construction and equipping of improvements, extensions, additions or replacements to the System that are of such nature as to be chargeable to fixed capital account by generally accepted accounting practices, (b) to refund any of the Bonds or other indebtedness of UOSA, or (c) for any combination of such purposes.

Each such series of Additional Bonds shall be issued pursuant to a supplement to the Trust Agreement and shall be equally and ratably secured under the Trust Agreement with the Bonds then Outstanding and any series of Additional Bonds issued thereafter pursuant to this article, without preference, priority or distinction of any Bonds over any other Bonds. All such Additional Bonds shall be of such denomination or denominations, bear such date or dates, bear interest at such rate or rates, have such maturity dates, redemption dates and redemption prices, contain an appropriate series designation, and be issued at such prices as shall be approved by UOSA. In connection with the issuance of Additional Bonds, the Trustee may create additional accounts and subaccounts within any fund or account established by the Trust Agreement.

The Trustee shall authenticate and deliver Additional Bonds, but only upon receipt of the following, among other things:

- (a) Evidence satisfactory to the Trustee that the Service Agreement, including, if necessary, any amendment or supplement thereto, provides for payment by the Member Jurisdictions of at least the annual debt service requirements for each Fiscal Year on all Bonds Outstanding after the issuance of such Additional Bonds and such evidence shall include opinions of counsel to the parties to the Service Agreement to the effect that the Service Agreement is enforceable against such parties in accordance with its terms.
- (b) If such Additional Bonds are for the purpose of constructing improvements, extensions, additions or replacements to the System,
- (1) A written statement of the Executive Director setting forth UOSA's estimate of the Cost of such improvements, extensions, additions or replacements to the System and the date on which the same is estimated to be completed;
- (2) Evidence satisfactory to the Trustee that upon issuance of such Additional Bonds the Debt Reserve Fund will contain the Required Reserve; and
- (3) A certificate of UOSA, signed by its Chairman, Vice Chairman or Executive Director, stating that UOSA has received payment of the amount of all charges for the use of the System billed by UOSA pursuant to Section 6.1 of the Service Agreement more than 30 days prior to the date of such certificate.
 - (c) If such Additional Bonds are for the purpose of refunding a series of Bonds or other indebtedness,
- (1) Evidence reasonably satisfactory to the Trustee that UOSA has made provision as required by the Trust Agreement for the redemption of all Bonds to be refunded; and
- (2) Evidence satisfactory to the Trustee that upon issuance of such Additional Bonds the Debt Reserve Fund will contain the Required Reserve.
- (d) The written opinion of Bond Counsel that the issuance of such Additional Bonds is permitted under the terms of the Trust Agreement and has been duly authorized.

Subordinate Bonds. UOSA may at any time issue Subordinate Bonds and pledge revenues of the System thereto so long as (a) rates and charges for the use of and the services of the System are in effect (or scheduled to go into effect) which will generate funds in each Fiscal Year in which such Subordinate Bonds are outstanding at least equal to the requirements with respect to revenues and enforcement of charges under the Service Agreement (taking into account the issuance of such Subordinate Bonds) and (b) no Subordinate Bonds may be accelerated unless no Bonds are Outstanding.

Continuing Disclosure Undertaking. Rule 15c2-12 (the "Rule") of the Securities and Exchange Commission ("SEC") issued under the Securities Exchange Act of 1934, as amended (the "1934 Act"), requires the purchasers of the 2022 Bonds to determine, as a condition to purchasing the 2022 Bonds, that UOSA or another obligated person as defined in the Rule has undertaken to provide certain continuing disclosure. This section constitutes the undertaking of UOSA required by the Rule and is provided as an inducement to the purchasers of the

2022 Bonds to purchase the 2022 Bonds. UOSA acknowledges that the purchasers of the 2022 Bonds are relying on this undertaking in agreeing to purchase the 2022 Bonds.

For purposes of this section, the following terms and phrases shall have the following meaning:

"Annual Financial Information" means the financial information, which shall be based on financial statements prepared in accordance with generally accepted accounting principles ("GAAP") for governmental units as prescribed by the Governmental Accounting Standards Board ("GASB") and operating data with respect to UOSA and each Political Subdivision, provided at least annually, of the type described below, which Annual Financial Information may, but is not required to, be included in the Audited Financial Statements. For the most recent complete Fiscal Year, UOSA shall provide the following information:

UOSA Information:

- 1. Operating and non-operating revenues;
- 2. Operating (and non-operating expenses, if any);
- 3. Revenue available for debt service;
- 4. Debt service payments; and
- 5. Debt service ratio.

Political Subdivision Information:

- 1. Number of connections (or accounts);
- 2. Rate schedule;
- 3. Total amounts for:
 - a. Service charge revenues;
 - b. Availability/connection fee revenues;
 - c. Interest income revenues;
 - d. Total System revenues;
- e. System operating and maintenance expenses (not including expense payments to UOSA or debt service payments on UOSA obligations);
 - f. Expense payments to UOSA;
 - g. Debt service payments on debt treated as senior to UOSA obligations;
 - h. Debt service payments on debt treated as on parity with UOSA obligations;
 - i. Debt service payments on UOSA obligations;
 - j. Debt service payments on debt treated as subordinate to UOSA obligations;
- 4. Identity of any customer of the Member System paying over 5% of the total service charge revenues of the Member System and the specific percentage for such customer; and

5. System capacity (flows in mgd).

"Audited Financial Statements" means UOSA's and each Political Subdivision's annual financial statements, prepared in accordance with GAAP for governmental units as prescribed by GASB, which financial statements shall have been audited by such auditor as shall be then required or permitted by the laws of the state. In the case of the Political Subdivisions, the Audited Financial Statements must include relevant information about the Political Subdivision's sewer system. If any Political Subdivision has created an authority to operate all or a portion of its sewer system, the Audited Financial Statements must include the relevant financial information with respect to such authority.

"Financial Obligation" means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of 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 provided to the Municipal Securities Rulemaking Board consistent with the Rule.

"Material Event" means any of the following events with respect to the 2022 Bonds.

- 1. Principal and interest payment delinquencies;
- 2. Non-payment related defaults, if material;
- 3. Unscheduled draws on debt service reserves reflecting financial difficulties;
- 4. Unscheduled draws on any credit enhancement reflecting financial difficulties;
- 5. Substitution of credit or liquidity providers, or their failure to perform;
- 6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the 2022 Bonds, or other material events affecting the tax status of the 2022 Bonds;
- 7. Modifications to rights of beneficial owners of the 2022 Bonds, if material;
- 8. Call of any of the 2022 Bonds for redemption, if material, and tender offers;
- 9. Defeasance of any of the 2022 Bonds;
- 10. Release, substitution, or sale of property securing repayment of the 2022 Bonds;
- 11. Rating changes;
- 12. Bankruptcy, insolvency, receivership or similar event of an Obligated Person;
- 13. Consummation of a merger, consolidation, or acquisition involving an Obligated Person or the sale of all or substantially all of the assets of an Obligated Person, other than the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- 14. Appointment of a successor or additional trustee or the change of name of a trustee, if material;

- 15. Incurrence of a Financial Obligation of an Obligated Person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of an Obligated Person, any of which affect Bondholders, if material; and
- 16. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of an Obligated Person, any of which reflect financial difficulties.

"Material Event Notice" means written or electronic notice of a Material Event.

"MSRB" means the Municipal Securities Rulemaking Board.

"Official Statement" means the final Official Statement of UOSA with respect to the 2022 Bonds.

Disclosure. UOSA undertakes to provide or cause to be provided, directly or through an intermediary, for itself and for each Political Subdivision, as applicable, the following information: Annual Financial Information, Audited Financial Statements, and Material Event Notices.

UOSA shall while any 2022 Bonds are Outstanding provide or cause to be provided to the Trustee and to the MSRB, the Annual Financial Information within 365 days after the end of each Fiscal Year (the "Report Date"), beginning with the Fiscal Year ending June 30, 2023.

UOSA shall include with each submission of Annual Financial Information to the Trustee a written representation addressed to the Trustee to the effect that the Annual Financial Information is the Annual Financial Information required by, and that it complies with the applicable requirements of, this undertaking. UOSA may adjust the Report Date if UOSA changes its Fiscal Year by providing written notice of the change of Fiscal Year and the new Report Date to the Trustee and to the MSRB; provided that the new Report Date shall be not more than 365 days after the end of the new Fiscal Year and provided further that the period between the final Report Date relating to the former Fiscal Year and the initial Report Date relating to the new Fiscal Year shall not exceed one year in duration. It shall be sufficient if UOSA provides to the Trustee and the MSRB the Annual Financial Information by specific reference to documents previously provided to the MSRB or filed with the Securities and Exchange Commission and, if such a document is a final official statement within the meaning of the Rule, available from the MSRB.

If not provided as part of the Annual Financial information, UOSA shall provide or cause to be provided to the Trustee and to the MSRB the Audited Financial Statements.

If a Material Event occurs while any Bonds are Outstanding, UOSA shall provide or cause to be provided in a timely manner not in excess of ten (10) business days after the occurrence of the event, to the Trustee and the MSRB, a Material Event Notice. Each Material Event Notice shall be so captioned and shall prominently state the date, title and CUSIP numbers of the Bonds.

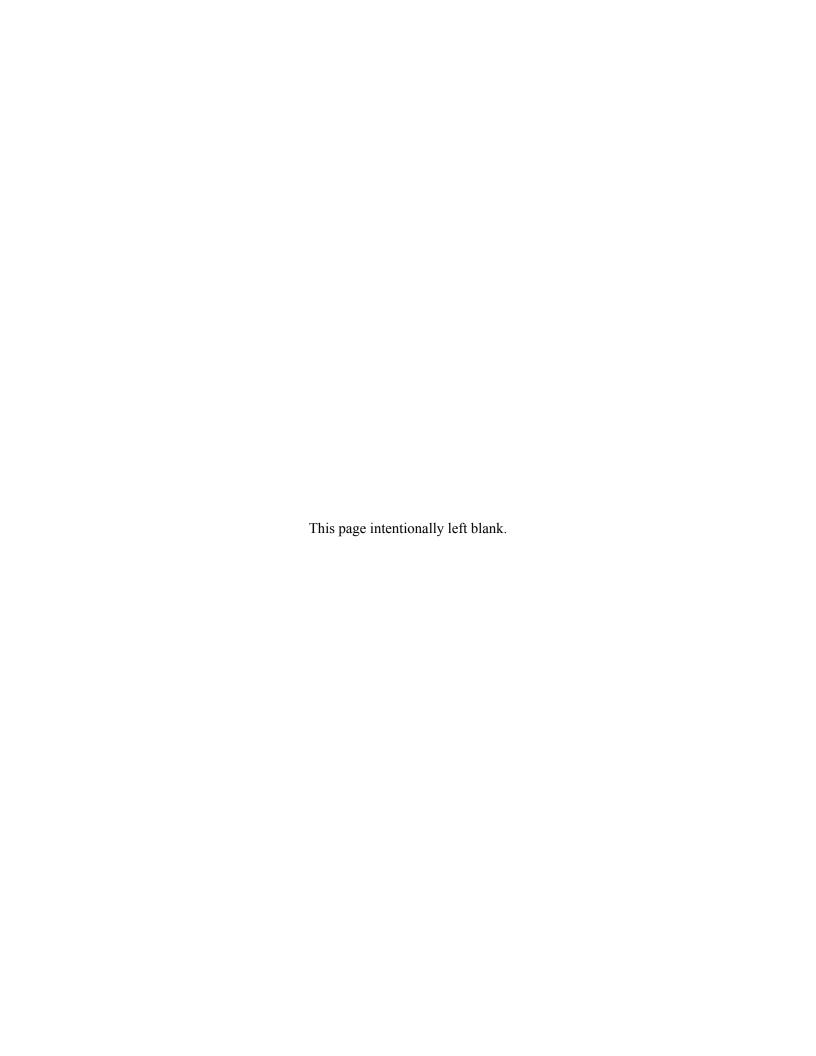
Defaults. If UOSA fails to comply with the provisions of the section above "Disclosure", UOSA shall provide or cause to be provided in a timely manner to the Trustee and the MSRB, notice of such failure.

Any failure by UOSA to perform in accordance with this undertaking shall not constitute an Event of Default under the Restated Trust Agreement and the rights and remedies provided by Article X of the Restated Trust Agreement upon the occurrence of an Event of Default shall not apply to any such failure. The Trustee shall not have any duty to enforce this undertaking.

Method of Dissemination. Unless otherwise required by law and subject to technical and economic feasibility, any filing required hereunder shall be made by transmitting such disclosure, notice or other information in electronic format to the MSRB through the MSRB's Electronic Municipal Market Access (EMMA) System pursuant to procedures promulgated by the MSRB.

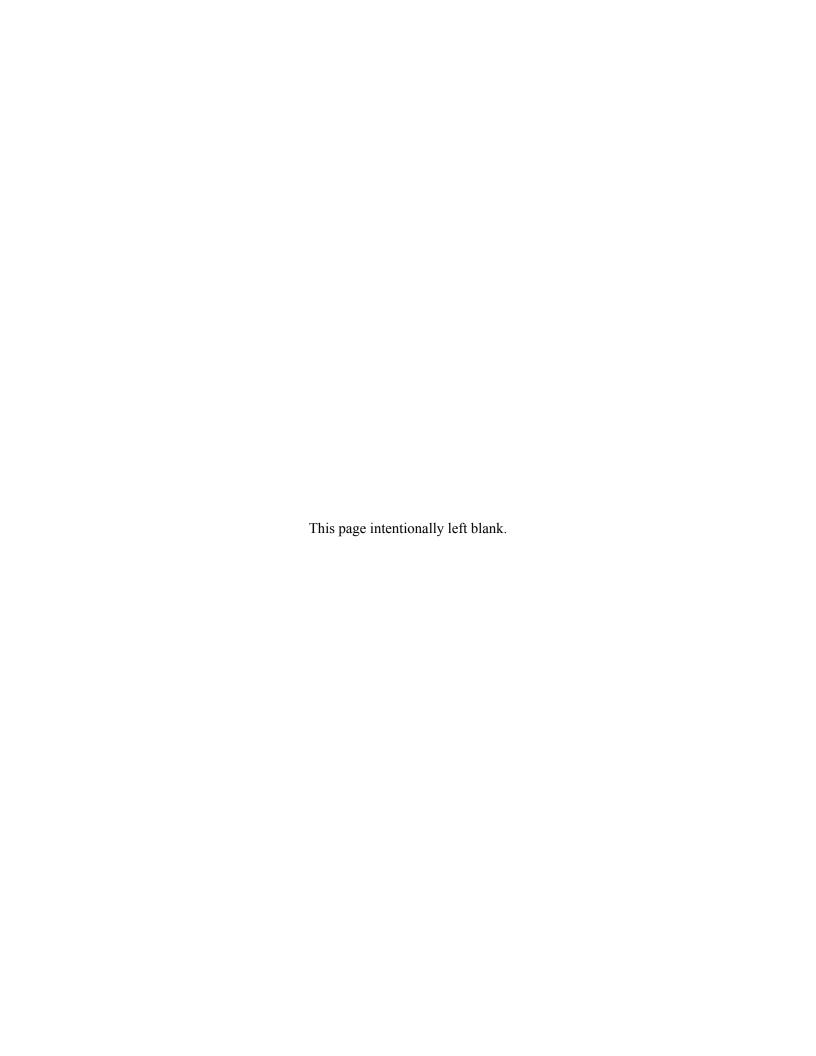
Termination. The continuing obligation of UOSA to provide Annual Financial Information, Audited Financial Statements, if any, and Material Event Notices shall terminate immediately once the 2022 Bonds are no longer outstanding. This undertaking or any portion of it shall be null and void in the event that UOSA delivers to the Trustee an opinion of nationally recognized bond counsel to the effect that those portions of the Rule which require this undertaking are invalid, have been repealed retroactively or otherwise do not apply to the 2022 Bonds; provided that UOSA shall have provided notice of such delivery and the cancellation of this undertaking to the MSRB. This undertaking may be amended, without the consent of the Bondholders, but only upon the delivery by UOSA to the Trustee of the proposed amendment and an opinion of nationally recognized bond counsel to the effect that such amendment, and giving effect thereto, will not adversely affect the compliance of this undertaking and by UOSA with the Rule; provided that UOSA shall have provided notice of such delivery and of the amendment to the MSRB.

Benefited Parties. This undertaking is made for the benefit of and may be enforced by the beneficial owners of the 2022 Bonds.



APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT



SUMMARY OF CERTAIN PROVISIONS OF THE SERVICE AGREEMENT

The following is a summary of certain provisions of the Restated and Amended Service Agreement dated as of May 15, 1972, most recently amended and restated in December 2007, among UOSA and the Member Jurisdictions. This summary does not purport to be comprehensive and definitive and is qualified by reference to the Service Agreement, copies of which may be obtained at the corporate trust office of the Trustee in Richmond, Virginia, or the office of UOSA in Centreville, Virginia.

Term; Withdrawal. The Service Agreement is to be in effect until December 31, 2049, and thereafter as may be agreed by the Member Jurisdictions that are then parties thereto. The Service Agreement may not be terminated by or as to any party until all Bonds have been paid or provision made for their payment (prior to the issuance of the Service 2022 Bonds, the last maturity is July 1, 2052). Thereafter, any party to the Service Agreement may withdraw from UOSA and terminate all of its obligations under the Service Agreement upon three years written notice. Withdrawal and termination by one Member Jurisdiction will not terminate the Service Agreement as to any other Member Jurisdiction.

Construction and Operation. The Service Agreement provides for the construction of the System and requires UOSA to operate and maintain the System in an efficient and economical manner, making all necessary and proper repairs, improvements, replacements and renewals, consistent with good business and operating practices for comparable facilities and in accordance with applicable standards of DEQ and the Occoquan Policy. The Service Agreement, as most recently amended and restated, specifically confirms UOSA's authorization to acquire, construct and finance facilities increasing the capacity of UOSA's interceptor and pump station delivery systems, nutrient reduction facilities and miscellaneous plant and hydraulic improvements.

Obligations of Member Jurisdictions. The Service Agreement requires the Member Jurisdictions to deliver to UOSA at Points of Delivery all sewage collected by them in the Service Area and, except as expressly permitted, not to permit or provide for the treatment of sewage collected by them in the Service Area in any other manner. The Member Jurisdictions are responsible for financing, construction, operation and maintenance of all facilities for the collection and delivery of sewage to Points of Delivery. Each of the Member Jurisdictions further agrees in the Service Agreement not to exceed its UOSA Plant capacity as allocated from time to time and to take the necessary actions to insure that its wastewater flows to the UOSA Plant remain within such allocated share. At such time as any Member Jurisdiction is advised by UOSA that its average flow for any consecutive thirty-day period during the past 48 months has reached 95% of its allocated capacity in the UOSA Plant, such Member Jurisdiction shall temporarily terminate the issuance of permits which allow start of construction on projects in that portion of the Service Area in the Member Jurisdiction until UOSA Plant capacity is increased by reason of reallocation, arrangements are made for sewage from the Service Area in excess of its allocation to be treated outside the Occoquan Watershed, or it is advised by UOSA that it may deliver additional sewage to UOSA.

Each of the Member Jurisdictions agrees in the Service Agreement to observe all applicable administrative and technical requirements contained in the Occoquan Policy or legally required by any authorized regulatory body, including UOSA. Each of the Member Jurisdictions also agrees (subject to provisions of its charter and state law or administrative policy, if applicable) that it will not enter into any contract providing for sewage treatment with any party having sewage flows originating within the geographic boundaries of any other Member Jurisdiction without the prior approval of such other Member Jurisdiction.

Each Member Jurisdiction agrees not to sell, transfer or dispose of its sewerage system unless (1) such transfer is to another governmental unit; (2) the transferee agrees to comply with the terms of the Service Agreement to the extent applicable to sewage delivered to UOSA; (3) the transferee agrees to fix and collect rates and charges sufficient to satisfy the payment obligation of the transferring Member Jurisdiction; (4) the transferee agrees to make the payments to UOSA required to be made by the transferring Member Jurisdiction to the extent such payments are not made by the Member Jurisdiction; and (5) the sale, transfer or disposition is approved by UOSA. Notwithstanding the foregoing, no such sale, transfer or disposition will release the transferring Member Jurisdiction from any obligation or liability under the Service Agreement.

No Member Jurisdiction will discharge sewage to UOSA that exceeds its allocated share (or reallocated share after an increase in plant capacity) by weight or concentration of the total design capacity of the UOSA Plant or causes UOSA to exceed any lawful limitations imposed upon its discharge. At such time as any Member Jurisdiction is

advised by UOSA that its pollutant discharge exceeds its allocated share of total designed UOSA Plant loadings (such loading being equivalent to the Member Jurisdiction's allocated percentage of total UOSA Plant design flow), such Member Jurisdiction will proceed to take such measures as may be necessary to bring its discharges into compliance and will temporarily terminate the issuance of permits which would result in any increase in the excessive loading in that portion of the UOSA Service Area in the Member Jurisdiction until its allocated share of total UOSA Plant loadings is increased by reason of reallocation or it is advised by UOSA that it may deliver additional sewage to UOSA. During the period of noncompliance, UOSA may assess the Member Jurisdiction costs for the treatment of the excess loading.

In the event that a Member Jurisdiction creates or has created an Authority or other legal entity to act as its agent, for the purposes of collecting sewage in the Service Area and/or for billing and collecting fees or charges to be paid by the users of a sewerage system located in the Service Area, such Member Jurisdiction shall not be relieved of its obligations under the Service Agreement. Such Member Jurisdiction shall require any Authority or other legal entity it creates to comply fully with the Service Agreement with respect to all sewage collected within the Service Area and shall nonetheless remain responsible for any noncompliance. The Member Jurisdiction shall cause such Authority or other entity to covenant and agree to fix and/or collect from the users of its sewerage system charges sufficient to make the payments required under the Service Agreement. A Member Jurisdiction that creates or has created such an entity shall ensure that UOSA has the same rights as that Member Jurisdiction to enforce the setting and collecting of rates and the payment of charges to UOSA. To the extent that any such Authority or other legal entity agrees to charge, collect and pay all or any part of Member Jurisdiction's obligations to UOSA, such agreement shall supplement and not be in lieu of the Member Jurisdiction's covenant and agreement to charge, collect and pay UOSA as provided in the Service Agreement.

Current Plant Capacity. The current capacity of the UOSA Plant is allocated among the Member Jurisdictions for purposes of determining the right of Member Jurisdictions to deliver sewage to the UOSA Plant pursuant to the Service Agreement. Such allocations are as follows:

Millions of Gallons Per Day	Percentage		
27.5999	51.11%		
15.7971	29.25		
7.6893	14.24		
2.9137	5.40		
54.0000	100.00%		
	27.5999 15.7971 7.6893 2.9137		

Any Member Jurisdiction may reallocate any portion of its allocated UOSA Plant capacity to any other Member Jurisdiction on such terms as may be mutually agreeable, subject to approval of UOSA. However, these reallocations will not alter the obligations of each Member Jurisdiction to pay for replacements and necessary improvements and make Trust Agreement payments.

Transfer of Capacity. Any Member Jurisdiction may reallocate any portion of its allocated UOSA Plant capacity to any other Member Jurisdiction on such terms as may be mutually agreeable, subject to approval of UOSA; provided such reallocations shall not alter the obligations of each Member Jurisdiction to make payments for replacements and necessary improvements and for payment of the principal of, premium, if any, and interest on Bonds in accordance with the allocation provisions of the Service Agreement.

Obligations of UOSA. Under the Service Agreement, UOSA must accept and treat all sewage delivered by the Member Jurisdictions at Points of Delivery up to their respective allocated (or reallocated) UOSA Plant capacities. UOSA is under no obligation to treat sewage at the UOSA Plant delivered by any Member Jurisdiction in excess of its allocated (or reallocated) UOSA Plant capacity.

Payments to UOSA. The Service Agreement requires each Member Jurisdiction to pay to UOSA charges for the use of the System. The charges will be set by UOSA in an amount sufficient to pay (1) the cost of operation and maintenance of the System, including reasonable reserves, (2) the cost of replacements and necessary improvements to the System, including reasonable reserves, and (3) the principal of, premium, if any, and interest on the Bonds, the cost of the System not paid with Bond proceeds, or any other monies due under the Trust Agreement, and required reserves therefore on Bonds issued to finance the Cost of the System ("Trust Agreement Payments").

Each Member Jurisdiction will pay charges of UOSA; provided that all such charges will be payable solely from revenues received by each Member Jurisdiction from the charges to be paid by the users of its sewerage system and available to it for such purposes including availability fees, connection fees, service fees or any other fees, and other system revenues. The Member Jurisdictions will set charges from their users fees sufficient to make the payments required of it under the Service Agreement.

UOSA may present charges based on budget estimates, subject to adjustment on the basis of an independent audit at the end of each fiscal year. All charges of UOSA will be payable upon presentation. In the event any Member Jurisdiction fails to make payment in full within 30 days after presentation, interest on such unpaid amounts will accrue at the highest rate of interest payable by UOSA on any of the Bonds then outstanding until such amounts and interest thereon have been paid in full. UOSA may enforce payment by any remedy available at law or in equity.

Allocation of Payments. Operations and maintenance payments will be paid by each Member Jurisdiction in proportion to the ratio that its annual flow as metered through the Points of Delivery bears to the total annual flow received at the UOSA Plant.

UOSA may use accumulated Service Agreement Reserves to the extent permitted by the Trust Agreement to meet the reasonable cost of replacements and necessary improvements that do not increase the capacity or scope of the System. Service Agreement Reserves may not always be available, in which case the Member Jurisdictions may be billed for the cost of replacements and necessary improvements as needed. Payments for replacements and necessary improvements will be paid by each Member Jurisdiction in proportion to the ratio its maximum capacity allocation bears to the total maximum capacity allocation of all Member Jurisdictions. See "Current Plant Capacity" above.

Partial Cash Funded Project. Subject to certain conditions, including a unanimous vote by the UOSA Board, one or more Member Jurisdictions may choose to deposit cash to fund all or a portion of (1) that Member Jurisdiction's cost of one or more projects or a designated portion of an identified UOSA program to be funded by Bonds and (2) its proportionate share of the fixed costs of borrowing. If such deposit is elected, the Member Jurisdiction must deposit with the Trustee on or before issuance of the Bonds, cash in the amount identified. The Member Jurisdiction will continue to be obligated to make payments to UOSA to restore the balance in any debt service reserve with respect to the Bonds for such project, even if the entire respective portion of the costs of such project has been deposited by the Member Jurisdiction and it therefore has no responsibility for regular payments for principal, premium, if any, or interest on such Bonds.

All monies relating to the same project, whether cash or financed funds, will be maintained and administered in one fund. Any excess monies at the conclusion of the project will be used for future project costs as may be permitted by the financing documents in accordance with each Member Jurisdiction's allocation of the costs of such project, projects or program.

Debt Service. The Service Agreement provides for different percentage splits of the debt service for Bonds depending on what portion of the UOSA Plant capacity such Bonds funded or refunded. These allocations, in the aggregate, are as follows:

Member Jurisdiction	Prior to Issuance of 2022 Bonds	After Issuance of 2022 Bonds	
Fairfax County	46.89%	45.92%	
Prince William County	35.40	35.71	
City of Manassas	12.62	13.24	
City of Manassas Park	5.10	5.13	

The aggregate percentage allocations will change as Bonds mature or are refunded. See detailed allocation percentage chart in "UPPER OCCOQUAN SEWAGE AUTHORITY - Service Agreement" in the front part of this Official Statement.

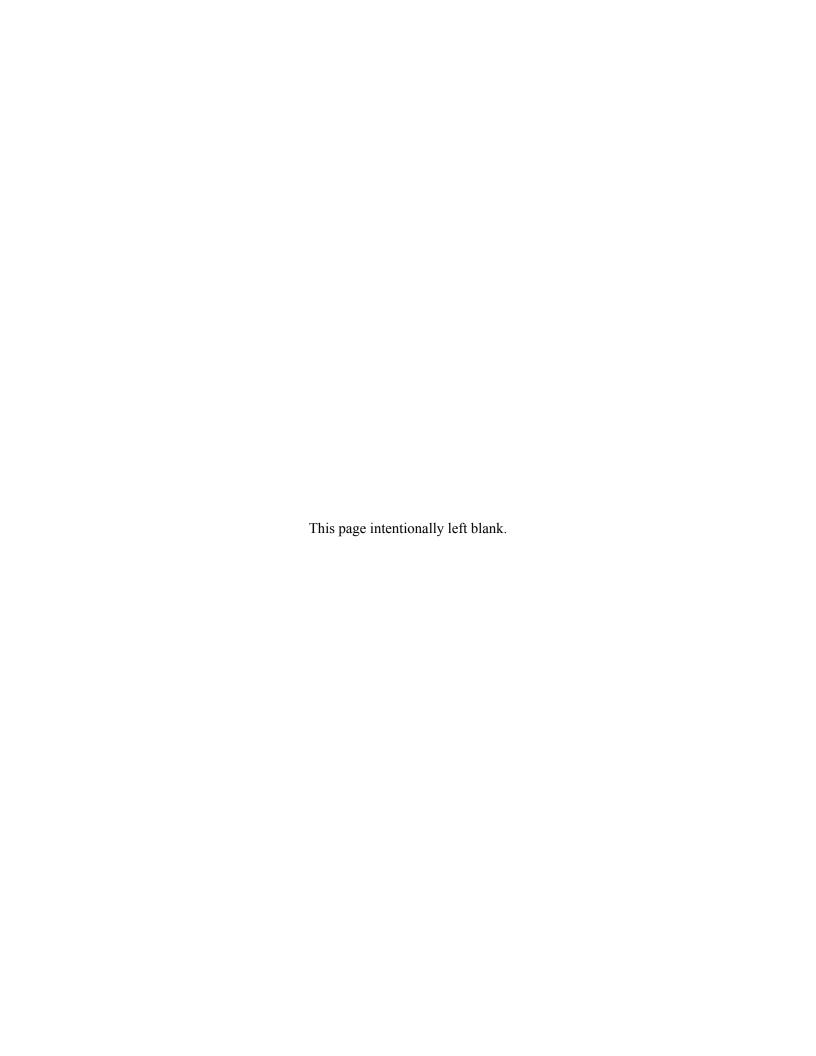
A Member Jurisdiction may pre-pay its debt service obligations so long as such pre-payment does not affect adversely the tax status of any Bonds. UOSA, at its option, may apply all or a portion of any such pre-payment and any earnings therefrom (1) to the subsequent debt service obligations of the pre-paying Member Jurisdiction as they become due, or (2) to effect a redemption of all or a portion of such Member Jurisdiction's share of outstanding Bonds. In the event of any such redemption, the pre-paying Member Jurisdiction's share of debt service obligations (with respect to the Bond issue of which the redeemed Bonds were a part) will be reduced correspondingly by the amount of the redemption.

Subject to the provisions of the Trust Agreement, residual funds from past or future Bond offerings will be applied to authorized expansions or costs of replacements or necessary improvements and will be credited toward each Member Jurisdiction's obligation in proportion to the Member Jurisdiction's obligations on the project or projects from which the funds are derived.

APPENDIX D

SEWAGE SYSTEM OF FAIRFAX COUNTY, VIRGINIA

The information contained in this Appendix (the "Information") is intended solely to provide potential investors with certain financial and operating information pertaining to the sewage systems of Member Jurisdictions, the revenues of which are the only source from which Member Jurisdictions are obligated to make payments with respect to UOSA's Bonds. UOSA has undertaken no independent investigation of, has not otherwise verified, and can make no representation or warranty with respect to, the Information.



FAIRFAX COUNTY, VIRGINIA

Overview

Fairfax County, Virginia (for purposes of this Appendix D, the "County" or "Fairfax County"), is located in the northeastern corner of Virginia and encompasses an area of 407 square miles. Its current estimated population is approximately one million. The County is part of the Washington, D.C. metropolitan area, which includes jurisdictions in Maryland, the District of Columbia, and Northern Virginia.

The Fairfax County government is organized under the Urban County Executive form of government (as defined under Virginia law). The governing body of the County is the Board of Supervisors, which makes policies for the administration of the County. The Board of Supervisors is comprised of ten members: the Chairman, elected at large for a four-year term, and one member from each of nine districts, elected for a four-year term by the voters of the district in which the member resides. The Board of Supervisors appoints a County Executive to act as the administrative head of the County. The County Executive serves at the pleasure of the Board of Supervisors, carries out the policies established by the Board of Supervisors, directs business and administrative procedures, and recommends officers and personnel to be appointed by the Board of Supervisors.

In Virginia, cities and counties are discrete units of government and do not overlap. Fairfax County completely surrounds the City of Fairfax and is adjacent to the City of Falls Church and the City of Alexandria. Property within these cities is not subject to taxation by Fairfax County, and the County generally is not required to provide governmental services to their residents. The County does, however, provide certain services to the residents of certain of these cities pursuant to agreements with such cities.

In Fairfax County there are located three incorporated towns, Clifton, Herndon and Vienna, which are underlying units of government within the County, and the ordinances and regulations of the County are, with certain limitations prescribed by Virginia law, generally effective in them. Property in these towns is subject to County taxation and the County provides certain services to their residents. These towns may incur general obligation bonded indebtedness without the prior approval of the County.

System Organizational Structure

In Fairfax County, essential management, engineering, design, and construction services in support of the Fairfax County Sanitary Sewer System (the "System") are provided through the Department of Public Works and Environmental Services under the general supervision of the County Executive and the Deputy County Executive for Planning and Development. The Wastewater Management Program is one of four Business Areas within the Department of Public Works and Environmental Services and is responsible for the administration and management of the System.

With oversight through a Deputy Public Works Director, the Wastewater Management Program consists of three agencies: the Wastewater Planning and Monitoring Division, the Wastewater Collection Division and the Wastewater Treatment Division.

The Wastewater Planning and Monitoring Division: (1) reviews the need for System development and additional treatment capacity; (2) administers and manages the System's billing operations; (3) administers the contract capacity at interjurisdictional treatment plants; (4) manages the environmental monitoring of the County treatment facility and embayment; and (5) reviews development plans for the construction of new sewer lines; (6) manages the Wastewater Management Program's finances. The Wastewater Collection Division is responsible for the operation, maintenance, and repair of the System sewer lines, pumping stations, and metering stations. The Wastewater Treatment Division is responsible for the operation, maintenance, and repair of the County-owned treatment facility.

System Characteristics

Approximately 98 million gallons of wastewater are generated daily in the System. About 40% of the System wastewater flow is treated at the Noman M. Cole, Jr. Pollution Control Plant ("NCPCP") near Lorton, Virginia. The balance of flow is distributed between one privately operated plant and five other regional treatment facilities operated and maintained by Arlington County, DC Water ("Blue Plains"), the Alexandria Renew Enterprises ("ARE"), the Upper Occoquan Sewage Authority ("UOSA"), and the Prince William County Service Authority ("PWCSA").

The System consists of approximately 3,250 miles of sewer lines ranging in size from 8 inches to 72 inches; 63 pump stations; and 57 metering stations. NCPCP, the County treatment plant, has a capacity of 67 million gallons per day ("mgd"). Capacity entitlement at the other treatment facilities totals 90 mgd. The System has a staff of 330 employees and for Fiscal Year 2022, had an operational outlay of \$103.6 million (NCPCP, \$26.0 million; ARE, \$10.8 million; Blue Plains, \$13.8 million; UOSA, \$13.8 million; Arlington, \$2.0 million; Falls Church, \$0.4 million; Harbor View and Price William, \$0.9 million; collections, \$17.3 million; billing administration, \$7.3 million; planning and administration, \$11.3 million).

More than 85% of the 424,100 households and virtually all businesses in the County are connected to the System. The sewer service area covers approximately 234 square miles, nearly 60% of the County's 407 square mile land mass. Under separate service agreements, sewer service is provided to nearby Arlington and Loudoun Counties, Fort Belvoir, the Cities of Fairfax and Falls Church, and the Towns of Herndon and Vienna.

System Wastewater Flows

System wastewater flows from County and non-County sources are collected in a network of sewer lines, pumping stations, and interceptors. The flows are conveyed to wastewater treatment plants where greases, solids, nutrients and other oxygen demanding wastes are removed. Treated effluent flows are also disinfected before being discharged into various tributaries leading to the Upper Potomac River Estuary. The resultant sludge streams are collected, conditioned, and disposed of separately.

Distribution of wastewater flow among wastewater treatment plants in the System is shown in the following table.

DISTRIBUTION OF FLOW TO WASTEWATER TREATMENT PLANTS FAIRFAX COUNTY SANITARY SEWER SYSTEM (Million Gallons per Day, mgd)

Fiscal Vear

Wastewater Treatment Plant	(Ended June 30,)					
(WWTP)	2018	2019	2020	2021	2022 (unaudited)	Current Capacity
County Owned WWTP: NCPCP	36.95	42.24	37.08	40.54	38.56	67.00
Blue Plains (DC Water) ^(b)	26.80	31.66	27.53	26.86	27.70	31.00
Alexandria Renew Enterprises	17.31	21.64	16.18	18.06	17.34	32.40
Upper Occoquan Sewage Authority	12.47	14.44	12.43	13.06	12.30	22.10
Arlington County	2.25	2.34	2.18	2.11	2.17	3.00
Loudoun Water ^(b)	0.00	0.00	0.00	0.00	0.00	1.00
Colchester (Private)	0.02	0.05	0.03	0.04	0.04	0.08
PWCSA	0.01	0.01	0.01	0.01	0.01	0.10
Subtotal, Non-County WWTPs	58.85	70.14	58.36	60.14	59.96	89.68
Total System Flow ^(a)	95.80	112.38	95.44	100.68	98.12	156.68

⁽a) Due to rounding, columns may not total to the amounts indicated.

⁽b) Due to high historical rainfall in FY 2019, DC Water's flows exceeded the capacity in contract.

Interjurisdiction Service Contracts

Wastewater Treatment Services Provided for Other Entities

Sewer services are provided to other jurisdictional entities through "Sale of Service" agreements between the County and the entities. As prescribed by each Sale of Service agreement, each entity shares in the operating, debt and capital costs of the System. Each entity's share is determined on the basis of actual wastewater flow or reserved treatment capacity. The County currently has Sale of Service Agreements with Arlington County, Fort Belvoir, the Cities of Fairfax and Falls Church, and the Towns of Herndon and Vienna. The following table summarizes service charge revenues from the Sale of Service entities for Fiscal Years 2018 through 2022.

SALE OF SERVICE REVENUES FAIRFAX COUNTY SANITARY SEWER SYSTEM

(in thousands)

Entity	Fiscal Year (Ended June 30,)							
·	2018	2019	2020	2021	2022 (unaudited)			
City of Fairfax	\$ 2,257	\$ 2,276	\$ 1,913	\$2,280	\$2,061			
Town of Herndon	1,377	2,571	1,398	1,643	2,328			
Arlington County	614	839	607	773	631			
Fort Belvoir	2,327	3,051	2,264	2,693	2,132			
City of Falls Church	821	717	595	672	659			
Town of Vienna	502	810	681	651	669			
Loudoun Water	224	157	203	209	208			
Other (a)	385	630	561	395	405			
Total (b)	\$8,507	\$11,051	\$8,222	\$9,316	\$9,093			

⁽a) Includes Fairfax Water and the I-95 Energy Resource Recovery Facility operated by Covanta of Fairfax, a private company.

(b) Due to rounding, columns may not total the amount indicated.

The County supplements the capacity of the System's own collection and treatment facilities through "Treatment by Contract" agreements with DC Water, ARE, UOSA and Arlington County. As prescribed in individual agreements, the County pays its share of the capital and operating and/or debt costs of each entity's system based on allocated capacity and actual wastewater flows, respectively. Following are amounts paid by the County to the four entities shown as operating expenses, parity indebtedness, or subordinate obligations for Fiscal Years 2018 through 2022.

TREATMENT BY CONTRACT OPERATING EXPENSES AND INDEBTEDNESS FAIRFAX COUNTY SANITARY SEWER SYSTEM

(in thousands)

Entity	Fiscal Year Ending June 30,					
	2018	2019	2020	2021	2022 (unaudited)	
Alexandria Renew Enterprises						
Operating Expenses	\$13,575	\$11,122	\$11,084	\$11,272	\$10,785	
DC Water						
Operating Expenses	14,572	15,517	15,930	15,317	13,789	
$UOSA^{(b)}$						
Operating Expenses	12,978	12,980	14,281	13,516	13,846	
Subordinate Debt Obligation	15,571	19,028	18,652	18,865	19,555	
Arlington County ^(a)						
Operating Expenses	2,454	2,592	2,073	2,616	2,046	
Other Operating Expenses ^(c)	1,037	946	969	1,233	1,266	
Total ^(d)	\$59,887	\$62,185	\$62,989	\$62,819	\$61,287	

⁽a) Includes Fairfax Water and I-95 Energy Resource Recovery Facility operated by Covanta of Fairfax.

Capital costs paid to Treatment by Contract entities are classified as "Purchased Capacity" expenses in the financial statements and amortized with other System capital expenses. Following are annual purchased capacity additions for Fiscal Years 2018 through 2022.

PURCHASED CAPACITY ADDITIONS - AMORTIZED CAPITAL EXPENSES FAIRFAX COUNTY SANITARY SEWER SYSTEM

(in thousands)

Fiscal Year Ending June 30,

Entity	2018	2019	2020	2021	2022 (unaudited)
DC Water ^(a)	\$16,586	\$ 7,745	\$ 8,345	\$10,630	\$10,250
Alexandria Renew Enterprises (b)	453	10,437	13,752	19,700	11,282
Arlington County (c)	0	373	622	317	374
$UOSA^{(d)}$	0	0	17,004	(177)	(2,627)
Total	\$17,039	\$18,555	\$39,723	\$30,470	\$19,279

⁽a) County pays 31/370 or 8.38% of the expansion and upgrade expenses at the Blue Plains AWT Plant.

⁽b) Debt payments reflect UOSA's bonds issues, which constitute Subordinate Obligations under the General Bond Resolution.

⁽c) Includes City of Falls Church ad Colchester Utilities, Inc.; operating expenses.

⁽d) Due to rounding, columns may not total to the amounts indicated.

⁽b) County pays 32.4/54 or 60% of ARE plant improvement expenses.

⁽c) County pays 3.0/40 or 7.5% of Arlington County WWTP upgrade expenses. Although the Arlington County WWTP was expanded from 30 to 40 mgd, the County did not participate in the plant expansion costs.

⁽d) The negative amount is due to CIP audit adjustment and the debt amortization of purchase capacity sold to City of Manassas.

Summary of Financial Activity

SEWER FUND FINANCIAL ACTIVITY FAIRFAX COUNTY SANITARY SEWER SYSTEM

(in thousands)

Fiscal Year (Ended June 30)

	2018	2019	2020	2021	2022 (unaudited)
BEGINNING BALANCE – POOLED CASH	\$187,764	\$177,553	\$165,395	\$140,019	\$340,289
Sources (Inflows) of Funds:					
Service Charges	\$199,759	\$210,962	\$217,854	\$216,448	\$231,214
Availability Fees	25,974	21,473	22,181	34,715	16,355
Interest Earnings	2,526	3,676	2,860	791	480
Sale of Purchased Capacity ^(a)	0	0	8,220	0	0
Grant Revenue	5,315	198	69	52	1
Bond Proceeds	0	0	0	240,839	0
Other	54	42	70	56	71
Subtotal, Inflows	\$233,628	\$236,351	\$251,254	\$492,901	\$248,121
Uses (Outflows) of Funds:					
O&M Expenses ^(a)	\$100,996	\$101,359	\$107,460	\$109,196	\$103,546
Capital Expenses	103,500	95,989	122,877	128,748	128,813
Debt Expenses	43,344	50,029	49,690	49,974	52,796
Redemption of Sewer Bonds	0	0	0	0	0
Other	0	0	7	993	16
Subtotal, Outflows	\$247,840	\$247,377	\$280,034	\$288,911	\$285,171
Changes in Receivable	(1,632)	(2,743)	(4,302)	(2,615)	4,355
Changes in Payables	4,282	2,361	6,355	5,178	178
Changes Inventory and other	4,450	707	246	288	347
Change in Investments & Interest Receivables	(4,410)	(1,418)	(1,062)	(8,727)	(5,222)
Change in pension and OPEB related deferred outflows and deferred inflows	1,311	(39)	2,167	2,156	(1,728)
POOLED CASH BALANCE	\$177,553	\$165,395	\$140,019	\$340,289	\$301,169

⁽a) Includes expensed capital costs for sewer repairs and renovations.

Sewer Revenue Bonds, Debt Service Payments, and Other Debt Obligations

Bond Resolution

On July 29, 1985, the Board of Supervisors adopted the Bond Resolution authorizing the issuance of sewer revenue bonds. The bond proceeds were to be used to finance improvements to the System, primarily at the Noman M. Cole, Jr., Pollution Control Plant. The bond resolution was restated on July 21, 1986, in advance of the initial \$75 million bond sale on August 6, 1986. Since that initial sale, several issues of sewer revenue bonds have been issued to finance (1) capital improvements for the benefit of the System, (2) the purchase of additional wastewater capacity for the benefit of the County, and (3) a portion of capital improvement costs allocable to the County at certain wastewater treatment facilities that are owned by, or that provide service to, the County.

Under the Bond Resolution, the County is required to establish rates and fees for connection to and use of the System sufficient to pay operating and maintenance expenses, System debt service, and other obligations payable from the revenues of the System. As described previously under the subcaption "Interjurisdictional Service Contracts," the County has classified as indebtedness under the Bond Resolution certain fixed payments owed to UOSA as shares of its debt service costs (such shares derived from the County's capacity rights in UOSA's treatment facilities).

Under the Bond Resolution, the County prioritizes its payment obligations under Treatment by Contract agreements as follows: (first) operating expenses, payable on par with operating expenses of the County's System; (second) debt service on the County's Outstanding Bonds and parity indebtedness, payable on parity with the debt service on the County's Outstanding Bonds; and (third) subordinate obligations, payable after provision is made for operating expenses, debt service on the Outstanding Bonds and parity indebtedness, and debt service reserve deficiencies. The County retired the last sewer parity indebtedness in 1999.

In addition, the County has borrowed money for the System from the Virginia Water Facilities Revolving Fund (the "Revolving Fund"), acting by and through the Virginia Resources Authority ("VRA"). In 2001, the County received financing approval for \$40 million from the Revolving Fund for a period of 20 years. Additional financing of \$50 million was approved in FY 2002. Debt service on these loans, refinanced in 2012 and 2016 and administered through VRA, is subordinate to the debt service on the Outstanding Bonds.

The following table shows total debt service requirements for all Indebtedness of the County relating to the System and payable from the Gross Revenues of the System.

	Sewer Revenue Bonds		<u>Subordinat</u>		
Fiscal Year Ending June 30,	Principal	Interest	EDA	UOSA	Total Debt Service ⁽¹⁾
2023	\$ 12,320,000	\$ 21,163,256	\$ 1,538,375	\$ 20,587,564	\$ 55,609,195
2024	16,100,000	20,460,481	1,537,375	20,588,059	58,685,915
2025	16,935,000	19,634,606	1,539,750	20,590,401	58,699,757
2026	17,765,000	18,819,156	1,535,500	27,744,425	65,864,081
2027	18,595,000	18,016,106	1,534,625	21,195,114	59,340,845
2028	19,405,000	17,202,281	1,536,875	21,188,479	59,332,635
2029	20,195,000	16,421,081	1,537,125	21,193,260	59,346,466
2030	15,070,000	15,665,981	1,535,375	9,025,928	41,297,284
2031	15,845,000	14,893,106	1,536,500	9,032,593	41,307,199
2032	16,655,000	14,080,606	1,535,375	9,026,098	41,297,079
2033	17,465,000	13,277,681	1,536,875	8,957,545	41,237,101
2034	18,215,000	12,526,581	1,535,875	8,719,400	40,996,856
2035	18,965,000	11,775,128	1,537,250	8,651,150	40,928,528
2036	19,755,000	10,984,538	1,537,875	8,649,448	40,924,861
2037	20,045,000	10,170,775	1,537,800	8,650,649	40,404,224
2038	20,870,000	9,345,450	1,538,400	8,700,270	40,454,120
2039	21,735,000	8,478,375	1,535,325	8,718,147	40,466,847
2040	23,345,000	7,606,400	1,537,875	8,719,376	41,208,601
2041	15,055,000	6,866,225	1,539,200	7,561,384	31,021,809
2042 - 2052	144,855,000	32,525,600	1,535,100	16,121,681	195,037,381
Total	\$489,190,000	\$299,913,413	\$30,736,400	\$273,620,971	\$1,093,460,784

⁽¹⁾ Columns may not add due to rounding.

Debt Service Coverage Ratio

The following table shows the coverage of Debt Service on System indebtedness for Fiscal Years 2018 through 2022.

(in thousands)		2022			
	2018	2019	2020	2021	(unaudited)
System Revenue:					
Service Charges	\$190,550	\$198,632	\$208,705	\$205,802	\$220,777
Sales of Service	8,507	11,051	8,222	9,316	9,092
Availability Fees	25,974	21,473	22,181	34,715	16,355
Interest Income	2,526	3,676	2,860	791	480
Other	701	1,300	926	1,330	1,345
Total System Revenue	\$228,258	\$236,132	\$242,894	\$251,954	\$248,049
System O&M Expenses	(100,996)	(101,359)	(107,460)	(109,195)	(103,546)
Revenue Available for Paying Debt	127,262	134,773	135,434	142,759	144,503
Debt Service:					
2009 Bonds	3,693	3,696	3,695	0	0
2012 Bonds	3,392	3,396	3,395	3,395	2,106
2014 Bonds	5,723	5,732	5,766	5,774	5,787
2016 Bonds	6,697	6,697	6,697	10,455	10,455
2017 Bonds	2,293	5,505	5,510	5,510	5,507
2021A Bonds	0	0	0	0	5,235
2021B Bonds	0	0	0	0	537
Subtotal, Senior Debt Service	\$ 21,798	\$ 25,026	\$ 25,063	\$ 25,134	\$ 29,627
Subordinate Obligations:					
UOSA	\$ 15,571	\$ 19,028	\$ 18,652	\$ 18,865	\$ 19,555
EDA					3,277
Virginia Resources Authority	5,975	5,975	5,975	5,975	337
Total Debt Service	\$ 43,344	\$ 50,029	\$ 24,627	\$ 49,974	\$ 52,795
Debt-to-Revenue Ratio, %(a)	19.0%	21.2%	20.5%	19.8%	21.3%
Revenue Available after Paying Debt	\$ 83,973	\$ 84,744	\$ 95,598	\$ 92,785	\$ 91,708
Debt Service Safety Margin, %(b)	36.8%	35.9%	35.3%	36.8%	37.0%
Senior Debt Service Coverage (c)	4.65X	4.53X	4.52X	4.30X	4.33X
Total Debt Service Coverage (d)	2.94X	2.69X	2.73X	2.86X	2.74X
Debt Ratio, %	35.3%	33.3%	33.3%	38.0%	36.6%

⁽a) Debt, as a percentage of revenue; Target <35%, NGT 45%.

As shown in the previous table, System revenue includes current year revenue from availability fees, service charges and interest income. System revenue does not include available fund balance reserves; i.e., income received in previous years and currently held by the County in reserve in the Revenue Subfund under the County's General Bond Resolution. To maintain a ratio of annual net revenues compared to debt service for the same year of at least 1.25 or greater and to generate sufficient revenues to meet the System's funding needs, the County's Wastewater Management Program annually evaluates the need for, and the timing of implementing, increases in the availability fees and sewer service charge rates.

⁽b) Revenue available for reinvestment in the System after O&M and debt service expenses are covered as a percentage of total revenue; Target <15%, NLT 5%.

⁽e) Revenue available for paying debt service divided by Senior Debt Service; coverage must be greater than 1.00X, Target >2.0x. Revenue does not include non-recurring revenues.

⁽d) Revenue available for paying debt divided by Total Debt Service; Target >1.5x, NLT 1.2x.

⁽e) Ratio of Total Outstanding Debt-to-Total Assets; Target <45%, NGT 60%.

Rates and Charges

Rate Structure

The County adopts a sewer rate structure designed to satisfy all System revenue requirements. The rate structure is also designed to derive revenues from customers equitably. The sewer rates and availability and other fees for the last four fiscal years and the adopted rate structure, as of July 1, 2022, are summarized below.

SEWER RATE STRUCTURE FAIRFAX COUNTY SANITARY SEWER SYSTEM

Description of Rates	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Service Charge, \$/Thousand Gallons (TG)	\$ 7.00	\$ 7.28	\$ 7.28	\$ 7.72	\$ 8.09	\$ 8.41	\$ 8.73	\$ 9.21	\$ 9.67
Per Bill Base Charge	30.38	32.91	32.91	36.54	40.14	44.43	49.09	51.79	54.38
Availability Fee, \$/Unit:									
Single Family Dwelling	8,100	8,340	8,340	8,507	8,592	8,678	8,765	8,853	8,942
Apartment or Townhouse	6,480	6,672	6,672	6,806	6,874	6,942	7,012	7,082	7,153
Dorm Unit	2,025	2,085	2,085	2,127	2,148	2,170	2,191	2,213	2,235
Fixture Unit, (Commercial)	405	417	417	425	430	434	438	443	446
Connection Charge, \$/Foot	152.50	152.50	152.50	152.50	152.50	152.50	152.50	152.50	152.50

<u>Sewer Service Charges</u> are based on water consumption, in 1,000 gallons (TG), as measured by a water service meter(s). For single-family dwellings and townhouses, water consumption for sewer billing is based on the previous winter quarter consumption. For apartment or multifamily complexes and nonresidential connections, billing is based on actual water used for the quarter. Sewer billings are included in quarterly water and sewer bills issued by the water billing agents.

<u>Base Charges</u> are per bill charges assessed quarterly, in addition to the Sewer Service Charge, to partially recover fixed expenses for billing, wastewater collection, engineering, planning, and administrative expenses.

Availability Fees are one-time charges collected from new sewer customers prior to connection to the system. These fees cover in part the applicants' proportional share of costs for facilities required beyond the collector system; i.e., sub-trunk sewers, pumping stations, and treatment facilities. For nonresidential units, the minimum availability fee is equal to a single-family dwelling rate. Through Fiscal Year 1994, the minimum nonresidential rate provided for approximately 30 fixture units (e.g., sinks, showers, toilets); in Fiscal Year 1995, the minimum nonresidential rate provided for approximately 24 fixture units; and in Fiscal Year 1996 and thereafter, the minimum nonresidential rate provided for approximately 20 fixture units. Fixture units in excess of the minimum rate are charged at the prevailing fixture unit rate. The fixture unit rate and the minimum fixture unit count were adjusted in Fiscal Year 1995 and Fiscal Year 1996 to reflect higher water usage, per fixture unit, by nonresidential users.

Connection Charges are one-time front footage charges used to offset the cost of installing County-built sewers adjacent to the property. The residential minimum is \$7,625; the nonresidential minimum is \$15,250. The residential maximum is \$15,250; for commercial customers, there is no maximum. An additional lateral spur charge of \$600 is charged for connecting to a County built sewer spur.

Rate Development

Sewer service charge and availability fee rates are reviewed annually by County staff and an outside consultant as part of the County's annual budget process. These fees are analyzed and evaluated, adjusted as necessary, and adopted annually by the Board of Supervisors to ensure that rates are priced accurately. The County allocates operating revenues and expenses, interest income, bond proceeds, debt service payments, and capital improvement expenses between existing and new users of the System based on cost causative relationship analyses.

Separate accounting of revenues and expenses for existing and new customers along with analyses to determine the adequacy of sewer service charges and availability fees are conducted annually by the County. The purpose of these analyses is to allocate System revenues and expenses between existing and new customers such that growth pays for growth.

Sewer service charges are adjusted to maintain minimum reserves in the existing customer portion of the fund balance. The availability fee calculation is based on a "growth related" or marginal-incremental cost method whereby new customers are responsible for the next increment of System expansion costs incurred.

Sewer Taps Sold

The following table provides the number of Availability Fees paid to the System and the applicable Availability Fee for single-family dwelling units for each of the past five Fiscal Years.

SEWER TAPS SOLD AND AVAILABILITY FEE RATE FAIRFAX COUNTY SANITARY SEWER SYSTEM

_	Fiscal Year (ended June 30,)	2018	2019	2020	2021	2022 (unaudited)
	Sewer Taps Sold* Single Family	3,143	1,787	2,241	3,860	1,655
	Availability Fee	\$8,100	\$8,100	\$8,340	\$8,340	\$8,507

^{*}Motel units, dorm units, and long term care units are included in the taps sold figures.

Existing Customer Base

Approximately 343,000 residential households in the County are served by the System, representing approximately 954,000 County residents. Another 70,000 non-County residents are served through Sale of Service contracts. Slightly more than 28,300 nonresidential connections are served by the System. The following table summarizes the County's sewer customer base in terms of County residential connections during Fiscal Years 2018 through 2022.

RESIDENTIAL AND NONRESIDENTIAL CUSTOMER BASE FAIRFAX COUNTY SANITARY SEWER SYSTEM

Service Class					
	2018	2019	2020	2021	2022 (unaudited)
Residential Connections:	•				
Single Family Dwellings	165,936	166,462	166,981	167,359	167,978
Townhouses	78,159	78,636	96,263	96,264	96,327
Apartments	96,256	96,258	79,155	79,502	80,045
Total Residential Connections	340,351	341,356	342,399	343,125	344,350
Nonresidential Connections	28,262	28,300	28,330	28,335	28,367
Total Connections	368,613	369,656	370,729	371,460	372,717

Largest Retail Sewer Customers

Exclusive of Sale of Service wholesale contract customers, the following table provides data on the System's ten largest retail sewer customers for the Fiscal Year ended June 30, 2022.

LARGEST RETAIL SEWER CUSTOMERS FAIRFAX COUNTY SANITARY SEWER SYSTEM

Customer	Туре	Billed	% of Total
INOVA Fairfax Hospital	Hospital	\$ 421,845	0.18
INOVA Health Systems - Fair Oaks Hospital	Hospital	391,009	0.17
Skyline Plaza	Office Building	375,587	0.16
5599 Seminary Rd. Owner, LLC	Office Complex	288,899	0.12
Woodlake Towers Inc.	Apartments	288,093	0.12
Skyline Sq. Owners Assoc.	Office Building	270,632	0.12
Skyline House	Office Building	265,541	0.11
RBDW AVANT LLC	Office Complex	232,345	0.10
Washreit Riverside LLC	Office Complex	180,180	0.08
Gates/Hudson Assoc.	Apartments	170,396	0.07
	Total: ^(a)	\$2,884,527	1.23%

⁽a) Due to rounding, the total may not total to the amounts indicated.

Capital Improvement Program

The current five year (Fiscal Year 2023 – Fiscal Year 2027) capital improvement plan for the System includes upgrades and/or expansions at NCPCP, the UOSA Plant, the DC Water Blue Plains Plant, the ARE Plant, and the Arlington County Plant as well as miscellaneous improvements to the County's collection facilities, aggregating approximately \$878.0 million, exclusive of the System's share of UOSA debt financed construction expenses. Future capital funding would utilize a combination of System bond proceeds, System equity and proceeds of System subordinate obligations payable pursuant to service contracts.

Continuing Disclosure Obligations

As a condition to the issuance of various series of revenue bonds ("UOSA Bonds") issued by UOSA for the benefit of the County and other jurisdictions, the County has agreed pursuant to continuing disclosure undertakings (the "UOSA Undertakings") to provide and file certain annual financial and statistical information ("Sewer System Annual Disclosure Reports") relating to the System as well as the County's audited financial statements for the System ("Sewer System Annual Financial Statements"). The Sewer System Annual Financial Statements for the Fiscal Years ended June 30, 2009, and June 30, 2010, were filed pursuant to the UOSA Undertakings but not in a timely manner and other filings were complete and timely but were not correctly cross-referenced to the UOSA Bonds. The County has implemented procedures to ensure the inclusion of necessary information in a timely manner in future filings required by the UOSA Undertakings.

Pursuant to several continuing disclosure undertakings entered into relating to the Fairfax County Economic Development Authority's Transportation Contract Revenue Bonds (Route 28 Project), the County provided all required information, except that it inadvertently did not include in its annual information required under such undertakings a description of the twenty largest owners of real property by assessed value in the State Route 28 Highway Transportation Improvement District. The County has implemented procedures to ensure the inclusion of such information in future filings.

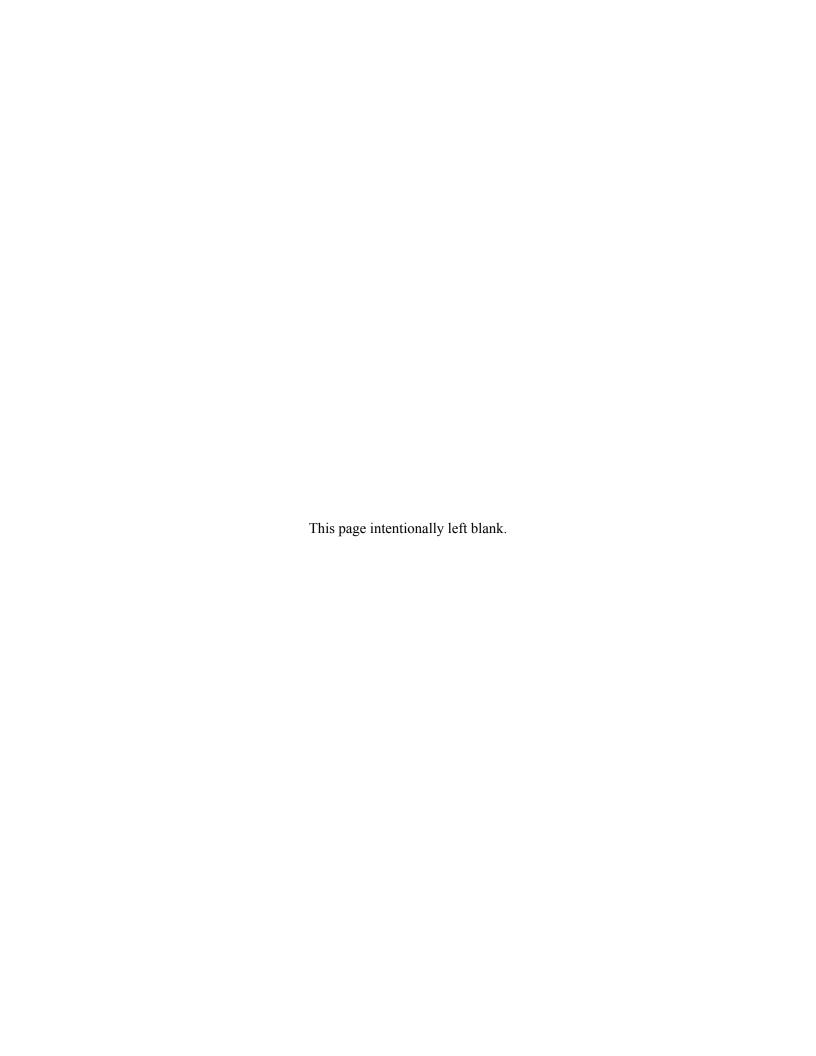
In addition, pursuant to the continuing disclosure undertakings relating to certain sewer revenue bonds defeased on May 12, 2016 (the "Sewer Bonds Defeasance"), the County agreed to provide timely notice of the Sewer Bonds Defeasance. Pursuant to the escrow deposit agreement dated May 12, 2016, between the County and its Escrow Agent, the Escrow Agent agreed to provide notice to EMMA of the Sewer Bonds Defeasance within two days of the date of the agreement. The Escrow Agent did not provide this notice within the two-day period. After inquiry from the County, the Escrow Agent did provide such notice, but not within the time periods required by the relevant continuing disclosure undertakings. The County has strengthened its procedures to ensure that event notices to be provided by outside entities on the County's behalf are done within the required time periods.

Except as described under this caption, in the five years preceding the date of this Official Statement, the County has materially complied with its undertakings under Rule 15c2-12.

APPENDIX E

SEWAGE SYSTEM OF PRINCE WILLIAM COUNTY, VIRGINIA

The information contained in this Appendix (the "Information") is intended solely to provide potential investors with certain financial and operating information pertaining to the sewage systems of Member Jurisdictions, the revenues of which are the only source from which Member Jurisdictions are obligated to make payments with respect to UOSA's Bonds. UOSA has undertaken no independent investigation of, has not otherwise verified, and can make no representation or warranty with respect to, the Information.



PRINCE WILLIAM COUNTY

Prince William County Service Authority

In the County, the Prince William County Service Authority (the "Authority") is responsible for the facilities and operations that provide water and wastewater services in separate areas of the County including the portion of its sewerage system located in the Upper Occoquan Sewage Authority ("UOSA") service area. 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 Board of County Supervisors of Prince William County, Virginia on January 21, 1983, and is chartered by the State Corporation Commission.

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 water systems, sewer systems or sewage disposal systems and garbage and refuse collection and disposal systems located within the County, (ii) issue bonds of the Authority, payable solely from revenues, to pay all or any part of the cost of a water system, sewer system, sewage disposal system, or garbage and refuse collection and 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 any water system, sewer system, sewage disposal system, or garbage and refuse collection and disposal system, or any combination of such systems 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.

Directors

The Authority is governed by its Board of Directors consisting of eight members appointed by the Board of County Supervisors for four-year terms. The following chart lists the current members of the Board of Directors, the occupation of each Director, the expiration date of each Director's term and the year in which each Director was appointed.

Member	Occupation	Term Expires February	Year First Appointed
B. Paul O'Meara, Chairman	Owner, Gum Spring, LLC (property management company)	2023	2020
Paul Colangelo, Jr., Vice Chairman	CEO, Avenu Insights & Analytics	2023	2021
Harry Wiggins, Secretary-Treasurer	Retired	2024	2020
Jim Almond	Regional Vice President, Virginia – Boys & Girls Clubs of Greater Washington	2023	2021
Dean E. Dickey	Retired	2023	2021
Joyce P. Eagles	Retired	2026	1990
Dr. K. Jack Kooyoomjian	Retired Supervisory Environmental Engineer, U.S. Environmental Protection Agency	2023	1995
Marlo Thomas Watson	CEO, The Marlo Company, Inc.	2023	2019

Organization

The Authority is organized into 10 divisions: (i) Finance, (ii) Management and Budget, (iii) Information Technology, (iv) Engineering & Planning, (v) Operations and Maintenance, (vi) Environmental Services and Water Reclamation, (vii) Human Resources and Organizational Development, (viii) Communications, (ix) Enterprise Asset Management, and (x) the General Manager's Office. The General Manager's Office oversees these divisions and has overall responsibility for the Authority's operations.

Principal Authority Staff and Outside Professionals

Calvin D. Farr, Jr. - General Manager/Chief Executive Officer. Prior to his role at the Service Authority, Mr. Farr was the Director of the Department of Public Utilities for the City of Richmond where he provided leadership in the areas of water, wastewater, storm water, natural gas, and street light utilities. Mr. Farr's professional experience also includes serving as the Assistant Commissioner of the Department of Watershed Management in Atlanta and as a Group Leader for the Washington Suburban Sanitary Commission. He holds an Executive Masters of Public Management from the University of Maryland, Masters of Environmental Engineering from Johns Hopkins University and Bachelor of Science in Civil Engineering from Old Dominion University. Mr. Farr is also a licensed Professional Engineer (PE) in Virginia, Maryland and the District of Columbia.

Don Pannell - Deputy General Manager/Chief Operating Officer. Mr. Pannell has served as the Deputy General Manager/Chief Operating Officer since July 2019. He began his employment with the Authority in 2005, having previously served as both the Director and the Deputy Director of Operations & Maintenance. Prior to his employment with the Authority, Mr. Pannell served as the Collection and Distribution Manager for the City of Manassas. Mr. Pannell received his BS in Civil Engineering from Virginia Polytechnic Institute and State University and a master's degree in Engineering from Old Dominion University. He is a Registered Professional Engineer.

Astrid B. Nelson – Deputy General Manager/Chief Administrative Officer. Ms. Nelson has served in her current role since September 2019. Since joining the Authority in 2003, she has served in roles of increasing responsibility including Chief of Strategic Business Initiatives, Director of Finance, and Accounting Manager since 2003. Prior to her employment with the Authority, Ms. Nelson was an auditor for Deloitte & Touche, LLP. Ms. Nelson received a BS in Accounting from George Mason University in 1998. She is a Certified Public Accountant.

Sandra Hardeman - Chief People and Talent Officer. Ms. Hardeman joined the Service Authority in March 2022. She has more than 20 years of human resources experience serving Virginia higher education and Kindergarten-Grade 12 organizations, with prior roles as the Director of Employee Relations and Director of Recruitment. Ms. Hardeman holds a Master of Science in Management from Liberty University and is a certified Senior Professional in Human Resources (SPHR and SHRM-CP).

Hari Kurup – Chief Information & Technology Officer. Mr. Kurup joined the Service Authority in March 2022. He has more than 20 years of experience in the software development, utility, manufacturing and service industries. Prior to joining the Service Authority, Mr. Kurup served as the Director of Enterprise Information Technology (IT) Systems for DC Water. He holds an undergraduate degree in Mechanical Engineering from Calicut University and a master's degree in Finance from John Hopkins University. He also has received an Executive Program in General Management (EPGM) Advanced Certificate for Executives from MIT Sloan.

Douglas Shoop - Director of Operations and Maintenance. Mr. Shoop has served as the Director of Operations & Maintenance since September 2019. He began his employment with the Authority in 2011, having previously served as the Deputy Director of Engineering and Planning and as the Operations and Maintenance Collection and Distribution Manager. Prior to his employment with the Authority, Mr. Shoop was the Utility Systems Maintenance Supervisor and a Project Manager for Loudoun Water. His career includes service in the U.S. Marine Corps, consulting engineering, and utility engineering and management. Mr. Shoop received his BS in Civil Engineering from The Pennsylvania State University and is an alum of Leadership Prince William. He is a registered Professional Engineer and a Certified Construction Manager.

Samer Beidas - Director of Engineering and Planning. Mr. Beidas has served as Director of Engineering & Planning since May 2013. Prior to joining the Authority, he was the Public Works Director for the Town of Purcellville and General Manager of the Department of Environmental Services for the City of Falls Church. Mr. Beidas received a BS in Civil Engineering with Construction Option in 1984 and MS in Civil Engineering from North Carolina State University in 1986. He is a registered Professional Engineer and Certified Construction Manager.

Brian Sipes –Director of Finance. Mr. Sipes joined the Authority in September 2018 and has served in his current role since October 2019. Prior to his employment with the Authority, he served in a regulatory role with the Public Company Accounting Oversight Board and, prior to that, as an audit senior manager with Grant Thornton LLP. Mr. Sipes received a BS in Accounting from George Mason University in 2000. He is a Certified Public Accountant.

Lyle G. Beefelt - Director of Management and Budget. Mr. Beefelt has served as Director of Management and Budget since June 2006. Prior to that, Mr. Beefelt was employed for eighteen years as the Financial Analyst and Senior Financial Analyst in the Division of Finance. Mr. Beefelt received a BA in Economics from Brigham Young University in 1984.

Tony Piccione – Director of Information Technology. Mr. Piccione has served as the Director of Information Technology since July 2019. He began his career with the Authority in 2006 as Systems Administrator before serving as Network Services Manager and Deputy Director. Mr. Piccione is a Cisco Certified Network Professional, Microsoft Certified Systems Engineer and VMware Certified Professional.

Kathy Bentz - Director of Communications & Community Engagement. Ms. Bentz has more than 25 years of experience in communications and community engagement in Prince William County. She previously served as Executive Director of Leadership Prince William, owned Bentz Communications LLC and served as Communications Director for Prince William County Government. Ms. Bentz has a Bachelor of Science in Print Journalism from West Virginia University and a master's in Public Communication from The American University.

Jeanetta Williams - Director of Data Management. Ms. Williams has served as Director of Data Management since October 2018. She began her career at the Authority in May 2017 as Deputy Director of Data Management. Prior to joining the Authority, Ms. Williams was the Enterprise Programs Manager and Stormwater Utility Manager for the City of Suffolk, Virginia. Ms. Williams received her BS from Old Dominion University and a Master's in Public Administration from the Strome College of Business at Old Dominion University. She is a Certified Project Management Professional and Geographic Information System Professional.

Shannon Spence – Director of the Project Management Office. Ms. Spence is a Professional Engineer and has more than 30 years of experience in construction, water and wastewater facility design and project management. She previously worked for large design develop consulting firms to develop and implement control systems for water and wastewater utilities and to prepare vulnerability assessments and emergency response plans. Ms. Spence also worked as a construction electrician in New York City for 10 years, one of few women in this field. She received a Bachelor of Science in Civil Engineering from the Cooper Union for the Advancement of Science and Art.

McGuireWoods LLP, McLean, Virginia, and Bean, Kinney & Korman, Arlington, VA serve as counsel for the Authority.

Authority Employees

The following chart lists the distribution of the Authority's 353 employees, as of June 30, 2022.

Division	Employees	
Operations and Maintenance	107	
Environmental Services and Water Reclamation	66	
Finance	58	
Engineering & Planning	32	
Management and Budget	28	
Information Technology	17	
Data Management	16	
Executive Management	8	
Human Resources and Organizational Development	11	
Communications	10	

Financial and Budgetary Procedures

The Director of Finance manages the Authority's accounting, billing, collection, customer service, field service, rate setting and internal compliance programs. The Director of Management and Budget manages the Authority's budget, investment portfolio, performance analysis, procurement, and warehouse functions. The Deputy General Manager/Chief Administrative Officer oversees the Divisions of Finance and Management and Budget.

When developing its budget and financial planning, the Authority uses a strategic plan developed with input from the Board of Directors, 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 maintains a model of its finances that projects forward 20 years, with particular attention to the subsequent five-year period. This model includes projections of water and sewer capacity utilization, system growth and related availability fee revenue, operating revenues and expenses, debt service requirements, capital project spending, and cash flows.

The Authority also maintains and updates a Capital Improvements Program on an annual basis, which details capital projects designated for system expansion and rehabilitation. The Capital Improvements Program contains planned spending for the subsequent five-year period and estimated capital spending for identified projects in subsequent years. The Division of Engineering updates and prepares the Capital Improvements Program annually for presentation to the Board. The Board reviews the draft prepared and ultimately approves a 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 Improvements Program and strategic planning to project necessary rate increases and additional capacity requirements, 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 divisions provides input in the preparation of the annual capital and operating budget. The budget is typically submitted to the Board of Directors in April and approved in May 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 of Directors, General Manager, or Division Directors with oversight by the Division of Management and Budget. Payments of invoices are also subject to review and approval at the Division level with overall oversight by the Director of Finance.

The Authority has a conservative approach to managing its cash. The Authority's investment portfolio is reviewed by an internal investment committee 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 water and sewer

commitments. In making investments, the Authority considers cash flow requirements as well as the quality and return of potential investments.

The Authority's risk management program includes ongoing review of internal compliance and financial controls, insurance analysis, regulatory compliance and safety and loss control.

The Authority has approximately 95,805 accounts with water and sewer service, which are billed monthly. Bills are due and payable 24 days from the invoice date. Past due amounts are noted on the next bill and assessed a 10% late payment charge if the balance remains unpaid. The Authority takes all appropriate steps to enforce collection of overdue charges to include collecting deposits from tenant accounts, disconnection of service for nonpayment, filing a lien against the property if eligible to be liened and use of a collection agency when other collection methods are not successful. A \$35 delinquency fee is assessed to all accounts identified for further delinquent action, including, mail notification, door tag notification, telephone call or service disconnection. Accounts that are liened must be paid in full prior to opening a new account at that address and prior to the sale of the property. The Authority's losses from uncollected accounts have averaged less than 0.01% of amounts billed during the past five Fiscal Years.

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 and the notes thereto for those fiscal years.

Statements of Revenues, Expenses and Changes in Net Position

Fiscal Years Ended June 30,

2022

Operating Revenues \$ 111,625,426 \$ 111,478,707 \$ 116,694,479 \$ 120,192,707 \$ 123,650,905 Development Charges 1,317,157 1,603,267 1,775,068 1,548,490 1,497,025 Other 817,246 748,216 684,730 794,785 775,640 Total Operating Revenues \$ 13,759,829 \$ 13,830,190 \$ 19,154,277 \$ 122,535,982 \$ 125,923,570 Operating Expenses: \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources \$ 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services \$ 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies \$ 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other \$ 5,165,002 \$ 88,014,416 \$ 89,302,187 \$ 89,860,259 \$ 29,047,321 Total Operating Expenses \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 333,876,249 Depreciation and Amortization <th></th> <th></th> <th>2018</th> <th></th> <th>2019</th> <th></th> <th>2020</th> <th></th> <th>2021</th> <th>-</th> <th>ZUZZ Umanditad)</th>			2018		2019		2020		2021	-	ZUZZ Umanditad)
Water and Sewer User Charges \$ 111,625,426 \$ 111,478,707 \$ 116,694,479 \$ 120,192,707 \$ 123,650,905 Development Charges 1,317,157 1,603,267 1,775,068 1,548,490 1,497,025 Other 817,246 748,216 684,730 794,785 775,640 Total Operating Revenues \$ 113,759,829 \$ 113,830,190 \$ 119,154,277 \$ 122,535,982 \$ 125,923,570 Operating Expenses: Personnel Services \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses \$ 81,652,349 \$ 86,014,416 \$ 89,302,187 \$ 89,860,259 \$ 92,047,321	O 4' D		2018		2019		2020		2021	(Unaudited)
Development Charges Other 1,317,157 (817,246) 1,603,267 (748,216) 1,775,068 (84,730) 1,548,490 (794,785) 1,497,025 (775,640) Total Operating Revenues 113,759,829 113,830,190 119,154,277 122,535,982 125,923,570 Operating Expenses: Personnel Services 36,477,254 38,088,662 39,352,185 38,988,019 39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Income Before Depreciation and Amortization 32,107,480 27,815,774 29,852,090 32,675,723 33,876,249 Depreciation and Amortization 38,297,308 40,989,979 42,260,795 43,261,866 44,260,700 Non-Operating Income (Expenses) 27,777,731 21,872,652 <th< td=""><td></td><td>ф</td><td>111 (25 42)</td><td>ф</td><td>111 470 707</td><td>Φ</td><td>116 604 470</td><td>Φ</td><td>120 102 707</td><td>Φ</td><td>122 (50 005</td></th<>		ф	111 (25 42)	ф	111 470 707	Φ	116 604 470	Φ	120 102 707	Φ	122 (50 005
Other Total Operating Revenues 817,246 748,216 684,730 794,785 775,640 Total Operating Revenues \$113,759,829 \$13,830,190 \$19,154,277 \$122,535,982 \$125,923,570 Operating Expenses: Personnel Services \$36,477,254 \$38,088,662 \$39,352,185 \$38,988,019 \$39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses 81,652,349 86,014,416 89,302,187 89,860,259 92,047,321 Operating Income Before Depreciation and Amortization 38,297,308 40,989,979 42,260,795 43,261,866 44,260,700 Operating Loss (6,189,828) (13,174,205) (12,408,705) (10,586,143) (10,384,45		D		3		\$		Þ		\$	
Operating Expenses: \$ 113,759,829 \$ 113,830,190 \$ 119,154,277 \$ 122,535,982 \$ 125,923,570 Operating Expenses: Personnel Services \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses 81,652,349 86,014,416 89,302,187 89,860,259 92,047,321 Operating Income Before Depreciation and Amortization 32,107,480 27,815,774 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization 38,297,308 40,989,979 42,260,795 43,261,866 44,260,700 Operating Loss (6,189,828) (13,174,205) (12,408,705) (10,586,143) (10,384,451)	1 0										
Operating Expenses: Personnel Services \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources \$ 24,375,783 \$ 25,336,192 \$ 28,030,998 \$ 27,232,073 \$ 27,542,977 Contractual Services \$ 9,637,841 \$ 10,303,875 \$ 9,561,195 \$ 11,322,160 \$ 11,438,105 Materials and Supplies \$ 5,996,469 \$ 6,247,372 \$ 5,649,709 \$ 5,662,684 \$ 6,691,542 Other \$ 5,165,002 \$ 6,038,315 \$ 6,708,100 \$ 6,655,323 \$ 6,805,891 Total Operating Expenses \$ 81,652,349 \$ 86,014,416 \$ 89,302,187 \$ 89,860,259 \$ 92,047,321 Operating Income Before Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization \$ 38,297,308 \$ 40,989,979 \$ 42,260,795 \$ 43,261,866 \$ 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): \$ 27,777,731				_		Φ.		Φ.		Φ.	
Personnel Services \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Income Before 81,652,349 86,014,416 89,302,187 89,860,259 92,047,321 Depreciation and Amortization 32,107,480 27,815,774 29,852,090 \$ 32,675,723 33,876,249 Depreciating Loss (6,189,828) (13,174,205) (12,408,705) (10,586,143) (10,384,451) Non-Operating Income (Expenses): 27,777,731 21,872,652 28,996,478 36,390,288 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	Total Operating Revenues	\$	113,759,829	\$	113,830,190	\$	119,154,277	\$	122,535,982	\$	125,923,570
Personnel Services \$ 36,477,254 \$ 38,088,662 \$ 39,352,185 \$ 38,988,019 \$ 39,568,806 Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Income Before 81,652,349 86,014,416 89,302,187 89,860,259 92,047,321 Depreciation and Amortization 32,107,480 27,815,774 29,852,090 \$ 32,675,723 33,876,249 Depreciating Loss (6,189,828) (13,174,205) (12,408,705) (10,586,143) (10,384,451) Non-Operating Income (Expenses): 27,777,731 21,872,652 28,996,478 36,390,288 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	Onorating Evnoneses										
Purchased Resources 24,375,783 25,336,192 28,030,998 27,232,073 27,542,977 Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses \$ 81,652,349 \$ 86,014,416 \$ 89,302,187 \$ 89,860,259 \$ 92,047,321 Operating Income Before Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)		Ф	26 177 251	¢	20 000 662	Φ	20 252 195	Ф	20 000 010	Φ	20 560 906
Contractual Services 9,637,841 10,303,875 9,561,195 11,322,160 11,438,105 Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses 81,652,349 86,014,416 89,302,187 89,860,259 92,047,321 Operating Income Before Depreciation and Amortization 32,107,480 27,815,774 29,852,090 32,675,723 33,876,249 Depreciation and Amortization Operating Loss 38,297,308 40,989,979 42,260,795 43,261,866 44,260,700 Operating Loss (6,189,828) (13,174,205) (12,408,705) (10,586,143) (10,384,451) Non-Operating Income (Expenses): 27,777,731 21,872,652 28,996,478 36,390,288 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)		Ф		Ф		Ф		Ф	, ,	Ф	
Materials and Supplies 5,996,469 6,247,372 5,649,709 5,662,684 6,691,542 Other 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Total Operating Expenses \$ 81,652,349 \$ 86,014,416 \$ 89,302,187 \$ 89,860,259 \$ 92,047,321 Operating Income Before Depreciation and Amortization Operating Loss \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)											
Other Total Operating Expenses 5,165,002 6,038,315 6,708,100 6,655,323 6,805,891 Operating Income Before Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)											
Total Operating Expenses \$ 81,652,349 \$ 86,014,416 \$ 89,302,187 \$ 89,860,259 \$ 92,047,321 Operating Income Before Depreciation and Amortization and Amortization Operating Loss \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 33,876,249 Depreciation and Amortization Operating Loss \$ 38,297,308 \$ 40,989,979 \$ 42,260,795 \$ 43,261,866 \$ 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	**										
Operating Income Before Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 \$ 33,876,249 Depreciation and Amortization Operating Loss \$ 38,297,308 \$ 40,989,979 \$ 42,260,795 \$ 43,261,866 \$ 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)		Φ.		Φ		Ф		ф		Ф	
Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 \$ 33,876,249 Depreciation and Amortization Operating Loss \$ 38,297,308 \$ 40,989,979 \$ 42,260,795 \$ 43,261,866 \$ 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) \$ 2,735,103 \$ 9,844,877 \$ 10,426,352 722,348 (5,189,453)	Total Operating Expenses	\$	81,652,349	\$	86,014,416	\$	89,302,187	\$	89,860,259	\$	92,047,321
Depreciation and Amortization \$ 32,107,480 \$ 27,815,774 \$ 29,852,090 \$ 32,675,723 \$ 33,876,249 Depreciation and Amortization Operating Loss \$ 38,297,308 \$ 40,989,979 \$ 42,260,795 \$ 43,261,866 \$ 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) \$ 2,735,103 \$ 9,844,877 \$ 10,426,352 722,348 (5,189,453)	Operating Income Perfore										
Depreciation and Amortization 38,297,308 40,989,979 42,260,795 43,261,866 44,260,700 Operating Loss \$ (6,189,828) \$ (13,174,205) \$ (12,408,705) \$ (10,586,143) \$ (10,384,451) Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)		\$	32 107 480	\$	27 815 774	\$	29 852 090	\$	32 675 723		33 876 249
Non-Operating Income (Expenses): \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	Depreciation and Amortization	Ψ	32,107,400	Ψ	27,013,774	Ψ	27,032,070	Ψ	32,073,723		33,070,247
Non-Operating Income (Expenses): Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	Depreciation and Amortization		38,297,308		40,989,979		42,260,795		43,261,866		44,260,700
Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)	Operating Loss	\$	(6,189,828)	\$	(13,174,205)	\$	(12,408,705)	\$	(10,586,143)	\$	(10,384,451)
Availability Fees \$ 27,777,731 \$ 21,872,652 \$ 28,996,478 \$ 36,390,288 \$ 21,225,247 Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)											
Investment Income (Loss) 2,735,103 9,844,877 10,426,352 722,348 (5,189,453)		;									
	Availability Fees	\$	27,777,731	\$	21,872,652	\$	28,996,478	\$	36,390,288	\$	21,225,247
Grant Revenues - 5,000 1,502,167 1,483,020	Investment Income (Loss)		2,735,103		9,844,877		10,426,352		722,348		(5,189,453)
	Grant Revenues		-		-		5,000		1,502,167		1,483,020
Payments for UOSA Debt Service (10,802,414), (10,707,029) (10,686,076) (11,099,831) (11,467,146)	Payments for UOSA Debt Service		(10,802,414),		(10,707,029)		(10,686,076)		(11,099,831)		(11,467,146)
Equity Interest in UOSA (7,196,620) (7,202,430) (4,042,609) (4,835,657) (7,919,751)	Equity Interest in UOSA		(7,196,620)		(7,202,430)		(4,042,609)		(4,835,657)		(7,919,751)
Interest Expense (3,718,274) (3,262,054) (3,151,552) (2,891,220) (2,511,491)	Interest Expense		(3,718,274)		(3,262,054)		(3,151,552)		(2,891,220)		(2,511,491)
Purchased Capacity (723,671) (612,337) (668,004) (668,004)											
Other 900,429 376,543 932,625 2,206,454 1,339,017											
Total Non-Operating Income					/		,		,, -		, ,- ·
(Expense), net \$ 8,972,284 \$ 10,312,222 \$ 21,812,214 \$ 21,326,545 \$ (3,708,561)		\$	8,972,284	\$	10,312,222	\$	21,812,214	\$	21,326,545	\$	(3,708,561)
	(1 //				, ,						
Income (Loss) before Contributions	Income (Loss) before Contributions										
from Developers and Others \$ 2,782,456 \$ (2,863,963) \$ 9,403,509 \$ 10,740,402 \$ (14,093,012)		\$	2,782,456	\$	(2,863,963)	\$	9,403,509	\$	10,740,402	\$	(14,093,012)
Contributions from Developers and					,						(, , , ,
Others 15,792,666 27,083,099 13,872,544 23,648,463 23,683,518			15,792,666		27.083.099		13,872,544		23,648,463		23,683,518
Change in Net Position \$ 18,575,122 \$ 24,219,116 \$ 23,276,053 \$ 34,388,865 \$ 9,590,506		\$		\$		\$		\$		\$	
		4	- 5,0 , 0 , 1 22	4	,, ,	Ψ	_2,_, 0,000	4	2 .,200,000	4	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Net Position, Beginning of Year \$1,286,322,176 \$1,304,897,298 \$1,329,116,414 \$1,352,392,467 \$1,386,781,332						_	, , ,				
Net Position, End of Year \$1,304,897,298 \$1,329,116,414 \$1,352,392,467 \$1,386,781,332 \$1,396,371,838	Net Position, End of Year	\$1	,304,897,298	\$1	,329,116,414	\$1	,352,392,467	\$1	,386,781,332	\$1	,396,371,838

Source: Prince William County Service Authority, Comprehensive Annual Financial Report, Fiscal Years 2017 through 2021.

Management Discussion of Operations

Operating revenues consist of water and sewer user charges, development charges and other operating revenues, which primarily consist of refuse collection fees, lab testing fees, and grinder pump maintenance fees. Operating revenues are, in part, based on local environmental and economic factors. Demand for water is affected by climatological influences such as temperature, precipitation amounts, and precipitation frequency. In addition, the volume of water sold increases in the summer months as customers increase their water usage for irrigation systems, swimming pools, and other applications.

The Authority's Board of Directors adopts rates and fees to cover the cost of service provided. Water and sewer user charges consist of fixed and variable charges. Variable charges are based on the amount of water used. The amount of water used during the peak season of May through October for outdoor watering and commercial cooling is influenced by the weather. Development charges are impacted by development in the County during the year.

Operating revenues increased \$3.4 million, or 2.8% over the prior fiscal year to \$125.9 million. The increase is primarily due to higher demand. Decreased precipitation resulted in increased water demand for irrigation, particularly during the first quarter of fiscal year 2022. In addition, the number of accounts increased by 1.1%. The Service Authority also resumed late fees and service disconnects, resulting in higher administrative fee revenue of \$1.6 million. Accounts receivable over 90 days decreased to \$1 million at June 30, 2022 due to grant money received from the American Recovery Plan Act to assist past-due customers, as well as the Authority working with past-due customers to establish payment plans.

Water and Sewer Revenue Bonds, Debt Service Payments, and Other Debt Obligations

The Authority has \$46,310,000 in water and sewer system revenue bonds outstanding under a Master Indenture of Trust dated as of May 1, 1991, as supplemented and amended (the "Master Indenture"), between the Authority and U.S. Bank National Association, as master trustee. The bonds are limited obligations of the Authority payable solely from net revenues derived from the Authority's water and sewer operations and other funds pledged for their payment under the terms of the Master Indenture.

In addition, the Authority borrowed money from the Virginia Water Facilities Revolving Loan Fund (the "Revolving Fund"), acting by and through the Virginia Resources Authority ("VRA"), for the purpose of construction for expansion and improvements at the HL Mooney Advanced Water Reclamation Facility. The loans are secured by a pledge of revenues from the Authority's water and wastewater system and are deemed to be parity indebtedness under the terms of the Master Indenture.

The following table shows total debt service requirements for indebtedness of the Authority:

	Revenue Bonds		<u>VRA</u>			
Fiscal Year Ending June 30,	Principal ⁽¹⁾	Interest ⁽¹⁾	Principal	Interest	Total Debt Service	
2023	\$ 3,440,000	\$1,436,213	\$ 5,612,625	\$683,473	\$11,174,334	
2024	3,575,000	1,305,148	5,711,366	584,732	11,178,270	
2025	3,705,000	1,168,595	5,811,853	484,247	11,171,720	
2026	3,465,000	1,034,071	5,111,805	385,879	9,998,781	
2027	3,600,000	915,963	5,200,148	297,535	10,015,673	
2028-2032	16,835,000	2,780,274	13,394,638	358,949	33,368,862	
2033-2037	11,690,000	539,250	_	-	12,229,250	

⁽¹⁾ Reflects principal and interest payable to the trustee on June 30 of each fiscal year. The trustee makes payments to the bondholders on July 1.

In addition, the Authority makes payments to UOSA to fund the Authority's share of UOSA's debt service. The Authority records its share of debt service payments as non-operating expenses in its financial statements, and as operating expenses in its debt covenant calculations in accordance with the terms of the Master Indenture. UOSA's annual debt service for current and future years is funded by each of the participating jurisdictions based on their allocated capacity with certain modifications. The Authority's future debt service requirements for principal and interest to UOSA, net of UOSA accumulated debt service reserves, are as follows:

Fiscal Year Ending June 30,	Principal ⁽¹⁾	Interest ⁽¹⁾	Debt Service Reserve Fund	Total Debt Service
2023	\$ 7,798,033	\$ 4,102,467		\$ 11,900,500
2024	7,984,249	3,915,958		11,900,207
2025	8,192,392	3,711,749		11,904,141
2026	11,442,690	3,493,957	\$ (2,753,110)	12,183,537
2027	8,904,253	3,257,573		12,161,826
2028-2032	35,805,564	13,884,310	(62,519)	49,627,355
2033-2037	30,855,531	10,086,466	(62,519)	40,879,478
2038-2042	30,474,211	4,736,870	(5,974,746)	29,236,335
2043-2047	8,821,028	1,501,653	(1,927,399)	8,395,282
2048-2052	5,229,659	437,267	(1,703,362)	3,963,564

Service Area and Connection Policy

As of June 30, 2022, the Authority provided service to approximately 96,814 accounts. The Authority's service area boundaries are coterminous with the County's boundaries, which had a population of approximately 484,000 as of June 30, 2021. Under an agreement with the County, the Authority provides retail water and sewer service to County residents. The Authority does not provide service to those residents on well and septic systems or to residents in the County's unincorporated Dale City area, which residents receive their water and sewer from the Virginia-American Water Company ("Virginia American"), a subsidiary of American Waterworks. According to demographic information available from the United States Census Bureau (2020), the Dale City area has a population of approximately 72,000 residents. With the exception of the portion of the County comprising the former Yorkshire Sanitary District, neither the County nor the Authority has a mandatory connection policy. The County's Department of Environmental Health, however, can issue permits for wells or septic systems without the Authority's concurrence. Moreover, the Authority, if referred by the County, reviews new zoning applications and presents its recommendations to the County's Planning Commission, which is the body that makes recommendation to approve land use entitlement applications, with final approval of such applications by the Board of County Supervisors. Generally, in areas where the Authority's utility service is available, residents and businesses connect to the System.

Existing Facilities and Capacity

The Authority has the following facilities and water and wastewater capacity:

	Fiscal Year 2022
Miles of water lines	1,308
Miles of sewer lines	1,150
Wastewater pumping stations	65
Water tank storage capacity (million gallons)	26.1
Number of fire hydrants	12,559
Water capacity (mgd):	
Capacity at Fairfax Water	62.4
Capacity at City of Manassas	5.0
Authority wells	0.4
Total water capacity	67.8
Wastewater treatment capacity (mgd):	
at the Mooney Facility	24.0
at UOSA	19.8
Total wastewater treatment capacity:	43.8

Source: Prince William County Service Authority.

The Authority purchases water pursuant to contractual agreements with Fairfax Water and the City of Manassas. Water is supplied by Fairfax Water through parallel 24-inch and 36-inch lines from the Fairfax Water Griffith Treatment Plant to the eastern portion of the County, inclusive of the areas of Lake Ridge, Montclair, Woodbridge, Dumfries, and Triangle. In addition, a 42-inch transmission main, owned by the Authority, supplies water from Fairfax Water along Route 28 at Bull Run to the Authority's Stonewall Jackson Pumping Station near the City of Manassas, which pumps water purchased from Fairfax Water to customers in Bristow, Gainesville and Haymarket. The majority of water supplied by the City of Manassas is delivered at the City of Manassas' water treatment plant to the Authority's 24-inch transmission main in Gainesville. The Authority also has a small number of raw water wells representing less than 1% of total water purchased and produced.

The Authority's H. L. Mooney Advanced Water Reclamation Facility (the "Mooney Facility") serves the eastern portion of the County, whereas UOSA serves the western portion of the County.

The Authority is a member of the Virginia Water and Wastewater Response Network ("WARN"), a network of water utilities providing mutual aid to each other to respond to and recover from emergencies. The mission of WARN is to provide a method whereby Virginia water and wastewater utilities that have sustained damages from natural or manmade events could obtain emergency assistance in the form of personnel, equipment, materials and other associated services as necessary from other water and wastewater utilities. The objective is to provide rapid, short term deployment of emergency services to restore the critical operations of the impacted utility. The Authority also has emergency agreements for treated water with the City of Manassas and Virginia American.

Water Supply Contracts

In Fiscal Year 2022, the Authority delivered an average of 40 million gallons per day ("mgd") of water to its customers, and purchased and produced a total of approximately 11.9 billion gallons of water. More than 99% of that water was purchased by the Authority, with the remainder produced by 10 raw water wells owned and operated by the Authority.

The Authority has several agreements with Fairfax Water that collectively reserve treated water capacity of 62.4 mgd for the Authority. Capacity agreements with Fairfax Water represent approximately 92% of the Authority's total available purchased water capacity. These agreements allow for the purchase of additional capacity, if available, based on actual construction and administrative costs negotiated at the time of sale. In the most recent May 2017 transaction, the Authority purchased an additional 5.0 mgd of water capacity at the Corbalis Water Treatment Plant for approximately \$26.6 million, bringing the Authority's total reserved capacity at the plant to 25 mgd. The Authority pays a per thousand gallon water service charge based on Fairfax Water's operation, maintenance, and general and administrative costs divided by total consumption billed. In Fiscal Year 2022, the Authority purchased approximately 10.1 billion gallons of treated water under the Fairfax Water agreement at an approximate rate of \$1.29 per 1,000 gallons. The Authority also participates in certain projects, such as transmission mains and plant upgrades based on the Authority's proportionate share of the project.

The Authority has a water capacity and service agreement with the City of Manassas (the "City") under which the City reserves 5.0 mgd of treated water capacity for the Authority at the City's water treatment facility at Lake Manassas. The agreement with the City represents approximately 7% of the Authority's total available purchased water capacity. The agreement also allows for the use of 2.0 mgd by either party if needed. The Authority is obligated to pay the City's wholesale rate for purchases at the water treatment facility and is obligated to pay the City's wholesale rate plus a wheeling charge for water taken at other delivery points. The City's wholesale rate consists of fixed and variable costs per the agreement. The Authority also shares in the cost of certain capital improvements based on the Authority's reserved capacity as a percentage of the total permitted capacity at the City's water treatment facility. In Fiscal Year 2022, the Authority purchased approximately 1.7 billion gallons of treated water under the City agreements at an approximate rate of \$1.12 per 1,000 gallons.

Wastewater Treatment Agreement

In Fiscal Year 2021, the Authority was responsible for the collection of an average of 27.7 mgd of wastewater of which 52% was treated by the Authority and 48% was treated by UOSA.

The Mooney Facility serves the eastern portion of the County and has a capacity of 24 mgd. In 2016, the Authority completed a large upgrade and expansion project at the Mooney Facility at a cost of approximately \$132.5 million. To meet new discharge requirements established by the Environmental Protection Agency and the Virginia Department of Environmental Quality to protect the Chesapeake Bay, the Authority improved the level of treatment provided to the "limit of technology" available for nutrient removal. Additionally, the expansion increased the capacity from 18 mgd to 24 mgd to satisfy projected growth in the Authority's service area until the year 2030. The Authority received \$34.3 million in grant funding from the Virginia Water Quality Improvement Fund for this project and financed \$85 million with loans from the Virginia Water Facilities Revolving Fund.

The western portion of the Authority's service area is served by UOSA, which is a regional sewage treatment facility. UOSA and its four member jurisdictions have entered into a service agreement (the "Service Agreement"), which governs the capacity and use of the UOSA facilities. UOSA was created pursuant to the Enabling Act to be the single regional entity to construct, finance and operate the regional sewage treatment facility for the upper portion of the Occoquan Watershed.

Any member jurisdiction may reallocate any portion of its allocated plant capacity to any other member jurisdiction on such terms as may be mutually agreeable, subject to approval of the State Water Control Board, or, if the State Water Control Board should relinquish the responsibility for allocation of plant capacity, to approval of UOSA. In 2008, and again in 2011, the Authority purchased with cash reserves an additional 2 mgd each, for a combined total of 4 mgd of capacity from Fairfax County for \$33,710,000 and \$39,807,586, respectively. In 2017, the Authority purchased with cash reserves an additional 5 mgd of capacity from Fairfax County for \$26,595,887.

Pursuant to agreements between the County and the Authority, the Authority pays directly to UOSA 100% of all charges due from the County to UOSA under the Service Agreement. The Authority also has agreed with the County for the benefit of UOSA to (i) deliver all sewage it collects in the UOSA service area to UOSA for treatment up to the County's maximum allocated capacity in the UOSA treatment plant, (ii) fix and collect rates and charges sufficient to make the payments required to be made by the County to UOSA under the Service Agreement, (iii) conduct its operations relating to sewage collected in the UOSA service area in accordance with the Service Agreement and (iv) neither commit or fail to perform any act which would constitute a breach of the Service Agreement if done by the County.

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 2022.

Customer	Туре	Amount Billed (in thousands)	Percentage of Revenue
Prince William County Schools	Schools	\$1,695	1.37%
City of Manassas Park	Utility	1,163	0.94
Amazon	Data Centers	895	0.72
Potomac Club	Housing	773	0.63
Westgate Apartments	Housing	638	0.52
Summerland Heights Apartments	Housing	570	0.46
Navy Military Housing	Housing	540	0.44
Potomac Mills Mall	Shopping Mall	471	0.38
Wellington Apartments	Housing	464	0.38
Sentara Potomac Hospital	Hospital	443	0.38

Source: Prince William County Service Authority, Division of Finance.

The ten largest customers together represent less than 7.0% of total water and sewer billing, and no single customer represents more than 1.5% of total water and sewer billing.

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 five Fiscal Years.

]	Millions of Gallon	S
Fiscal Year	Customer Accounts	Water Produced	Water Purchased	Water Peak Day Flow	Wastewater Treated
2018	92,654	26	10,106	40.5	9,671
2019	93,498	22	9,869	36.9	11,293
2020	94,632	36	10,465	42.1	9,794
2021	95,805	38	10,912	52.1	10,644
2022	96,814	40	11,830	44.4	10,096

Source: Prince William County Service Authority, Division of Finance.

Rate Regulation

The Enabling Act provides that the Authority is authorized to fix and revise from time to time rates, fees and other charges for the use of and for the services furnished or to be furnished by any water system, sewer system, sewage disposal system or garbage and refuse collection and 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 Enabling Act states that the rates, fees and charges of the Authority are subject to the jurisdiction of the State Corporation Commission and any applicable regulation. However, the State Corporation Commission, on November 15, 1963, in Case No. 16516, ruled that it had no jurisdiction to review or revise rates of authorities such as the Authority, except that, upon the application of a bondholder, the Commission may require that rates be sufficient to comply with the above statutory requirements. That decision was not appealed. Subject to the foregoing, 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

In setting its user rate and availability fee structure, the Authority's general practice has been to cover projected operating costs and capital replacement costs with user rates and to cover certain projected expansion-related capital improvement costs and large capacity commitments funded through the issuance of debt with availability fees. That practice generally allows growth in use of the Authority's services to pay for the additional costs of expanding the System's capacity.

Current User Rate Structure. The principal source of funds to pay operation and maintenance expenses is user fees for both water and sewer. The user fee, based upon metered water consumption, consists of a fixed monthly service charge, plus a commodity charge per 1,000 gallons for water and sewer use. The present monthly user fees for 3/4" meter customers, effective on January 1, 2022, are as follows:

	Water	Sewer	
Monthly service charge	\$6.85	\$12.10	
Charge per 1,000 gallons – Residential	3.45	6.65	
Charge per 1,000 gallons – Commercial	3.80	7.25	

In 2022, the typical single-family residential customer of the Authority consumed approximately 6,000 gallons of water monthly and is billed a monthly user fee of \$27.55 for water and \$52.00 for sewer.

Residential accounts whose water usage patterns reach peak capacity demands on the System during the period May 1 to October 31 are subject to peak use I and II user rates of \$3.60 per thousand gallons. Residential water consumption in excess of the greater of (i) 7,000 gallons, (ii) 2,000 gallons above the preceding winter average consumption or (iii) 1.3 times the preceding winter average consumption is subject to the peak use I charge and water consumption exceeding the greater of (i) 3 times the preceding winter average consumption or (ii) 21,000 gallons is subject to peak use II charges. Monthly consumption of 7,000 gallons or less is never subject to peak use charges. Commercial customers are subject to high demand I charges year round at \$3.10 per thousand gallons and high demand II charges year round at \$3.40 for water usage in excess of thresholds set by equivalent residential units.

Availability Fee Structure. New customers are charged a one-time availability fee per 3/4" meter equivalent. Revenues derived from availability fees are used to fund: (i) long-term commitments associated with water and sewer treatment capacity at the plants and (ii) certain costs of expansion to the System. The present availability fees for 3/4" meter customers, which became effective on September 1, 2012, are as follows:

\$ 4,600
10,800
\$15,400

Historical Rates and Fees. The following table sets forth historical monthly water and sewer rates and availability fees for the past five Fiscal Years.

Monthly Service Charges(1)			Monthly Volume Charges (2)			Availability Fee(1)			
Fiscal Year	Water	Sewer	Total	Water	Sewer	Total	Water	Sewer	Total
2018	\$5.45	\$ 9.60	\$15.05	\$3.35	\$6.55	\$ 9.90	\$4,600	\$10,800	\$15,400
2019	5.95	10.45	16.40	3.35	6.55	9.90	4,600	10,800	15,400
2020	6.85	12.10	18.95	3.45	6.65	10.10	4,600	10,800	15,400
2021	6.85	12.10	18.95	3.45	6.65	10.10	4,600	10,800	15,400
2022	6.85	12.10	18.95	3.45	6.65	10.10	4,600	10,800	15,400

Source: Prince William County Service Authority, Division of Finance.

Adopted increases in rates and fees were approved in 2018 for user charges that went into effect January 1, 2019 and 2020, and in 2014 for user charges that went into effect January 1, 2017. There are no adopted or pending increases to Availability Fees.

⁽¹⁾ Based on residential 3/4" meter.

⁽²⁾ Monthly residential volume charges are per 1,000 gallons.

Comparative Rates and Fees. The following table sets forth comparative monthly water and sewer rates based on 5,000 gallons a month and residential availability fees for the following jurisdictions as of June 2022:

	Authority	Fairfax County	Loudoun County	Stafford County	City of Manassas
User Charges:					
Water	\$24.10	\$22.28	\$26.46	\$32.62	\$27.07
Sewer	45.35	54.58	39.75	50.63	59.25
Total	\$69.45	\$76.86	\$66.22	\$83.25	\$86.32
Availability Fees:					
Water	\$ 4,600	\$ 4,510	\$ 7,395	\$ 6,900	\$ 4,887
Sewer	10,800	8,592	8,972	3,500	10,952
Total	\$15,400	\$13,102	\$16,367	\$10,400	\$15,839

Source: Prince William County Service Authority, Division of Finance.

Continuing Disclosure Obligations*

As a condition to the issuance of various series of revenue bonds issued by UOSA (the "UOSA Bonds"), for the benefit of the County and other jurisdictions, the County undertook (the "UOSA Undertakings") to provide annual financial information and operating data with respect to the wastewater system within the County. Pursuant to the UOSA Undertakings, the Authority is responsible for making such filings on behalf of the County. The Authority is required to file with EMMA within 270 days of its fiscal year end.

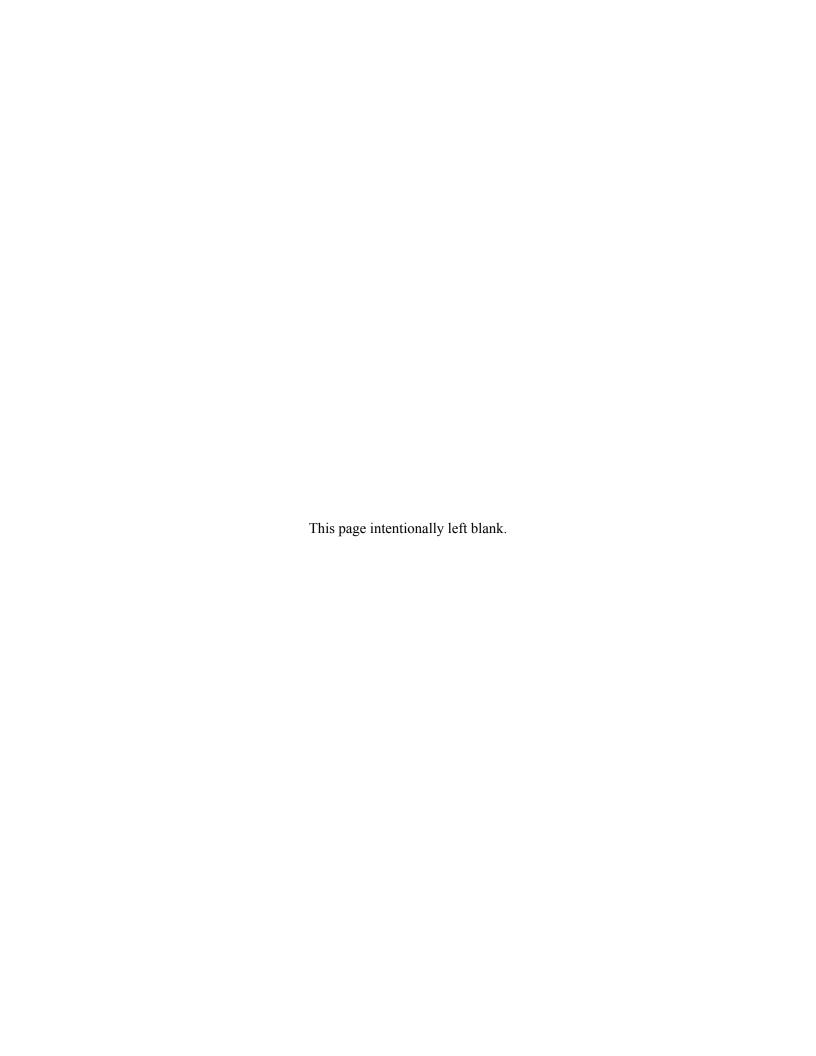
While the Authority timely filed with EMMA its required annual financial information and operating data for Fiscal Years 2017 through 2021, such information was not cross-referenced to the CUSIP numbers for the UOSA Bonds. In June 2018 through 2022, UOSA made the corrective filings needed to incorporate the Authority's annual financial information and operating data for Fiscal Years 2017 through 2021 into the continuing disclosure archive for the UOSA Bonds. Except for the instances mentioned above, the Authority has complied in all material respects with its prior continuing disclosure undertakings under Rule 15c2-12 during the last five years.

^{*} This section has been modified since the Preliminary Official Statement dated November 22, 2022.

APPENDIX F

SEWAGE SYSTEM OF CITY OF MANASSAS, VIRGINIA

The information contained in this Appendix (the "Information") is intended solely to provide potential investors with certain financial and operating information pertaining to the sewage systems of Member Jurisdictions, the revenues of which are the only source from which Member Jurisdictions are obligated to make payments with respect to UOSA's Bonds. UOSA has undertaken no independent investigation of, has not otherwise verified, and can make no representation or warranty with respect to, the Information.



MANASSAS, VIRGINIA

Overview

The City of Manassas, a community of approximately 42,772 residents, is located in Northern Virginia within the Washington, D.C. Metropolitan Statistical Area. Surrounded by Prince William County, the City is thirty miles southwest of the nation's capital and encompasses ten square miles. The City is a regional employment and activity center with a strong employment base in advanced manufacturing, defense contracting, and healthcare. Manassas is a transportation, economic, and cultural hub built around a thriving historic downtown established near a strategic railroad junction.

The City government is organized under a charter, adopted by the General Assembly of Virginia, and amended from time-to-time, which authorizes a council-manager form of government. The governing body, the Mayor and a six-member City Council, is elected at-large for staggered four-year terms and makes policies for administration of the City. The City Council appoints a City Manager to act as Chief Administrative Officer of the City. The City Manager serves at the pleasure of the City Council, carries out its policies, directs business procedures and appoints and may remove all employees, including the heads of the departments as provided by the City Charter.

Sewer System

The City maintains over 142 miles of sewer collection lines that discharge into the regional advanced wastewater treatment collection system for treatment by the Upper Occoquan Sewage Authority ("UOSA"). The City currently has sewer treatment capacity of 9.2 MGD at the UOSA facilities. Pursuant to service contracts between the City and UOSA, the City pledges to establish rates sufficient to cover the payment of charges to UOSA for its percentage of the capital and operation and maintenance cost of the plant and its transmission system. The City also has a 100-million-gallon storage facility so it can average the flow for treatment to UOSA by managing the industrial wastewater flow from Micron Technology during extreme peak periods.

Sewer System Operating Expenses

The City purchases wastewater treatment services from UOSA. The table below shows the operating expenses of the City's Sewer System for the past five fiscal years.

City of Manassas Sewer System Operating Expenses

Fiscal Year Ending June 30	2017	2018	2019	2020	2021
UOSA Contract Treatment	\$ 6,209,102	\$ 5,903,292	\$ 5,954,140	\$ 6,856,217	\$ 6,787,658
UOSA Debt	2,594,689	6,204,761	2,967,838	3,333,754	3,553,392
Other Operating Expenses	3,384,001	3,440,147	3,732,023	3,497,258	3,393,164
Total Operating Expenses	\$12,187,792	\$15,548,200	\$12,654,001	\$13,687,229	\$13,734,214

Financial Operation of the Sewer System

The Sewer Fund is established to account for the provision of sewage treatment for the residents of the City. All activities necessary to provide this service are accounted for in this fund. Activities of this fund are supported through user fees. At present, 100% of availability fees are not considered revenue and instead are treated as contribution in aid of construction and are placed in a restricted fund. Uses of these restricted funds are approved by the Commission and are generally intended for capital improvements when deemed appropriate by the Commission.

Customers, Rates and Charges

For Fiscal Year 2021, residential customers are charged an \$8.65 Monthly Service Charge and \$2.78 per thousand gallons of metered water, plus the variable UOSA Cost Recovery Charge. Over 5,000 gallons the rate is \$4.02 per thousand gallons. New customers are charged \$10,952 as an availability fee for a 5/8" meter.

The tables below summarize the City's customer base and sewer service charges:

Customer Base

Fiscal Year Ending June 30	2017	2018	2019	2020	2021
Year End Connections	11,166	11,181	11,298	11,393	11,453
Growth Rate	.28%	.13%	1.05%	.84%	.53%
	Sewer Ser	vice Char	ges		
July 1, 1992 to June 30, 1995	3.23 pe	r 1000 Gal			
July 1, 1995 to December 31, 2001	3.73 pe	r 1000 Gal			
January 1, 2002 to June 30, 2002	3.82 pe	r 1000 Gal			
July 1, 2002 to June 30, 2003	3.92 pe	r 1000 Gal			
July 1, 2003 to June 30, 2004	4.09 pe	r 1000 Gal			
July 1, 2004 to June 30, 2005	1.13 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2005 to June 30, 2006	1.52 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2006 to June 30, 2007	2.75 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2007 to June 30, 2008	2.95 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2008 to June 30, 2009	3.10 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2009 to June 30, 2011	3.26 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2011 to June 30, 2018	2.48 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2018 to June 30, 2019	2.59 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2019 to June 30, 2020	2.70 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge
July 1, 2020 to June 30, 2021	2.78 pe	r 1000 Gal	. plus the UC	SA Recove	ry Charge

There is a consumption cap for residential customers for the months of May through October: there's no charge for usage in excess of 14,000 gallons of water consumption when the Winter Quarter Average is 10,000 gallons or less.

Availability Fees⁽¹⁾

January 1, 1992 to December 31, 2001	\$ 5,000
January 1, 2002 to June 30, 2002	5,150
July 1, 2002 to June 30, 2003	5,305
July 1, 2003 to June 30, 2004	5,464
July 1, 2004 to June 30, 2005	5,630
July 1, 2005 to June 30, 2015	$12,360^{(2)}$
July 1, 2015 to June 30, 2021	$10,952^{(3)}$

Base rate for single family residences (with 24 fixture units).

⁽²⁾ Actual Effective Date October 1, 2005-No change in 24 Units or 3 BR.

⁽³⁾ Actual Effective Date July 1, 2015-change from fixture units to meter size.

Debt Service Coverage

The following table summarizes the results of operations and debt service for the Sewer System:

City of Manassas Sewer System Debt Service Coverage

	2017	2018	2019	2020	2021
System Revenue:					
Service Charges	\$13,919,640	\$14,125,589	\$14,161,225	\$15,231,368	\$15,553,525
Availability Fees	1,241,920	1,920,604	992,460	1,207,849	536,653
Interest and Other Income	95,384	157,773	286,864	222,759	132,650
Gross System Revenues (1)	\$15,256,944	\$16,203,966	\$15,440,549	\$16,661,976	\$16,222,828
System Direct Operating Expenses (2)	\$10,473,941	10,818,744	\$11,225,848	\$12,899,823	\$12,867,464
Net System Revenue Available for Debt Service	4,783,003	5,385,222	4,214,701	3,762,153	3,355,364
Debt Service Requirement City Bonds	1,210,718	1,227,200	1,256,124	1,404,904	1,737,000
Debt Service Requirement UOSA Bonds	2,594,689	6,204,721	2,967,838	3,333,754	3,553,392

⁽¹⁾ Gross System Revenues include non-operating revenues.

Largest Customers

The following table provides data on the Sewer System's five largest customers for Fiscal Year ended June 30, 2021:

Customers	Amount Billed			
Micron Technology, Inc. IW	\$2,977,058			
PWC Courthouse/Jail	353,168			
Prince William Hospital	223,213			
Manassas Mobile Home Park	85,540			
Manassas City Schools	55,642			

Continuing Disclosure Obligations

In connection with the issuance of previous bonds, the City has entered into continuing disclosure undertakings pursuant to Rule 15c2-12 (the "Prior CDAs"). The City historically has made the annual filings required by the Prior CDAs in the form of its comprehensive annual financial report ("CAFR").

Due to technical oversight in linking otherwise available information to certain CUSIP numbers, the City did not file in a timely manner its financial information for the fiscal year ended June 30, 2016, for some of its outstanding bonds. On April 10, 2018, the City realized the oversight, linked the disclosure to the CUSIPs of all of its outstanding bonds, and filed the appropriate notice with EMMA.

As a condition to the issuance of various series of revenue bonds issued by UOSA for the benefit of the City and other jurisdictions, the City undertook (the "UOSA Undertakings") to provide annual financial information and operating data with respect to the wastewater system within the City. Pursuant to the UOSA Undertakings, the City is required to file the required information with EMMA within 270 days of its fiscal year end. Instead, prior to 2018, the City filed the information with UOSA, and UOSA filed the information with EMMA within UOSA's required timeframe of 365 days.

The City entered into continuing disclosure undertakings (the "Stafford Undertakings") in connection with the issuance of various series of revenue bonds (the "Stafford Bonds") issued by the Industrial Development Authority of the County of Stafford and the City of Staunton, Virginia, for the benefit of the City. Pursuant to the Stafford Undertakings, the City is required to disclose certain financial information within 270 days after the end of the City's fiscal year. While the City independently filed its required annual financial information for fiscal years 2013 and 2017, such information was not cross-referenced to the CUSIP numbers for the Stafford Bonds. In July 2016 and April 2019, respectively, the City made the corrective filings needed to incorporate the City's annual financial information for fiscal years 2013 and 2017 into the continuing disclosure archive for the Stafford Bonds.

⁽²⁾ Direct Operating Expenses exclude depreciation and amortization but include payment to UOSA for debt.

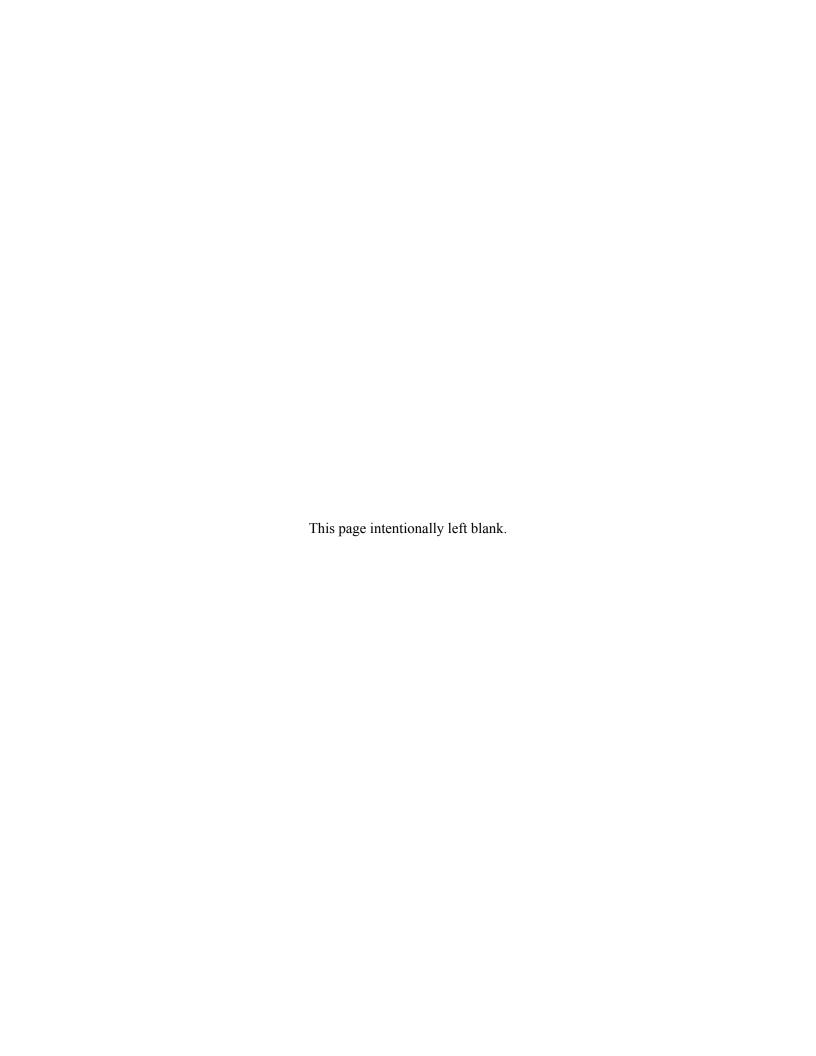
The City also failed to file its operating data for the fiscal year ended 2014, and the notice of a rating change that occurred on March 11, 2014, both of which were required by the undertaking pertaining to the Stafford Bonds issued in 2007 (the "2007 Stafford Bonds"). Following the defeasance of the majority of the City's portion of the 2007 Stafford Bonds on November 13, 2014, the City ceased to be a material participant for purposes of the continuing disclosure undertaking for the 2007 Stafford Bonds. The unrefunded portion of the City's portion of the 2007 Stafford Bonds matured on August 1, 2017.

The City has procedures in place with respect to its continuing disclosure undertakings.

APPENDIX G

SEWAGE SYSTEM OF CITY OF MANASSAS PARK, VIRGINIA

The information contained in this Appendix (the "Information") is intended solely to provide potential investors with certain financial and operating information pertaining to the sewage systems of Member Jurisdictions, the revenues of which are the only source from which Member Jurisdictions are obligated to make payments with respect to UOSA's Bonds. UOSA has undertaken no independent investigation of, has not otherwise verified, and can make no representation or warranty with respect to, the Information.



MANASSAS PARK, VIRGINIA

Overview

The City is located in the northern portion of Prince William County near its border with Fairfax County. A part of the City's western border is contiguous with the eastern border of the City of Manassas. The City comprises an area of approximately 2.53 square miles.

The City of Manassas Park government is organized according to the Council Manager form of government. The Mayor and City Council constitutes the Governing Body of the City, which formulates policy for the administration of the City. The six members of the City Council are elected on an at large basis to serve four-year staggered terms of office. The Mayor is also elected at large for a four-year term and presides at Governing Body meetings and is authorized to vote, as a member of the Governing Body.

The Governing Body appoints the City Manager to serve as the City's chief administrative officer. The City Manager is responsible for implementing the policies of the Governing Body, directing business and administrative procedures and appointing departmental officials and certain other City employees. At the present time, the City Manager is assisted by nine staff departments including Public Works, Police, Fire, Planning & Zoning, Social Services, Finance, Human Resources, Information Technology and Parks & Recreation.

The operation of the public school system is the responsibility of the City School Board. The Governing Body appoints the five members of the School Board to serve three-year staggered terms of office. The Superintendent of Schools is appointed by the School Board. The local share of funds for operating public schools in the City is provided by an appropriation from the City's General Fund to the School Board. The School Board, however, is an autonomous policy-making body in matters governing education and is independent of the Governing Body.

The City Treasurer and the Commissioner of the Revenue are local constitutional officers of the Commonwealth elected by the residents of the City. The City Treasurer is responsible for the collection, investment and management of all monies payable to the City and its School Board. The Commissioner of the Revenue prepares tax billing data comprised of the assessment and the tax levy of real and personal property, and processes the Commonwealth of Virginia income tax returns of City residents.

In Virginia, cities and counties are not overlapping units of government. Each city or county is a distinct political entity providing services for the population within its respective jurisdiction. The City and Prince William County share certain regional services such as court facilities. These regional services are paid for by the jurisdictions on a per-capita basis.

Department of Public Works

The City's Public Works Department consists of street maintenance, building and grounds, solid waste, storm water management, sanitation, vehicle maintenance and water and sewer technical support. The City is responsible for the maintenance of all City streets and traffic signals, public buildings, property, building inspections, utility lines and other public infrastructure. The City contracts refuse collection to Patriot Disposal.

Sewer System

The City of Manassas Park operates and maintains a sanitary sewage collection system for use by the residents of Manassas Park and a portion of Prince William County. This sewage system consists of approximately 31 miles of sewer mains ranging in size from 6 to 12 inches in diameter. Total flows from this sewage collection network are metered as it enters the Upper Occoquan Sewage Authority's ("UOSA") trunk sewers. From there the flows are transported to the UOSA regional advanced wastewater treatment plant where they are processed.

The City's participation in a regional sewage treatment authority began in 1971 when the State Water Control Board, based on a wastewater management study for the 580 square mile Occoquan River Basin, recommended replacement of 11 local sewage treatment plants (two in the City) with a regional advanced wastewater treatment plant that would achieve some of the most stringent treatment levels in the United States. This regional wastewater treatment plant was constructed by UOSA along Bull Run, approximately five miles upstream of the Occoquan Reservoir, currently the water supply for over 1 million Northern Virginians.

The City's locally maintained sewage collection system has a service area equal to the entire area within the incorporated limits of the City. Within this area there are approximately 17,219 people and 5,100 households serviced by the City's sewer system.

In December, 1981 the City sold 0.6 million gallons per day ("mgd") of its allocated sewage capacity within the UOSA system to the City of Manassas for \$3,275,000 and in October 1986 the City sold 0.5 mgd of its allocated sewage capacity within the UOSA system to Fairfax County for \$2,812,500. The principal of and investment income from the proceeds of the sale of this capacity were never intended to be and are not committed to or available for payment of debt service on the UOSA's bonds and those Bondholders should not expect these moneys to be available for this purpose.

Customers, Rates and Charges

The City's customer base as measured by the number of flowing connections, along with annual increases, is summarized in the following table:

City of Manassas Park Sewer System Customer Base

Fiscal Year Ending June 30,	2017	2018	2019	2020	2021
New Connections	482	368	373	393	385
Year End Connections	3,451	3,718	4,064	4,190	4,576
Growth Rate	9.9%	7.7%	9.3%	9.4%	8.4%

The following tables summarize the rates for sewer service charges and availability fees imposed by the System:

Sewer Service Charges

	2017	2018	2019	2020	2021
Sewer Service Charge (\$/thousand gallons)					
0-3,500 gallons	\$ 6.25	\$ 6.25	\$ 6.25	\$ 8.20	\$ 8.20
3,501 - 7,000 gallons	6.25	6.25	6.25	8.20	8.20
Per Bill Base Charge	46.00	46.00	46.00	46.00	46.00
Availability Fees (\$/unit)					
Single Family Residence	9,152	9,152	9,152	9,152	9,152

Debt Service Coverage

The following table summarizes the results of operations and debt service coverage for the City's Sewer System:

Debt Service Coverage

Fiscal Year Ending June 30	2017	2018	2019	2020	2021
System Revenue:					
Gross Revenue	\$10,121,686	\$8,700,101	\$8,047,394	\$8,093,081	\$8,043,974
Operating Expenses	4,105,860	3,499,036	3,411,038	4,932,421	4,820,200
Net Revenue Available					
For Debt Service	6,015,826	5,201,065	4,636,356	3,160,660	3,223,774
Total Debt Service	1,386,386	1,420,476	1,734,429	1,735,334	1,780,528
Debt Service Coverage	4.34	3.66	2.67	1.82	1.81

Largest Customers

The following table provides data on the Sewerage System's five largest customers for Fiscal Year ended June 30, 2021:

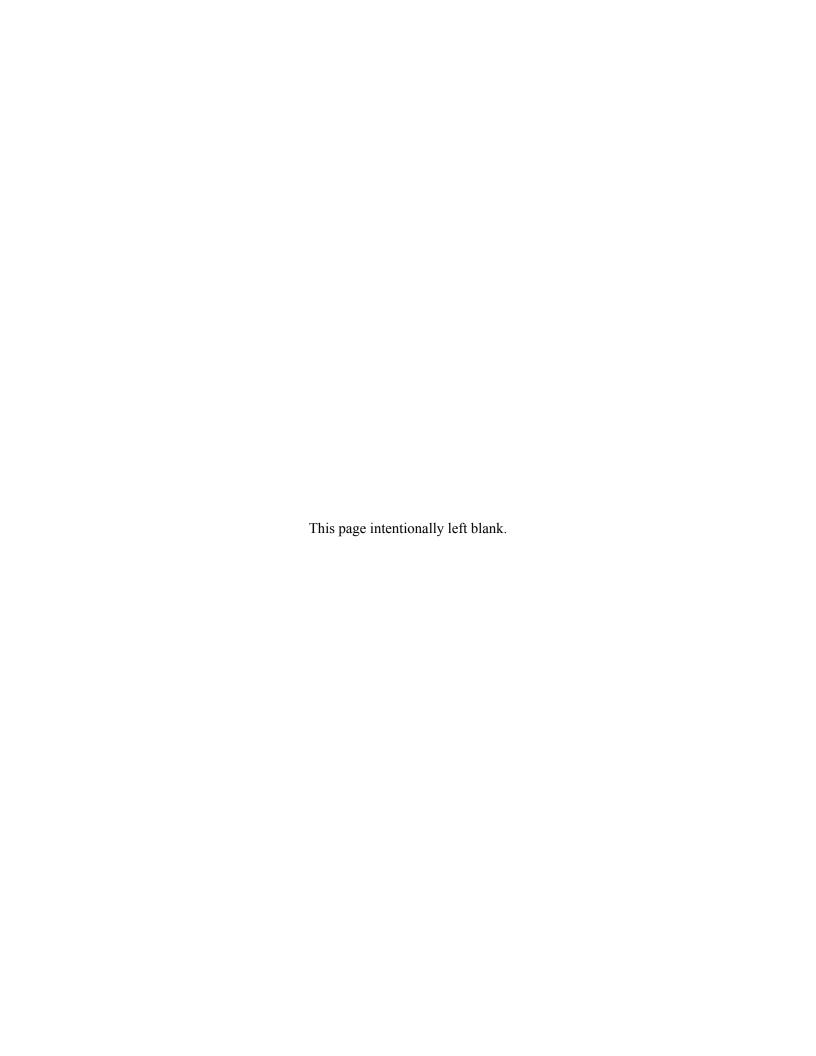
Customer	Type	Amount Billed
Northern Virginia Health Care	Commercial	1,702,404
Manassas Park City Schools	Education	639,225
Northern Virginia Health Care Center	Commercial	237,692
Prince William County School Board	Education	164,623
City of Manassas Park	Commercial	106,582

Continuing Disclosure Obligations*

As a condition to the issuance of various series of revenue bonds issued by UOSA (the "UOSA Bonds"), for the benefit of the City and other jurisdictions, the City undertook (the "UOSA Undertakings") to provide annual financial information and operating data with respect to the wastewater system within the City. Pursuant to the UOSA Undertakings, the City is required to file the required information with EMMA within 270 days of its fiscal year end. Instead, in 2018 and 2019 the City filed the information with UOSA, and UOSA filed the information with EMMA within UOSA's required timeframe of 365 days.

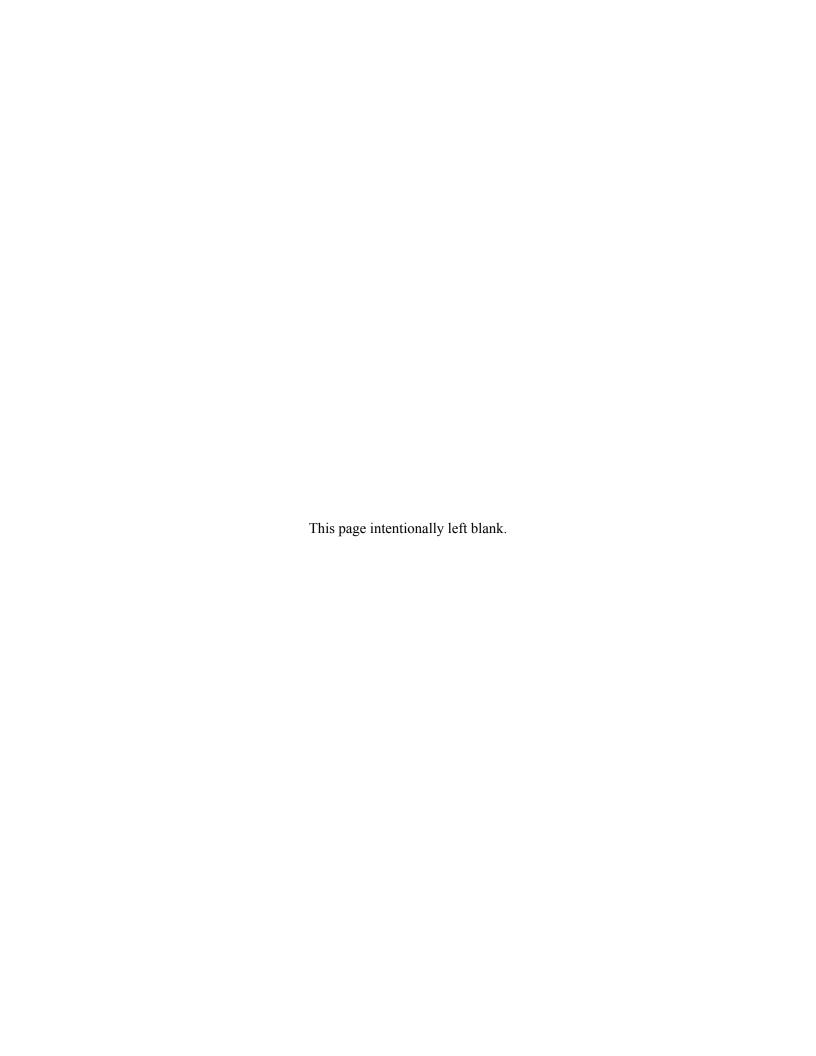
Except for the instances in 2018 and 2019 mentioned above, the City has complied in all material respects with its prior continuing disclosure undertakings under Rule 15c2-12 during the last five years. In addition, the City has retained Digital Assurance Certification L.L.C. to provide dissemination services for its continuing disclosure undertakings to promote future compliance with its disclosure undertakings.

^{*} This section has been modified since the Preliminary Official Statement dated November 22, 2022.



APPENDIX H

AUDITED FINANCIAL STATEMENTS OF UOSA FOR PERIOD ENDED JUNE 30, 2022





INDEPENDENT AUDITOR'S REPORT

To the Board of Directors Upper Occoquan Service Authority

Report on the Audit of the Financial Statements

Opinion

We have audited the accompanying financial statements of the Upper Occoquan Service Authority (UOSA), as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise UOSA's 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 financial position of UOSA as of June 30, 2022, and respective changes in financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS); the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities*, *Boards, and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Our responsibilities under those standards and specifications 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 UOSA and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

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

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

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of UOSA'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 UOSA'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 on pages 19-27 and the required supplementary information on pages 72-78 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.

H-2 Financial Section | 15

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the introductory section and statistical section but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does 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 3, 2022 on our consideration of UOSA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of UOSA'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 UOSA's internal control over financial reporting and compliance.

PBMares, LLP

Harrisonburg, Virginia November 3, 2022



(Unaudited)

The following discussion and analysis of the Upper Occoquan Service Authority's financial performance provides a narrative overview of the financial activities of UOSA for the year ended June 30, 2022. This analysis should be read in conjunction with the basic financial statements, which are located in the next section of this ACFR.

FINANCIAL HIGHLIGHTS

- Assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$20.1 million at June 30, 2022 compared to \$27.3 million at June 30, 2021.
- UOSA's total net position decreased by \$7.2 million, or 26.3%, for fiscal year 2022 compared to a decrease of \$13.8 million, or 33.6%, for fiscal year 2021.
- The decrease in net position for the current year is attributable to a \$8.7 million decrease in net investment in capital assets, a \$1.6 million increase in restricted net position and a \$0.1 million decrease in unrestricted net position.
- Fiscal year 2022 operating revenues decreased by 1.8% to \$31.9 million and operating expenses decreased by 4.5% to \$59.7 million, which includes depreciation and amortization expense of \$29.5 million.
- Capital contributions from the Member Jurisdictions were \$24.9 million and \$21.1 million for fiscal years 2022 and 2021, respectively.

OVERVIEW OF THE FINANCIAL STATEMENTS

UOSA operates as a single enterprise fund, which is a proprietary type fund used to account for operations in a manner similar to those used in the private sector. UOSA uses the accrual basis of accounting, under which revenues are recognized when they are earned and expenses are recognized when they are incurred.

This ACFR is presented in three main sections: introductory, financial and statistical. The introductory section includes the letter of transmittal, the GFOA Certificate of Achievement for Excellence in Financial Reporting, a list of Board members and officers, and an organizational chart.

The financial section contains the Independent Auditor's Report, Management's Discussion and Analysis, and the basic financial statements as follows:

- Statements of Net Position These statements include all of UOSA's assets, deferred outflows of resources, liabilities, deferred inflows of resources and net position. The statements contain information about the nature and amounts of investments in resources and obligations to creditors as well as provide a basis for evaluating the capital structure of UOSA and assessing its liquidity and flexibility.
- Statements of Revenues, Expenses and Changes in Net Position These statements reflect revenue and expense activity for UOSA and measure the success of its operations.
- Statements of Cash Flows These statements present the cash provided and used in operating; investing; and capital and related financing activities.
- Notes to the Financial Statements The notes to the financial statements provide necessary disclosures essential to a full understanding of the data provided in the financial statements.

The statistical section includes selected financial, operational and demographic information about UOSA and its Member Jurisdictions.

(Unaudited)

FINANCIAL ANALYSIS OF UOSA'S FINANCIAL POSITION AND RESULTS OF OPERATIONS

The table presented below provides a summary of UOSA's financial position and operations for fiscal year 2022 and fiscal year 2021.

Condensed Statements of Net Position June 30,

				Chang	je
	2022	2021		Amount	%
Assets and Deferred Outflows of Resources					
Current & other assets	\$ 121,014,866	\$ 134,987,180	\$	(13,972,314)	-10.4%
Capital assets, net	395,726,004	410,152,137		(14,426,133)	-3.5
Total Assets	516,740,870	545,139,317		(28,398,447)	-5.2
Deferred outflows of resources	26,351,328	30,108,454		(3,757,126)	-12.5
Total Assets and Deferred Outflows of Resources	543,092,198	575,247,771		(32,155,573)	-5.6
Liabilities and Deferred Inflows of Resources					
Current liabilities	43,212,086	38,743,001		4,469,085	11.5
Long-term liabilities	468,369,154	508,012,429		(39,643,275)	-7.8
Total Liabilities	511,581,240	546,755,430		(35,174,190)	-6.4
Deferred inflows of resources	11,399,652	1,214,477		10,185,175	838.6
Total Liabilities and Deferred Inflows of Resources	522,980,892	547,969,907		(24,989,015)	-4.6
Net Position					
Net (deficit) investment in capital assets	(45,898,264)	(37,170,862)		(8,727,402)	23.5
Restricted	75,578,687	73,915,571		1,663,116	2.3
Unrestricted (deficit)	(9,569,117)	(9,466,845)		(102,272)	1.1
Total Net Position	20,111,306	27,277,864		(7,166,558)	-26.3
Total Liabilities, Deferred inflows of			,		_
Resources and Net Position	\$ 543,092,198	\$ 575,247,771	\$	(32,155,5 73)	-5.6%

During fiscal year 2022, net position decreased by \$7,166,558. Significant factors attributable to the decrease were as follows:

- Net investment in capital assets decreased by \$8,727,402, primarily due to a decrease in net capital assets related to depreciation and amortization that was partially offset by a decrease in outstanding debt.
- Restricted net position increased by \$1,663,116, primarily due to a decrease in accounts payable that was partially offset by a decrease in receivables.
- Unrestricted net position decreased by \$102,272, largely due to a decrease in cash and cash equivalents as well as
 accounts receivable coupled with increases in accounts payable and landfill closure liability, partially offset by a
 decrease in net pension liability.

(Unaudited)

The table presented below provides a summary of UOSA's financial position and operations for fiscal year 2021 and fiscal year 2020

Condensed Statements of Net Position June 30,

						Chang	ge
		2021		2020		Amount	%
Assets and Deferred Outflows of Resources							
Current & other assets	\$	134,987,180	\$	153,973,071	\$	(18,985,891)	-12.3%
Capital assets, net		410,152,137		425,881,706		(15,729,569)	-3.7
Total Assets		545,139,317		579,854,777		(34,715,460)	-6.0
Deferred outflows of resources		30,108,454		17,674,213		12,434,241	70.4
Total Assets and Deferred Outflows of Resources		575,247,771		597,528,990		(22,281,219)	-3.7
Liabilities and Deferred Inflows of Resources							
Current liabilities		38,743,001		45,638,741		(6,895,740)	-15.1
Long-term liabilities		508,012,429		508,547,709		(535,280)	-0.1
Total Liabilities		546,755,430		554,186,450		(7,431,020)	-1.3
Deferred inflows of resources		1,214,477		2,274,841		(1,060,364)	-46.6
Total Liabilities and Deferred Inflows of Resources		547,969,907		556,461,291		(8,491,384)	-1.5
Net Position							
Net (deficit) investment in capital assets		(37,170,862)		(22,762,183)		(14,408,679)	-63.3
Restricted		73,915,571		72,956,334		959,237	1.3
Unrestricted (deficit)		(9,466,845)		(9,126,452)		(340,393)	-3.7
Total Net Position		27,277,864		41,067,699		(13,789,835)	-33.6
Total Liabilities, Deferred inflows of	,		_		_		_
Resources and Net Position	\$	575,247,771	\$	597,528,990	\$	(22,281,219)	-3.7%

During fiscal year 2021, net position decreased by \$13,789,835. Significant factors attributable to the decrease were as follows:

- Net investment in capital assets decreased by \$14,408,679, primarily due to a decrease in net capital assets related to depreciation and amortization that was partially offset by a decrease in outstanding debt.
- Restricted net position increased by \$959,237, primarily due to an increase in cash and decrease in accrued interest payable that was partially offset by a decrease in investments.
- Unrestricted net position decreased by \$340,393, largely due to an increase in net pension liability, landfill closure liability and accounts payable, partially offset by increases in accounts receivable.

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(Unaudited)

REVENUES AND EXPENSES

The table that follows summarizes the changes in revenues and expenses for UOSA between fiscal year 2022 and fiscal year 2021.

Condensed Statements of Revenues, Expenses and Changes in Net Position For the Years Ended June 30,

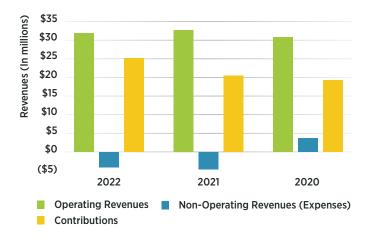
				Chang	Je
	2022	2021		Amount	%
Operating Revenues					
Member Jurisdictions	\$ 31,325,092	\$ 31,373,219	\$	(48,127)	-0.2%
Other	561,335	1,113,678		(552,343)	-49.6
Total Operating Revenues	31,886,427	32,486,897		(600,470)	-1.8
Operating Expenses					
Operations	30,231,445	32,749,614		(2,518,169)	-7.7
Depreciation and amortization	29,462,594	29,781,996		(319,402)	-1.1
Total Operating Expenses	59,694,039	62,531,610		(2,837,571)	-4.5
Operating Loss	(27,807,612)	(30,044,713)		2,237,101	7.4
Non-operating revenues (expenses), net	(4,323,085)	(4,852,451)		529,366	10.9
Capital contributions	24,964,139	21,107,329		3,856,810	18.3
Change in Net Position	(7,166,558)	(13,789,835)		6,623,277	48.0
Total net position, beginning of the year	27,277,864	41,067,699		(13,789,835)	-33.6
Total Net Position, End of Year	\$ 20,111,306	\$ 27,277,864	\$	(7,166,558)	-26.3%

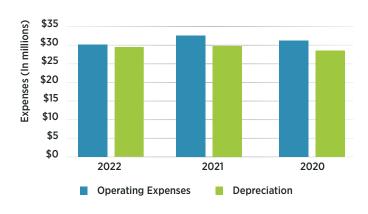
The table that follows summarizes the changes in revenues and expenses for UOSA between fiscal year 2021 and fiscal year 2020.

Condensed Statements of Revenues, Expenses and Changes in Net Position For the Years Ended June 30,

			Chan	ge
	2021	2020	Amount	%
Operating Revenues				
Member Jurisdictions	\$ 31,373,219	\$ 30,221,705	\$ 1,151,514	3.8%
Other	1,113,678	400,807	712,871	177.9
Total Operating Revenues	32,486,897	30,622,512	1,864,385	6.1
Operating Expenses				
Operations	32,749,614	30,962,210	1,787,404	5.8
Depreciation and amortization	29,781,996	28,531,473	1,250,523	4.4
Total Operating Expenses	62,531,610	59,493,683	3,037,927	5.1
Operating Loss	(30,044,713)	(28,871,171)	(1,173,542)	-4.1
Non-operating revenues (expenses), net	(4,852,451)	3,787,368	(8,639,819)	-228.1
Capital contributions	21,107,329	19,301,263	1,806,066	9.4
Change in Net Position	(13,789,835)	(5,782,540)	(8,007,295)	-138.5
Total net position, beginning of the year	41,067,699	46,850,239	(5,782,540)	-12.3
Total Net Position, End of Year	\$ 27,277,864	\$ 41,067,699	\$ (13,789,835)	-33.6%

(Unaudited)





OPERATING REVENUES

Operating revenue is derived primarily from billings to the Member Jurisdictions for treatment of sewage. The billings to the four Member Jurisdictions are based on the approved budget and actual monthly flows.

Current Year. Compared to fiscal year 2021, operating revenue decreased by \$600,470 net of a \$1,526,147 credit to the Member Jurisdictions for the fiscal year 2022 Operations and Maintenance budget surplus. The variance was due primarily to decreases in Other Revenue.

Prior Year. Compared to fiscal year 2020, operating revenue increased by \$1,864,385 net of a \$1,505,736 credit to the Member Jurisdictions for the fiscal year 2021 Operations and Maintenance budget surplus. The variance was due primarily to increases in operating costs.

OPERATING EXPENSES

Operating expenses reflect the cost of services associated with the operation of the treatment plant and delivery systems.

Current Year. Operations expenses decreased by \$2,518,169 compared to fiscal year 2021. The decrease was primarily due to a decrease in net pension liability, lower personnel expense and lower requirements for contract services. This was partially offset by higher chemical pricing.

Prior Year. Operations expenses increased by \$1,787,404 compared to fiscal year 2020. The increase was primarily due to higher personnel expense and higher requirements for contract services.

NON-OPERATING REVENUES (EXPENSES)

Current Year. Non-operating revenues increased by \$529,366 in fiscal year 2022 due to a decrease in bond issuance costs partially offset by increased asset disposal losses and decreased revenue in excess of expenses from restricted accounts.

Prior Year. Non-operating revenues decreased by \$8,639,819 in fiscal year 2021 due to a decrease in revenue in excess of expenses from restricted accounts. This decrease is primarily due to decreases in restricted investment income and an increase in expense related to capital along with higher bond issuance costs.

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(Unaudited)

CAPITAL ASSETS

At the close of fiscal year 2022, UOSA had \$395,726,004 invested in capital assets. This amount represents a net decrease of \$14,426,133 or approximately 3.5% under fiscal year 2021.

Capital Assets at June 30, (net of accumulated depreciation and amortization)

			Chang	ge
	2022	2021	Amount	%
Land	\$ 7,203,612	\$ 7,203,612	\$ _	0.0%
Treatment plant and reservoir	248,954,593	244,327,712	4,626,881	1.9
Interceptor sewers	47,247,743	48,165,996	(918,253)	-1.9
Pumping stations	70,281,877	74,477,814	(4,195,937)	-5.6
Mobile equipment	920,715	870,259	50,456	5.8
Office furniture and equipment	181,408	236,692	(55,284)	-23.4
Vehicles	711,426	602,281	109,145	18.1
Construction in progress	20,224,630	34,267,771	(14,043,141)	-41.0
Total	\$ 395,726,004	\$ 410,152,137	\$ (14,426,133)	-3.5%

Major Additions in Fiscal Year 2022, at Cost, Included:

Treatment Plant and Reservoir:

General plant improvements, Residuals Renovations and Improvements to D/2 and assets placed in service (removed from construction in progress) \$ 25,747,931

Construction in Progress:

Plant and delivery system expansion and improvements 11,827,746

Vehicles:

Fleet vehicles 252,924

(Unaudited)

At the close of fiscal year 2021, UOSA had \$410,152,137 invested in capital assets. This amount represents a net decrease of \$15,729,569 or approximately 3.7% under fiscal year 2020.

Capital Assets at June 30, (net of accumulated depreciation and amortization)

			Chang	ge
	2021	2020	Amount	%
Land	\$ 7,203,612	\$ 7,203,612	\$ -	0.0%
Treatment plant and reservoir	244,327,712	243,342,501	985,211	0.4
Interceptor sewers	48,165,996	46,242,464	1,923,532	4.2
Pumping stations	74,477,814	78,796,015	(4,318,201)	-5.5
Mobile equipment	870,259	937,886	(67,627)	-7.2
Office furniture and equipment	236,692	310,955	(74,263)	-23.9
Vehicles	602,281	500,089	102,192	20.4
Construction in progress	34,267,771	48,548,184	(14,280,413)	-29.4
Total	\$ 410,152,137	\$ 425,881,706	\$ (15,729,569)	-3.7%

Major Additions in Fiscal Year 2021, at Cost, Included:

Treatment Plant and Reservoir: General plant improvements and assets placed in service (removed from construction in progress)	\$ 21,987,240
Construction in Progress: Plant and delivery system expansion and improvements	13,233,397
Interceptor: Manassas Northside Interceptor (removed from construction in progress)	3,299,217
Vehicles: Fleet vehicles	201,110

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(Unaudited)

DEBT ADMINISTRATION

Current Year. At June 30, 2022, the total principal balance due on UOSA's outstanding debt was \$479,906,271 compared to \$501,117,559 at June 30, 2021. The decrease in outstanding debt from fiscal year 2021 is equal to \$21,211,288, which reflects a reduction in bonds payable of \$15,435,000 and a reduction in loans payable of \$5,776,288.

At June 30, 2022, the total outstanding bonds payable balance was \$464,425,000. The decrease reflects the principal payments on the 2010B Series Bonds, 2013A Series Bond, 2016A Series Bonds and the 2020 Series Bonds.

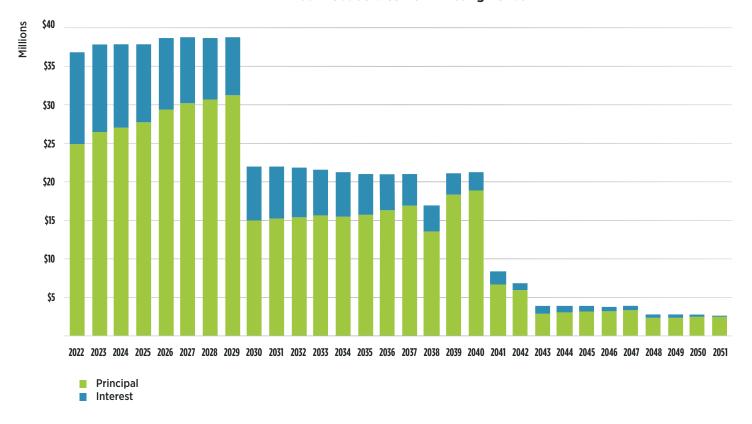
At June 30, 2022, the total outstanding loan balance was \$15,481,271. The decrease consisted of principal payments for the 2013B Series loan and the VRA (2011A & B) loans.

Prior Year. At June 30, 2021, the total principal balance due on UOSA's outstanding debt was \$501,117,559 compared to \$484,813,205 at June 30, 2020. The increase in outstanding debt from fiscal year 2020 is equal to \$16,304,354, which reflects an increase in bonds payable of \$21,945,000 and a reduction in loans payable of \$5,640,646.

At June 30, 2021, the total outstanding bonds payable balance was \$479,860,000. The increase reflects the issuance of the 2020 Series Bonds; partially offset by the defeasance of the 2014 Series Bonds as well as principal payments on the 1995A Series Bonds, 2010B Series Bonds, 2013A Series Bonds and 2016A Series Bonds.

At June 30, 2021, the total outstanding loan balance was \$21,257,559. The decrease consisted of principal payments for the 2013B Series loan and the VRA (2011A & B) loans.

Annual Debt Service from Existing Bonds



This information should be read in conjunction with the transmittal letter and note 6 to the audited financial statements in order to obtain more detailed information on UOSA's long-term debt.

(Unaudited)

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET

- UOSA's adopted Annual Budget for fiscal year 2023 is \$77.4 million and is primarily comprised of \$37.8 million (48.8%) in capital financing costs, \$34.7 million (44.8%) in operating expenses, \$4.6 million (6.0%) in reserve maintenance expenditures, and \$0.3 million (0.4%) in reserve funding. The total represents an increase of \$3,128,691 or 4.21% over fiscal year 2022. The increase is primarily due to a modest increase for Debt Service and Operations & Maintenance.
- The average daily flow projection for fiscal year 2023 is 37.0 million gallons per day (mgd). This represents an increase of 0.6 mgd or 1.65% over fiscal year 2022.
- UOSA's Capital Improvements Program (CIP) includes \$698.9 million in forecasted capital projects for plant renewal and improvements; plant expansion; delivery system improvements and expansion; reserve maintenance; and nutrient removal through 2031. Budgeted spending for calendar year 2023 is \$41.7 million.
- The next bond issuance is contemplated for late 2022 with additional bond issues planned for 2025 and 2028, which will fund CIP through 2031.
- The fiscal year 2023 budget reflects efforts to reduce costs by securing fixed pricing for natural gas and treatment plant electrical power, and through the continued use of a cogeneration facility that will produce power from digester gas.
- UOSA's favorable loss experience and risk management efforts resulted in a continuation of the 5.0% premium reduction from VML Insurance for liability, automobile and public officials liability insurance.

CONTACTING UOSA'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of UOSA's finances to all interested parties. Questions about this report or requests for additional financial information should be addressed to UOSA's Director of Finance at the Upper Occoquan Service Authority, 14631 Compton Road, Centreville, VA 20121-2506, or by telephone at (703) 830-2200, or visit UOSA's website at www.uosa.org.

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STATEMENTS OF NET POSITION

June 30, 2022 and 2021

Assets and Deferred Outflows of Resources	2022	2021
Current Assets		
Cash and cash equivalents (notes 1 and 2) Accounts receivable (notes 1 and 3) Accrued interest receivable Inventory Prepaid expenses Restricted assets (notes 1 and 4)	\$ 8,749,178 591,955 5,524 3,751,082 482,847	\$ 9,451,864 1,049,101 1,065 3,420,519 323,717
Cash and cash equivalents (notes 1 and 2) Investments (notes 1 and 2) Deposits Reserve maintenance receivable Accrued interest receivable	58,688,139 22,875,202 70 3,202,664 103,438	91,696,121 - 70 1,956,684 68,071
Total Current Assets	98,450,099	107,967,212
Non-Current Assets		
Restricted assets (notes 1 and 4) Investments (notes 1 and 2) Arbitrage rebate receivable (note 13)	22,272,757	25,219,968 1,800,000
Restricted assets	22,272,757	27,019,968
Capital assets (notes 1 and 5) Utility plant and equipment Other Accumulated depreciation and amortization Land Construction in progress	909,158,960 9,939,266 (550,800,464) 7,203,612 20,224,630	882,333,792 9,794,817 (523,447,855) 7,203,612 34,267,771
Capital assets, net	395,726,004	410,152,137
Net pension asset (note 7)	292,010	
Total Non-Current Assets	418,290,771	437,172,105
Total Assets	516,740,870	545,139,317
Deferred Outflows of Resources (note 1)		
Deferred amount on refunding of debt Deferred outflows related to OPEB (notes 1 and 8) Deferred outflows related to pensions (notes 1 and 7)	20,191,648 1,391,228 4,768,452	24,079,890 1,117,232 4,911,332
Total Deferred Outflows of Resources	26,351,328	30,108,454
Total Assets and Deferred Outflows of Resources	\$ 543,092,198	\$ 575,247,771

STATEMENTS OF NET POSITION (continued)

June 30, 2022 and 2021

Liabilities, Deferred Inflows of Resources and Net Position	2022	2021
Current Liabilities		
Accounts payable and accrued liabilities Accrued salaries and benefits Accrued bond interest payable (note 6) Accrued loan interest payable (note 6) Contract retainage payable (note 6) Income received in advance Revenue bonds payable, net (note 6) Virginia Resources Authority (VRA) loans payable (note 6) Loans payable, net (note 6) Compensated absences payable (notes 1 and 6)	\$ 4,906,496 678,442 6,541,823 72,950 - 3,270 24,209,460 981,717 3,770,000 2,047,928	\$ 6,733,000 595,560 7,129,246 158,893 798,275 3,150 15,621,436 897,886 4,845,000 1,960,555
Total Current Liabilities	43,212,086	38,743,001
Landfill closure and postclosure obligation (notes 6 and 12) Contract retainage payable (note 6) Revenue bonds payable, net (note 6) VRA loans payable (note 6) Loans payable, net (note 6) Compensated absences payable (notes 1 and 6) Net other postemployment benefit obligation (notes 1, 6 and 8) Net pension liability (notes 1, 6 and 7) Total Long-Term Liabilities Total Liabilities Deferred Inflows of Resources (note 1) Deferred inflows related to OPEB (notes 1 and 8)	4,978,422 245,511 445,090,001 10,729,554 - 377,318 6,948,348 - 468,369,154 511,581,240	4,619,846 20,317 469,299,461 11,744,673 3,770,000 361,419 6,803,711 11,393,002 508,012,429 546,755,430
Deferred inflows related to pensions (notes 1 and 7)	10,847,804	871,246
Net Position Net (deficit) investment in capital assets Restricted Capital projects Repairs and replacement Debt service Unrestricted (deficit)	11,399,652 (45,898,264) 10,935 7,573,260 67,994,492 (9,569,117)	1,214,477 (37,170,862) 1,800,265 6,161,190 65,954,116 (9,466,845)
Total Net Position	20,111,306	27,277,864
Total Liabilities, Deferred Inflows of Resources and Net Position	\$ 543,092,198	\$ 575,247,771

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION For the Years Ended June 30, 2022 and 2021

	2022	2021
Operating Revenues (notes 1 and 9)		
Member jurisdictions Other	\$ 31,325,092 561,335	\$ 31,373,219 1,113,678
Total Operating Revenues	31,886,427	32,486,897
Operating Expenses (notes 1 and 10)		
Operations Depreciation and amortization	30,231,445 29,462,594	32,749,614 29,781,996
Total Operating Expenses	59,694,039	62,531,610
Operating Loss	(27,807,612)	(30,044,713)
Non-Operating Revenues (Expenses)		
Interest income Federal Build America Bonds subsidy Bond issuance costs Loss on sale of assets Revenues in excess of (less than) expenses from restricted accounts (note 11)	17,493 1,310,668 - (814,456) (4,836,790)	27,723 1,343,681 (1,641,470) (92,198) (4,490,187)
Total Non-Operating Revenues (Expenses), Net	(4,323,085)	(4,852,451)
Net Loss before Capital Contributions	(32,130,697)	(34,897,164)
Capital contributions (note 11)	24,964,139	21,107,329
Change in Net Position	(7,166,558)	(13,789,835)
Total net position, beginning of year	27,277,864	41,067,699
Total Net Position, End of Year	\$ 20,111,306	\$ 27,277,864

STATEMENTS OF CASH FLOWS

For the Years Ended June 30, 2022 and 2021

		2022	2021
Cash Flows from Operating Activities			
Cash received from localities	\$	36,523,141	\$ 34,883,942
Payments to employees for services		(19,835,890)	(20,593,930)
Payments to suppliers for goods and services		(12,080,092)	(11,055,791)
Net Cash Provided by Operating Activities		4,607,159	3,234,221
Cash Flows from Non-capital Financing Activities			
Federal Build America Bonds subsidy		1,310,668	1,343,681
Net Cash Provided By Non-capital Financing Activities		1,310,668	1,343,681
Cash Flows from Capital and Related Financing Activities			
Proceeds from debt issuance		-	199,755,000
Payment to escrow agent		-	(198,823,215)
Bond issuance costs		-	(1,641,470)
Collections for debt service		36,585,299	35,301,552
nterest payments on long-term debt		(15,804,046)	(17,258,779)
Principal payments on long-term debt		(21,211,288)	(19,565,646)
Acquisition and construction of capital assets		(18,079,709)	(21,521,303)
Proceeds from sale of capital assets		112,697	125
Net Cash Used in Capital and Related Financing Activities		(18,397,047)	(23,753,736)
Cash Flows from Investing Activities			
Sale (purchase) of investments		(21,760,957)	11,951,608
nterest on investments		529,509	1,117,447
Net Cash (Used in) Provided by Investing Activities		(21,231,448)	13,069,055
Net Decrease in Cash and Cash Equivalents		(33,710,668)	(6,106,779)
Cash and cash equivalents, beginning of year		101,147,985	107,254,764
Cash and Cash Equivalents, End of Year	\$	67,437,317	\$ 101,147,985
Reconciliation of Operating Loss to Net Cash Provided by Operating Activities			
Operating loss	\$	(27,807,612)	\$ (30,044,713)
Adjustments to reconcile operating loss to net cash provided by operating activities:	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(* * *) *)
Depreciation and amortization		29,462,594	29,781,996
Collections for reserve maintenance		5,082,891	4,479,824
Payments for reserve maintenance costs		(1,050,529)	(991,596)
		144,093	80,565
OPEB expense			860,357
OPEB expense Pension expense		(1.574.996)	
Pension expense		(1,574,996)	000,007
Pension expense Changes in assets and liabilities:			
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory		406,130	(769,630)
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions		406,130 9,423	(769,630) (146,815)
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions Net change in OPEB contributions	\$	406,130 9,423 (64,835)	\$ (769,630) (146,815) (15,767)
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions Net change in OPEB contributions Net Cash Provided by Operating Activities	\$	406,130 9,423	\$ (769,630) (146,815)
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions Net change in OPEB contributions Net Cash Provided by Operating Activities Noncash Investing, Capital, and Financing Activities		406,130 9,423 (64,835) 4,607,159	(769,630) (146,815) (15,767) 3,234,221
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions Net change in OPEB contributions Net Cash Provided by Operating Activities Noncash Investing, Capital, and Financing Activities Decrease in fair value of investments not classified as cash and cash equivalents	\$	406,130 9,423 (64,835) 4,607,159 (1,832,965)	\$ (769,630) (146,815) (15,767) 3,234,221 (1,490,964)
Pension expense Changes in assets and liabilities: Net change in accounts receivable, accounts payable, prepaid expenses and inventory Net change in pension contributions		406,130 9,423 (64,835) 4,607,159	(769,630) (146,815) (15,767)

The accompanying notes are an integral part of these statements.

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June 30, 2022 and 2021

1. SIGNIFICANT ACCOUNTING POLICIES AND PRACTICES

(a) Reporting Entity

The Upper Occoquan Service Authority (UOSA) is a public body politic and corporate created pursuant to the Virginia Water and Sewer Authorities Act (now the Virginia Water and Waste Authorities Act) whose principal purpose is the reclamation of wastewater to protect Northern Virginia's Occoquan Reservoir as a potable water supply source. UOSA is a joint venture formed on March 3, 1971 by a concurrent resolution of the governing bodies of Fairfax County, Prince William County, the City (formerly Town) of Manassas and the City (formerly Town) of Manassas Park (collectively the "Member Jurisdictions"). The governing body of UOSA is an eight-person Board of Directors consisting of two members appointed for four-year terms by the governing body of each Member Jurisdiction.

The obligations of UOSA and its Member Jurisdictions are set forth in a Restated Service Agreement. Under the Restated Service Agreement, UOSA is obligated to process all wastewater delivered to it by the Member Jurisdictions up to their allotted capacities. The Member Jurisdictions are obligated to pay charges for the wastewater processing. These charges include Operations and Maintenance, Reserve Maintenance (the cost of replacements and necessary improvements which do not increase the system capacity), and Debt Service on the loans and bonds issued to finance construction of the UOSA facilities.

As required by accounting principles generally accepted in the United States of America for governmental entities, the financial statements of the reporting entity include all the funds and accounts of UOSA (the primary government). There are no component units to be included in the reporting entity.

(b) Basis of Presentation and Accounting

The accounting policies of UOSA conform to accounting principles generally accepted in the United States of America as applicable to enterprise funds of governmental units. An enterprise fund is a proprietary type fund used to account for operations in a manner similar to those used in the private sector. UOSA applies all applicable Governmental Accounting Standards Board (GASB) pronouncements when they become effective. GASB is the independent organization that establishes the accounting and financial reporting standards for state and local governments that follow generally accepted accounting principles.

UOSA uses the accrual basis of accounting, under which revenues are recognized when they are earned and expenses are recognized when they are incurred. Operating revenues and expenses consist of those revenues and expenses that result from the ongoing principal operations of UOSA. Non-operating revenues and expenses consist of those revenues and expenses that are related to financing and investing types of activities or result from non-exchange transactions and ancillary services.

(c) Budget and Budgetary Accounting

The Board of Directors adopts an annual budget for operations and maintenance as required by the Restated Agreement of Trust administered by the Trustee, U.S. Bank National Association. The budget is based on projected wastewater flow and may be amended during the year, as determined necessary, by the Board of Directors. After adoption, increases or decreases in the budget may be made only upon Board approval. The charges to the four Member Jurisdictions, based on the budget and monthly flow, are adjusted upon completion of the annual audit for any deficit or available surplus in the operating account. The deficit or available surplus in the operating account is recorded as a receivable or liability respectively, at year-end. The budget is prepared on the accrual basis of accounting. Budgetary control is maintained at the sub-function level. A review of revenues and expenses compared to the budget is conducted with the Board of Directors on a monthly and quarterly basis. Unexpended budgeted amounts for the operating account lapse at year-end and may not be carried forward to the next year. Design and construction budgets and related funds are multi-year and do not lapse annually.

(d) Cash and Cash Equivalents

UOSA considers all highly liquid investments with a maturity of three months or less from the date of purchase to be cash equivalents.

(e) Investments

UOSA follows GASB Statement No. 31, Accounting and Financial Reporting for Certain Investments and for External Investment Pools and GASB Statement No. 72, Fair Value Measurement and Application, which prescribes that certain investments be reported at their fair value, with the change in fair value being reported as revenue.

June 30, 2022 and 2021

(f) Accounts Receivable

Management expects all receivables to be fully collectible; therefore, no allowance for bad debts is maintained. Receivables relate to reserve maintenance, septage facility usage and selected meter stations and pump stations, the latter two of which are operated on behalf of others.

(g) Prepaid Expenses

Payments to vendors, which are applicable to future accounting periods are recorded as prepaid expenses in the accompanying Statement of Net Position. Prepaid expenses are expensed in the period they are used.

(h) Inventories

Inventories are reported at cost and consist of chemicals, fuels, operating supplies and certain system replacement parts.

(i) Capital Assets

Capital assets consist of the water reclamation system, vehicles, furniture and equipment valued at historical cost. In addition to property and equipment, other direct acquisition costs and certain administrative costs during the construction period have been capitalized. When appropriate, costs are reduced by interest earned on construction funds. The capitalization threshold for capital assets is \$5,000. The assets are depreciated or amortized using the straight-line method. Major repairs are capitalized and depreciated over a shorter estimated useful life. When, in the opinion of management, certain assets are impaired, any estimated decline in value is accounted for as a non-operating expense. There are no impaired assets as of June 30, 2022.

Capital Assets	Estimated Useful Lives
Treatment Plant and Reservoir	15 - 50 years
Interceptor Sewers	20 - 50 years
Pumping Stations	10 - 50 years
Mobile Equipment	5 - 15 years
Office Furniture and Equipment	5 – 15 years
Vehicles	8 - 15 years

(j) Deferred Outflows and Deferred Inflows of Resources

In addition to assets, the statement of net position contains a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then. UOSA currently reports deferred amounts on bond refundings, deferred outflows related to pensions (see note 7) and deferred outflows related to OPEB (see note 8) as deferred outflows of resources.

In addition to liabilities, the statement of net position contains a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until then. UOSA currently reports deferred inflows related to pensions (see note 7) and deferred inflows related to OPEB (see note 8) as deferred inflows of resources.

(k) Pensions

The Virginia Retirement System (VRS) Political Subdivision Retirement Plan (UOSA's retirement plan) is a multi-employer, agent plan. 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 UOSA's Retirement Plan and the additions to/deductions from UOSA's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by 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.

(I) Other Postemployment Benefits (OPEB)

Health Care Benefit Plan

UOSA administers a single-employer defined post-employment health care benefit plan (the Plan). For purposes of measuring the total OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, an actuarial valuation was performed as of June 30, 2021, using updated actuarial assumptions. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms. There are no investments as this is a pay-as you-go plan and all cash is held in a cash account.

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June 30, 2022 and 2021

VRS Group Life Insurance Program

The Virginia Retirement System (VRS) Group Life Insurance Program is a multiple employer, cost-sharing plan. It provides coverage to state employees, teachers, and employees of participating political subdivisions. The Group Life Insurance Program was established pursuant to §51.1-500 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Group Life Insurance Program is a defined benefit plan that provides a basic group life insurance benefit for employees. For purposes of measuring the net GLI OPEB liability, deferred outflows of resources and deferred inflows of resources related to the GLI OPEB, and GLI OPEB expense, information about the fiduciary net position of the VRS Group Life Insurance Plan and the additions to/deductions from the VRS Group Life Insurance Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

VACORP Hybrid Disability Program

The VACORP Hybrid Disability Program is an insured defined benefit OPEB plan. OPEB expense is recognized as premium payments required for the reporting period in accordance with the agreement with the insurance company are due and payable.

(m) Deferred Compensation Plan

UOSA offers its employees a deferred compensation plan in accordance with Internal Revenue Code, Section 457. The funds are held in a trust and managed by a third party. Therefore, UOSA is no longer reporting such assets and associated liabilities on its statement of net position as stated under GASB Statement No. 32 (Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans). UOSA's contributions to the deferred compensation plan for the fiscal years ended June 30, 2022 and 2021 were \$210,482 and \$222,178, respectively.

(n) Compensated Absences

UOSA's employee benefits program provides for the earning and accumulation of vacation and sick leave. The accumulation of vacation leave is based on years of service. Employees with less than 10 years of service are limited to 240 hours, employees with 10 to 20 years of service are limited to 320 hours and directors or employees with 20 or more years are limited to 400 hours. Accumulated vacation hours in excess of the limit are transferred to sick leave. Accrued vacation leave balances are paid to employees who terminate employment. The liability for accrued vacation leave as of June 30, 2022 and 2021, was \$1,571,728 and \$1,504,240 respectively.

Sick leave may be accumulated up to 480 hours for employees in the VRS Hybrid plan and up to 1040 hours for all other full-time employees. Sick leave accumulation was not limited prior to July 1, 2015 and hours accumulated prior to that date are not subject to the current policy limits. A portion is paid upon termination based on years of service and does not exceed 25% of the total accumulated balance. As of June 30, 2022 and 2021, the liability for accrued sick leave was \$853,518 and \$817,734 respectively.

(o) Risk Management

UOSA is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. UOSA purchases insurance coverage for risks including workers' compensation, automobiles, boiler/machinery use, land use, public officials' liability, crime, general liability, and earthquake. UOSA has not incurred any environmental losses through June 30, 2022 and in the past three years there were no insurance settlements that exceeded insurance coverage. Costs resulting from non-insured losses will be charged to operations when incurred.

(p) Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amount of assets and deferred outflows of resources, liabilities and deferred inflows of resources, the 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.

(q) Restricted Assets

Restricted assets present constraints on resources that are either externally imposed by creditors, contributors, laws and regulation of other governments or imposed by law through state statute.

June 30, 2022 and 2021

(r) New Accounting Pronouncements Adopted

UOSA has reviewed all GASB pronouncements that became effective for the fiscal year ended June 30, 2022 and determined none to be applicable to UOSA for fiscal year ended June 30, 2022.

(s) New Accounting Pronouncements

Management has elected to disclose upcoming GASB pronouncements that may have an impact on UOSA.

GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, will improve financial reporting by establishing the definitions of PPPs and APAs and providing uniform guidance on accounting and financial reporting for transactions that meet those definitions. Statement 94 will become effective for UOSA beginning with its year ending June 30, 2023.

GASB Statement No. 96, Subscription-Based Information Technology Arrangements, will improve financial reporting by establishing a definition for subscription-based information technology arrangements and providing uniform guidance for accounting and financial reporting for transactions that meet that definition. Statement 96 will become effective for UOSA beginning with its year ending June 30, 2023.

GASB Statement No. 100, Accounting Changes and Error Corrections, An Amendment of GASB Statement No. 62, will enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. Statement 100 will become effective for UOSA beginning with its year ending June 30, 2024.

GASB Statement No. 101, *Compensated Absences*, will better meet the information needs of financial statement users by updating the recognition and measurement guidance under a unified model and by amending certain previously required disclosures. Statement 100 will become effective for UOSA beginning with its year ending June 30, 2025.

Management has not yet determined the effect that these Statements will have on its financial statements.

(t) Subsequent Events

UOSA has evaluated subsequent events through November 3, 2022, the date on which the financial statements were available to be issued.

2. CASH AND INVESTMENTS

(a) Cash and Cash Equivalents

At June 30, 2022 and 2021, all cash of UOSA is maintained in accounts covered by federal deposit insurance or collateralized in accordance with the Virginia Security for Public Deposits Act (the Act).

Under the Act, banks holding public deposits in excess of the amounts insured by federal deposit insurance must pledge collateral in the amount of 50% of excess deposits to a collateral pool in the name of the State Treasury Board. If any member bank fails, the entire collateral pool becomes available to satisfy the claims of the governmental entities. With the ability to make additional assessments, the multiple bank collateral pool functions similar to federal deposit insurance. Savings institutions are required to collateralize 100% of deposits in excess of federal deposit insurance limits.

Unrestricted cash and cash equivalents consist of bank deposits and petty cash funds.

Unrestricted Cash and Cash Equivalents	2022		2021
Cash	\$ 6,249,178	(\$ 9,451,864
Investments classified as cash equivalents	2,500,000		_
Total Unrestricted Cash and Cash Equivalents	\$ 8,749,178	(\$ 9,451,864

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Restricted cash and cash equivalents consist of bank deposits and money market fund investments in debt service and project fund accounts held by a Trustee.

Restricted Cash and Cash Equivalents	2022	2021
Cash	\$ 4,503,051	\$ 4,503,802
Money market funds held by trustee	54,185,088	87,192,319
Total Restricted Cash and Cash Equivalents	\$ 58,688,139	\$ 91,696,121

(b) Investments

As of June 30, 2022 and 2021, the fair value of UOSA's investments, with their respective credit ratings, was as follows:

		Fai	ir Value		
Investment Type	Credit Rating	2022	2021		
Restricted Investments					
U.S. securities	AAA	\$ 45,147,959	\$	25,219,968	
Total Investments		\$ 45,147,959	\$	25,219,968	

(1) Credit Risk

UOSA's Investment Policy (Policy) authorizes UOSA to invest in (1) obligations of the United States, the Commonwealth of Virginia, the Federal National Mortgage Association, Federal Home Loan Banks, Federal Home Loan Mortgage Corporation, Federal Land Banks, Federal Intermediate Credit Banks, Federal Banks for Cooperatives, Financing Corporation (FICO), and Student Loan Marketing Association, (2) commercial paper with a maturity of 270 days or less rated prime 1 by Moody's Investors Service, Inc. or A-1 by Standard & Poor's Corporation, and (3) repurchase agreements.

(2) Concentration of Credit Risk

The Policy places no limit on the amount UOSA may invest in any one issuer. UOSA had investment types at June 30, 2022 and 2021 that exceed 2% of the total investments. UOSA had no investments over 5% that required disclosure.

	202	22	2021
Investment Type (Restricted & Unrestricted)	Fair Value	% of Total Investments	% of Total Fair Value Investments
U.S. Treasury notes and bills	\$ 45,147,959	100%	\$ 25,219,968 100%
Total Investments	\$ 45,147,959	100%	\$ 25,219,968 100%

(3) Interest Rate Risk

The Policy limits the investment of funds in the operating and restricted asset accounts in obligations of the following maturities:

- Operating Account Not to exceed date needed for payment of operating expenses
- Restricted Asset Accounts:
 Construction Fund Not to exceed date needed for payment of construction costs
 Reserve Maintenance Not to exceed seven years
 Revenue Bond Not to exceed date needed for payment of principal and interest

June 30, 2022 and 2021

As of June 30, 2022 and 2021, UOSA had the following investments and maturities:

		Original Mat	turity (in years)
Investment Type (Restricted & Unrestricted)	Fair Value at June 30, 2022	1 Year or Less	More than 2 Years
U.S. securities	\$ 45,147,959	\$ 22,875,202	\$ 22,272,757
Total Investments	\$ 45,147,959	\$ 22,875,202	\$ 22,272,757
		Original Ma	turity (in years)
Investment Type	Fair Value at		More than
(Restricted & Unrestricted)	June 30, 2021	1 Year or Less	2 Years
U.S. securities	\$ 25,219,968	\$ -	\$ 25,219,968
Total Investments	\$ 25,219,968	\$ -	\$ 25,219,968

(4) Custodial Credit Risk

The Policy requires execution of a third-party custodial safekeeping agreement for all purchased securities, and requires that securities be held in UOSA's name. As of June 30, 2022 and 2021 all of UOSA's investments and money market funds classified as cash equivalents are held in a bank's trust department in UOSA's name, and therefore UOSA is not exposed to custodial credit risk.

(5) Fair Value Measurement

UOSA 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 quoted prices for similar assets in active markets or quoted prices for identical or similar assets in markets that are not active; Level 3 inputs are significant unobservable inputs. As of June 30, 2022 and 2021, UOSA's investments are valued using Level 1 inputs.

UOSA has the following recurring fair value measurements:

• U.S. Treasury securities of \$45.1 million and \$25.2 million as of June 30, 2022 and 2021 respectively, are valued using quoted prices in an active market for identical assets (Level 1 inputs).

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3. ACCOUNTS RECEIVABLE

Accounts receivable consists of the following at June 30, 2022 and 2021:

	2022	2021			
Fairfax County	\$ 331,355	\$ 585,548			
Prince William County	19,984	11,252			
City of Manassas	62,397	365,482			
Other	178,219	86,819			
Total	\$ 591,955	\$ 1,049,101			

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4. RESTRICTED ASSET ACCOUNTS

UOSA's restricted assets are accounted for within the Enterprise Fund accounts rather than through separate fund entities. Therefore, in accordance with the Restated Agreement of Trust and Supplements administered by the Trustee, UOSA had the following restricted asset accounts in operation at June 30, 2022:

Reserve Maintenance - This account receives all revenue derived by UOSA to pay the cost of replacements and necessary improvements that do not increase the system capacity or scope. In accordance with Section 606 of the Restated Agreement of Trust, UOSA charges and collects from the Member Jurisdictions amounts sufficient to make the current balance in the Reserve Maintenance account equal to the greater of (1) \$2,000,000, (2) the estimated cost of replacements and necessary improvements which do not increase the system capacity or scope as set forth in the current fiscal year budget, or (3) the amount certified by UOSA's consulting engineer, provided, however, that if such amount certified by the consulting engineer is greater, UOSA may charge and collect the amount over a period not to exceed five fiscal years, so long as the amount on deposit at all times during the year is at least equal to the amount required to pay the cost of replacements and improvements which do not increase the system capacity or scope.

Revenue Bonds - These accounts receive all revenue derived by UOSA to pay the principal and interest on the bonds. At all times, there is on deposit in the Revenue Bond Interest Accounts the amount of interest on the bonds accrued to the last day of the current month. At all times, there is on deposit in the Revenue Bond Principal Accounts the amount of principal due on the outstanding bonds during the next succeeding twelve months accrued to the last day of the current month. At all times, there is on deposit in the Revenue Bond Sinking Fund Accounts the amount of any sinking fund installment due within the next succeeding twelve months accrued to the last day of the current month with respect to any Bonds that are subject to redemption, in accordance with Section 607 of the Restated Agreement of Trust and the First Supplemental Restated Agreement of Trust.

Bond Debt Reserve - This account contains at all times an amount deposited from the proceeds of UOSA's bonds sufficient to cover the maximum amount payable on account of principal and interest in any fiscal year (the Required Reserve) in accordance with the Restated Agreement of Trust, Section 608. According to Section 608, in lieu of the Required Reserve or any portion of it, the account may contain on deposit a surety bond or an insurance policy payable to the Trustee for the benefit of the bondholders, in an aggregate amount equal to the difference between the Required Reserve and the amount on deposit in the Debt Reserve Account.

Construction - This account receives proceeds from the issuance of bonds and is used to pay for construction in accordance with the Restated Agreement of Trust, as supplemented, Section 501.

As of June 30, 2022 and 2021 the Restricted Asset Accounts are summarized below:

			20)22		
			Reserve			
	CIP	M	1aintenance	[Debt Service	Total
Cash and cash equivalents	\$ 17,807,214	\$	4,503,051	\$	36,377,874	\$ 58,688,139
Investments	7,009,141		-		38,138,818	45,147,959
Deposits	70		-		_	70
Reserve maintenance receivable	-		3,202,664		_	3,202,664
Accrued interest receivable	10,865		-		92,573	103,438
Total	\$ 24,827,290	\$	7,705,715	\$	74,609,265	\$ 107,142,270

			20	021		
	CIP	M	Reserve laintenance	[Debt Service	Total
Cash and cash equivalents	\$ 39,237,908	\$	4,503,802	\$	47,954,411	\$ 91,696,121
Investments	-		-		25,219,968	25,219,968
Deposits	70		-		-	70
Arbitrage rebate receivable	1,800,000		_		_	1,800,000
Reserve maintenance receivable	-		1,956,684		-	1,956,684
Accrued interest receivable	195		-		67,876	68,071
Total	\$ 41,038,173	\$	6,460,486	\$	73,242,255	\$ 120,740,914

June 30, 2022 and 2021

5. CAPITAL ASSETS

(a) Changes in Capital Assets for the Years Ended June 30, 2022 and 2021

				2022			
	J	Balance June 30, 2021	Additions	Retirements	Transfers	Jı	Balance une 30, 2022
Non-Depreciable Capital Assets							
Land	\$	7,203,612	\$ -	\$ -	\$ -	\$	7,203,612
Construction in progress		34,267,771	12,322,029	-	(26,365,170)		20,224,630
Depreciable Capital Assets							
Utility Plant and Equipment:							
Treatment plant and reservoir		675,693,477	2,223,189	(2,540,607)	26,205,143		701,581,202
Interceptor sewers		73,541,463	703,839	(254,384)	-		73,990,918
Pumping stations		129,238,200	410,285	(106,475)	13,556		129,555,566
Mobile equipment		3,860,652	90,164	(20,286)	100,744		4,031,274
Other:							
Office furniture and equipment	:	7,852,343	6,910	(6,600)	-		7,852,653
Vehicles		1,942,474	225,324	(108,785)	27,600		2,086,613
Total Capital Assets	\$	933,599,992	\$ 15,981,740	\$ (3,037,137)	\$ (18,127)	\$	946,526,468

				2021			
	J	Balance une 30, 2020	Additions	Retirements	Transfers	J	Balance une 30, 2021
Non-Depreciable Capital Assets							
Land	\$	7,203,612	\$ 	\$ -	\$ -	\$	7,203,612
Construction in progress		48,548,184	13,842,125	-	(28,122,538)		34,267,771
Depreciable Capital Assets							
Utility Plant and Equipment:							
Treatment plant and reservoir		651,430,522	2,211,727	(132,670)	22,183,898		675,693,477
Interceptor sewers		70,049,938	192,308	-	3,299,217		73,541,463
Pumping stations		128,992,347	242,882	_	2,971		129,238,200
Mobile equipment		3,817,038	69,947	(26,333)	-		3,860,652
Other:							
Office furniture and equipment	t	7,958,304	-	(105,961)	-		7,852,343
Vehicles		1,857,438	218,304	(137,178)	3,910		1,942,474
Total Capital Assets	\$	919,857,383	\$ 16,777,293	\$ (402,142)	\$ (2,632,542)	\$	933,599,992

Transfers of \$18,127 and \$2,632,542 during fiscal years 2022 and 2021, respectively, consist of expenses related to capital from restricted asset accounts (see Note 11).

June 30, 2022 and 2021

(b) Changes in Accumulated Depreciation and Amortization for the Years Ended June 30, 2022 and 2021

	Balance June 30, 2021		Additions		Retirements		Transfers		Balance une 30, 2022	
Depreciable Capital Assets										
Utility Plant and Equipment:	¢ 471 765 765	4	00 005 570	.	(1 70 4 70 6)	.			450 606 600	
Treatment plant and reservoir	\$ 431,365,765	\$	22,965,570	\$	(1,704,726)	\$	_	\$	452,626,609	
Interceptor sewers	25,375,467		1,606,026		(238,318)		-		26,743,175	
Pumping stations	54,760,386		4,544,572		(31,269)		-		59,273,689	
Mobile equipment	2,990,393		140,453		(20,287)		-		3,110,559	
Other:										
Office furniture and equipment	7,615,651		62,194		(6,600)		-		7,671,245	
Vehicles	1,340,193		143,779		(108,785)		-		1,375,187	
Total Accumulated Depreciation										
and Amortization	\$ 523,447,855	\$	29,462,594	\$	(2,109,985)	\$	-	\$	550,800,464	

	2021									
	Balance June 30, 2020	Additions		Retirements		Transfers		J	Balance une 30, 2021	
Depreciable Capital Assets Utility Plant and Equipment:										
Treatment plant and reservoir	\$ 408,088,021	\$	23,328,131	\$	(50,387)	\$	_	\$	431,365,765	
Interceptor sewers	23,807,474		1,567,993		-		-		25,375,467	
Pumping stations	50,196,332		4,564,054		-		-		54,760,386	
Mobile equipment	2,879,152		127,534		(16,293)		-		2,990,393	
Other:										
Office furniture and equipment	7,647,349		74,262		(105,960)		-		7,615,651	
Vehicles	1,357,349		120,022		(137,178)		-		1,340,193	
Total Accumulated Depreciation										
and Amortization	\$ 493,975,677	\$	29,781,996	\$	(309,818)	\$	-	\$	523,447,855	

6. LONG-TERM DEBT

(a) Bonds Payable

UOSA issues revenue bonds to provide funds for acquisition and construction of major capital facilities and for refunding higher-interest revenue bonds. The bonds are secured by pledges of revenues from UOSA's sewer system, certain pledged reserves and income from investments pursuant to the Trust Agreement between UOSA and U.S. Bank National Association. Bonds payable as of June 30, 2022, consist of the following:

\$85,180,000 Regional Sewerage System Revenue Bonds, Series 2010; dated December 23, 2010, principal maturing annually with interest from 3.50% to 6.00% payable semiannually through July 1, 2043.

\$101,615,000 Regional Sewerage System Revenue Refunding Bonds, Series 2013A; dated May 30, 2013, principal maturing annually with interest from 0.35% to 2.90% payable semiannually through July 1, 2026.

\$20,915,000 Regional Sewerage System Revenue Bonds, Series 2016A; dated June 16, 2016, principal maturing annually starting July 1, 2019 with interest from 3.00% to 5.00% payable semiannually through July 1, 2048.

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\$41,030,000 Regional Sewerage System Revenue Refunding Bonds, Series 2016B; dated June 16, 2016, principal maturing annually starting July 1, 2035 with interest from 3.00% to 4.00% payable semiannually through July 1, 2038.

\$52,440,000 Regional Sewerage System Revenue Bonds, Series 2019; dated December 20, 2019, principal maturing annually starting July 1, 2023 with interest from 3.00% to 5.00% payable semiannually through July 1, 2052.

\$199,755,000 Regional Sewerage System Revenue Refunding Bonds, Series 2020; dated November 12, 2020, maturing annually starting July 1, 2021 with interest from 0.297% to 2.55% payable semiannually through July 1, 2041.

For each outstanding bond series, principal payments are made annually on July 1 and interest is payable semi-annually on January 1 and July 1. Future debt service requirements are as follows:

Fiscal Year(s)	Principal		Interest		Total
2023	\$ 24,020,000	\$	11,445,673	\$	35,465,673
2024	25,485,000		10,897,616		36,382,616
2025	26,085,000	10,267,122			36,352,122
2026	26,755,000		9,583,440		36,338,440
2027	38,765,000		8,848,533		47,613,533
2028-2032	117,095,000		36,498,174		153,593,174
2033-2037	76,730,000		26,853,240		103,583,240
2038-2042	88,605,000		13,190,033		101,795,033
2043-2047	24,140,000		4,029,704		28,169,704
2048-2052	14,130,000		1,377,000		15,507,000
2052-2053	2,615,000		39,225		2,654,225
Total	\$ 464,425,000	\$	133,029,760	\$	597,454,760

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(b) Virginia Resources Authority Loans Payable

In July 2011, UOSA entered into a financing agreement with Virginia Resources Authority (VRA) for the purpose of funding the costs related to the Energy Service (ESCO) Project, including the replacement of an existing blower system and the installation of a generator and cogeneration unit which uses biogas to produce heat and electricity. The loan was authorized under the Virginia Water Facilities Revolving Fund (VWFRF) for \$6.1 million, at 2.93% per annum for a term of twenty years. In October 2021, UOSA amended the finance agreement with VRA that reduced the interest rates to 1.20% for the remainder of the loan. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest and principal are payable on a semi-annual basis each June 1 and December 1. The outstanding loan balance at June 30, 2022 was \$3,355,289.

In December 2011, UOSA entered into a second financing agreement with VRA for the purpose of funding Phase 1 of the Nutrient Compliance Improvement Project (P1NR), together with related project expenses. The loan was authorized under the VWFRF for \$13.9 million, at 2.35% per annum for a term of twenty years. In October 2021, UOSA amended the finance agreement with VRA that reduced the interest rates to 1.25% for the remainder of the loan. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest and principal are payable on a semi-annual basis each March 1 and September 1. The outstanding loan balance at June 30, 2022 was \$8,355,982.

Future debt service requirements for principal and interest are as follows:

		2011A Loan				20111		
Fiscal Year(s)		Principal		Interest		Principal	Interest	Total
2023	\$	301,701	\$	39,361	\$	680,016	\$ 102,331	\$ 1,123,409
2024		305,332		35,730		688,543	93,804	1,123,409
2025		309,007		32,055		697,176	85,171	1,123,409
2026		312,727		28,335		705,918	76,429	1,123,409
2027		316,491		24,572		714,770	67,577	1,123,410
2028-2032		1,640,517		64,794		3,710,556	201,180	5,617,047
2033-2034		169,514		1,017		1,159,003	14,518	1,344,052
Total	\$	3,355,289	\$	225,864	\$	8,355,982	\$ 641,010	\$ 12,578,145

(c) Loan Payable

In November 2013, UOSA issued the 2013B Series Regional Sewerage System Revenue Refunding Bonds for the purpose of refunding the 2003 Series Regional Sewerage System Revenue Refunding Bonds. The 2013B Series issuance is a direct bank loan for \$37.7 million at 1.85% per annum for a term of eight years. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest is payable on a semi-annual basis each January 1 and July 1 and principal is payable on an annual basis each July 1. The outstanding loan balance at June 30, 2022 was \$3,770,000.

Future debt service requirements for principal and interest are as follows:

Fiscal Year	Principal	oal Interest			Total
2023	\$ 3,770,000	\$	34,778	\$	3,804,778
Total	\$ 3,770,000	\$	34,778	\$	3,804,778

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(d) Changes in Long-Term Liabilities

The following is a summary of changes in long-term liabilities for the years ended June 30, 2022 and 2021:

				2022				
	Balar	nce June 30, 2021	Additions	Reductions	Balar	nce June 30, 2022	Due	Within One Year
Bonds Payable								
2010B Series	\$	72,080,000	\$ -	\$ 2,105,000	\$	69,975,000	\$	2,165,000
2013A Series		94,355,000	-	11,540,000		82,815,000		17,550,000
2016A Series		20,200,000	-	385,000		19,815,000		405,000
2016B Series		41,030,000	-	_		41,030,000		_
2019 Series		52,440,000	-	_		52,440,000		_
2020 Series		199,755,000	-	1,405,000		198,350,000		3,900,000
		479,860,000	_	15,435,000		464,425,000		24,020,000
Premium (discount)								
on bonds payable (net)		5,060,897	-	186,436		4,874,461		189,460
Net Bonds Payable		484,920,897	-	15,621,436		469,299,461		24,209,460
Loans Payable								
Loan payable (2013B Series) VRA loans payable		8,615,000	-	4,845,000		3,770,000		3,770,000
(2011A & 2011B Series)		12,642,559	-	931,288		11,711,271		981,717
Landfill closure and		4.610.046	750 570			4.070.400		
postclosure obligation		4,619,846	358,576	-		4,978,422		-
Contract retainage payable		818,592	548,164	1,121,245		245,511		_
Compensated absences payable	!	2,321,974	1,846,980	1,743,708		2,425,246		2,047,928
Net OPEB obligation		6,803,711	482,572	337,935		6,948,348		-
Net pension liability		11,393,002	7,647,857	19,040,859		_		_
Total	\$	532,135,581	\$ 10,884,149	\$ 43,641,471	\$	499,378,259	\$	31,009,105

				2021				
	Balan	ce June 30, 2020	Additions	Reductions	Balar	nce June 30, 2021	Due	Within One Year
Bonds Payable								
1995A Series	\$	10,415,000	\$ -	\$ 10,415,000	\$	-	\$	-
2010B Series		74,125,000	-	2,045,000		72,080,000		2,105,000
2013A Series		95,455,000	-	1,100,000		94,355,000		11,540,000
2014 Series		163,885,000	-	163,885,000		-		_
2016A Series		20,565,000	-	365,000		20,200,000		385,000
2016B Series		41,030,000	-	-		41,030,000		-
2019 Series		52,440,000	-	-		52,440,000		-
2020 Series		-	199,755,000	-		199,755,000		1,405,000
		457,915,000	199,755,000	177,810,000		479,860,000		15,435,000
Premium (discount)								
on bonds payable (net)		25,345,880	(19,510,374)	774,609		5,060,897		186,436
Net Bonds Payable		483,260,880	180,244,626	178,584,609		484,920,897		15,621,436
Loans Payable								
Loan payable (2013B Series)		13,380,000	-	4,765,000		8,615,000		4,845,000
VRA loans payable		47.540.005		075.646		40.040.550		227.225
(2011A & 2011B Series) Landfill closure and		13,518,205	-	875,646		12,642,559		897,886
postclosure obligation		4,419,697	200,149	_		4,619,846		_
Contract retainage payable		1,352,193	833,071	1,366,672		818,592		798,275
Compensated absences payable	è	2,592,541	1,692,500	1,963,067		2,321,974		1,960,555
Net OPEB obligation		6,467,821	368,609	32,719		6,803,711		_
Net pension liability		8,235,922	5,959,040	2,801,960		11,393,002		-
Total	\$	533,227,259	\$ 189,297,995	\$ 190,389,673	\$	532,135,581	\$	24,123,152

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7. PENSIONS

(a) Plan Description

All full-time, salaried permanent employees of UOSA are automatically covered by a VRS Retirement Plan upon employment. This multiple-employer retirement plan is administered by the Virginia Retirement System (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 different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out below:

RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
About VRS Plan 1	About VRS Plan 2	About the Hybrid Retirement Plan	
Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, service credit and average	Same as Plan 1.	The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.	
final compensation at retirement using a formula.		 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. 	

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RETIREMENT PLAN PROVISIONS				
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN		
Eligible Members	Eligible Members	Eligible Members		
Employees are in 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 VRS non-hazardous duty covered 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.	Employees are in 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 optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.	 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 - 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 optional retirement plan (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	Retirement Contributions	Retirement Contributions		
Employees contribute 5% 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 payment.	Same as Plan 1.	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.		

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RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Service Credit	Service Credit	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.	Same as Plan 1.	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 also may 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.	

June 30, 2022 and 2021

RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Vesting	Vesting	Vesting	
Vesting is the minimum length of service	Same as Plan 1.	Defined Benefit Component:	
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 their member contribution account balance if they leave employment and request a refund.		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.	
Marabaya aya ahusaya 1000/ washadi in bha		Defined Contributions Component:	
Members are always 100% vested in the contributions that they make.		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.	

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RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Calculating the Benefit The Basic Benefit is determined using the average final compensation service credit and plan multiplier. 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 plan chosen is then applied.	Calculating the Benefit See definition under Plan 1.	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 A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	Average Final Compensation A member's average final compensation is the average of the 60 consecutive months of highest compensation as a covered employee.	Average Final Compensation Defined Benefit Component: Same as Plan 2 Defined Contribution Component: Not applicable.	
VRS: 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% Sheriffs and regional jail superintendents: The retirement multiplier for sheriffs and regional jail superintendents is 1.85%. Political subdivision hazardous duty employees: The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.70% or 1.85% as elected by the employer.	VRS: Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members, the retirement multiplier is 1.65% for service credit earned, purchased or granted on or after January 1, 2013. Sheriffs and regional jail superintendents: Same as Plan 1. Political subdivision hazardous duty employees: Same as Plan 1.	Service Retirement Multiplier Defined Benefit Component: VRS: 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 benef for service credited in those plans. Sheriffs and regional jail superintendents Not applicable. Political subdivision hazardous duty employees: Not applicable. Defined Contribution Component: Not applicable.	

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RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Normal Retirement Age VRS: Age 65. Political subdivision hazardous duty employees: Age 60.	Normal Retirement Age VRS: Normal Social Security retirement age. Political subdivision hazardous duty employees: Same as Plan 1.	Normal Retirement Age Defined Benefit Component: VRS: Same as Plan 2. Political subdivision hazardous duty employees: Not applicable. Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.	
Earliest Unreduced Retirement Eligibility VRS: Age 65 with at least five years (60 months) of service credit or at age 50 with at least 30 years of service credit. Political subdivision hazardous duty employees: Age 60 with at least five years of service credit or age 50 with at least 25 years of service credit.	Earliest Unreduced Retirement Eligibility VRS: Normal Social Security retirement age with at least five years (60 months) of service credit or when their age plus service credit equals 90. Political subdivision hazardous duty employees: Same as Plan 1.	Earliest Unreduced Retirement Eligibility Defined Benefit Component: VRS: Normal Social Security retirement age and have at least five years (60 months) of service credit or when their age plus service credit equal 90. Political subdivision hazardous duty employees: Not applicable. Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.	
Earliest Reduced Retirement Eligibility VRS: Age 55 with at least five years (60 months) of service credit or age 50 with at least 10 years of service credit. Political subdivision hazardous duty employees: Age 50 with at least five years of service credit.	Earliest Reduced Retirement Eligibility VRS: Age 60 with at least five years (60 months) of service credit. Political subdivision hazardous duty employees: Same as Plan 1.	Earliest Reduced Retirement Eligibility Defined Benefit Component: VRS: Age 60 with at least five years (60 months) of service credit. Political subdivision hazardous duty employees: Not applicable. Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.	

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RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Cost-of-Living Adjustment (COLA) in Retirement	Cost-of-Living Adjustment (COLA) in Retirement	Cost-of-Living Adjustment (COLA) in Retirement	
The Cost-of-Living Adjustment (COLA)	The Cost-of-Living Adjustment (COLA)	Defined Benefit Component:	
matches the first 3% increase in the Consumer Price Index for all Urban	matches the first 2% increase in the CPI-U and half of any additional increase (up to	Same as Plan 2.	
Consumers (CPI-U) and half of any	2%), for a maximum COLA of 3%.	Defined Contribution Component:	
additional increase (up to 4%) up to a maximum COLA of 5%.		Not applicable.	
Eligibility:	Eligibility: Same as Plan 1.	Eligibility: Same as Plan 1 and Plan 2.	
For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the retirement date.		Sume as Fight and Fight 2.	
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	Exceptions to COLA Effective Dates:	Exceptions to COLA Effective Dates:	
following the unreduced retirement eligibility date.	Same as Plan 1.	Same as Plan 1 and Plan 2.	
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. 			
 The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins. 			

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RETIREMENT PLAN PROVISIONS			
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN	
Disability Coverage	Disability Coverage	Disability Coverage	
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.	Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.	Employees of political subdivisions (including Plan 1 and Plan 2 opt-ins) participate in an employer-paid program for its members. Hybrid members are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits under the employer-paid program.	
Purchase of Prior Service	Purchase of Prior Service	Purchase of Prior Service	
Members may be eligible to purchase service from previous public employment,	Same as Plan 1.	Defined Benefit Component:	
active duty military service, an eligible period of leave or VRS refunded service		Same as Plan 1, with the following exception:	
as service credit in their plan. Prior service credit counts toward vesting, eligibility		 Hybrid Retirement Plan members are ineligible for ported service. 	
for retirement and the health insurance		Defined Contribution Component:	
credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.		Not applicable.	

(b) Employees Covered by Benefit Terms

As of the June 30, 2020 actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	Number
Inactive members or their beneficiaries currently receiving benefits	115
Inactive Members	
Vested inactive members	24
Non-vested inactive members	35
Inactive members active elsewhere in VRS	31
Total Inactive Members	90
Active members	173
Total Covered Employees	378

(c) 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 UOSA by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement.

UOSA's contractually required contribution rate for the year ended June 30, 2022 was 8.42% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019. 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 UOSA were \$1,211,807 and \$1,221,230 for the years ended June 30, 2022 and June 30, 2021, respectively.

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(d) Net Pension Liability (Asset)

The net pension liability (asset) is calculated separately for each employer and represents that particular employer's total pension liability determined in accordance with GASB Statement No. 68, less that employer's fiduciary net position. UOSA's net pension liability (asset) was measured as of June 30, 2021. The total pension liability used to calculate the net pension liability (asset) was determined by an actuarial valuation performed as of June 30, 2020, rolled forward to the measurement date of June 30, 2021.

Actuarial Assumptions

The total pension liability for General Employees in the Political Subdivision's Retirement Plan was based on an actuarial valuation as of June 30, 2020, 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, 2021.

Inflation	2.50%
Salary increases, including inflation	3.50% - 5.35%
Investment rate of return	6.75%, net of pension plan investment expense, including inflation

Mortality Rates (15% of deaths are assumed to be service related):

- Pre-Retirement: Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years.
- Post-Retirement: Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years.
- Post-Disablement: Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years.
- · Beneficiaries and Survivors: Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years.
- Mortality Improvement: Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates.

The actuarial assumptions used in the June 30, 2020, valuation were based on the results of an actuarial experience study for the period from July 1, 2016 through June 30, 2020, except for the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Update to Pub-2010 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
Discount rate	No change

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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. 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:

Asset Class (Strategy)	Long-Term Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return*
Public Equity	34.00%	5.00%	1.70%
Fixed Income	15.00	0.57	0.09
Credit Strategies	14.00	4.49	0.63
Real Assets	14.00	4.76	0.67
Private Equity	14.00	9.94	1.39
MAPS - Multi -Asset Public Strategies	6.00	3.29	0.20
PIP - Private Investment Partnership	3.00	6.84	0.21
Total	100.00%		4.89
Inflation			2.50
Expected Arithmetic Nominal Return*			7.39%

^{*}The above allocation provides a one-year return of 7.39%. 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. These results provide a range of returns over various time periods that ultimately provide a median return of 6.94%, including expected inflation of 2.50%. On October 10, 2019, the VRS Board elected a long-term rate of 6.75% which was roughly at the 40th percentile of excepted long-term results of the VRS fund asset allocation at that time, providing a median return of 7.11%, including expected inflation of 2.50%.

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, UOSA was provided with an opportunity to use an alternate employer contribution rate. For the year ended June 30, 2021, the alternate rate was the employer contribution rate used in fiscal year 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2017 actuarial valuation, whichever was greater. From July 1, 2021 on, participating employers are assumed 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.

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Changes in Net Pension Liability (Asset)

		Increase (Decrease)	
	Total Pension Liability (a)	Plan Fiduciary Net Pension (b)	Net Pension Liability (Asset) (a) - (b)
Total at June 30, 2020	\$ 70,182,791	\$ 58,789,789	\$ 11,393,002
Changes for the year:			
Service cost	1,180,289	_	1,180,289
Interest	4,634,498	_	4,634,498
Changes of assumptions	1,792,977	_	1,792,977
Differences between expected			
and actual experience	(1,450,738)	_	(1,450,738)
Contributions - employer	_	1,135,025	(1,135,025)
Contributions - employee	-	689,802	(689,802)
Net investment income	-	16,055,794	(16,055,794)
Benefit payments, including refunds			
of employee contributions	(3,047,114)	(3,047,114)	_
Administrative expenses	_	(40,093)	40,093
Other changes	-	1,510	(1,510)
Net Changes	3,109,912	14,794,924	(11,685,012)
Total at June 30, 2021	\$ 73,292,703	\$ 73,584,713	\$ (292,010)

Increase (Decrease)

	Total Pension Liability (a)	Plan Fiduciary Net Pension (b)	Net Pension Liability (a) - (b)	
Total at June 30, 2019	\$ 66,977,428	\$ 58,741,506	\$ 8,235,922	
Changes for the year:				
Service cost	1,214,200	-	1,214,200	
Interest	4,429,378	-	4,429,378	
Differences between expected				
and actual experience	275,808	-	275,808	
Contributions - employer	-	999,574	(999,574)	
Contributions - employee	-	682,776	(682,776)	
Net investment income	-	1,119,610	(1,119,610)	
Benefit payments, including refunds				
of employee contributions	(2,714,023)	(2,714,023)	-	
Administrative expenses	-	(38,328)	38,328	
Other changes	-	(1,326)	1,326	
Net Changes	3,205,363	48,283	3,157,080	
Total at June 30, 2020	\$ 70,182,791	\$ 58,789,789	\$ 11,393,002	

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Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of UOSA using the discount rate of 6.75%, as well as what UOSA's net pension liability (asset) 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:

	19	% Decrease (5.75%)	Curre	nt Discount Rate (6.75%)	1% Increase (7.75%)
UOSA's Net Pension Liability (Asset) at June 30, 2021	\$	9,403,924	\$	(292,010)	\$ (8,279,882)
UOSA's Net Pension Liability at June 30, 2020	\$	20,060,320	\$	11,393,002	\$ 4,155,379

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the years ended June 30, 2022 and 2021, UOSA recognized pension expense of \$(353,766) and \$1,934,773, respectively.

At June 30, 2022, UOSA reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources
Differences between expected			
and actual experience	\$	132,294	\$ (1,097,922)
Change of assumptions		1,674,288	-
Net difference between projected and actual			
earnings on pension plan investments		1,750,063	(9,749,882)
Employer contributions subsequent to			
the measurement date		1,211,807	-
Total at June 30, 2022	\$	4,768,452	\$ (10,847,804)

At June 30, 2021, UOSA reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources		Deferred Inflow of Resources	
Differences between expected				
and actual experience	\$	406,197	\$	(586,770)
Change of assumptions		939,739		(51,965)
Net difference between projected and actual				
earnings on pension plan investments		2,344,166		(232,511)
Employer contributions subsequent to				
the measurement date		1,221,230		_
Total at June 30, 2021	\$	4,911,332	\$	(871,246)

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The \$1,211,807 and \$1,221,230, reported as deferred outflows of resources related to pensions resulting from UOSA's contributions subsequent to the measurement date, will be recognized as a reduction of the net pension liability (asset) in the years ending June 30, 2023 and ended 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

Year Ending June 30	Deferred Outflows (Inflows) of Resources
2023	\$ (1,347,664)
2024	(1,672,709)
2025	(1,844,777)
2026	(2,426,009)

Pension Plan Data

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2021 Annual Report. A copy of the 2021 VRS Annual Report may be downloaded from the VRS website at varetire.org/Pdf/Publications/2021-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payable to the Pension Plan

For the years ended June 30, 2022 and 2021, UOSA reported a current payable for the outstanding amount of contributions to the pension plan required for the year of \$0 and \$152,983, respectively.

8. OTHER POSTEMPLOYMENT BENEFITS (OPEB)

(a) Health Care Benefit Plan

(1) Plan Description

UOSA administers a single-employer defined post-employment health care benefit plan ("the Plan"). The Plan provides post-employment health care benefits to eligible employees who have retired from UOSA on or after July 1, 1999. In order to participate, retirees must meet the requirements of the Virginia Retirement System (VRS) and have attained age 55 with at least ten years of service. The benefit levels, employee contributions and employer contributions are governed, and can be amended, by UOSA's Board of Directors. Separate financial statements were not issued for the Plan.

Pre-65 Health Insurance

Retirees under the age of 65 and their dependents (spouse and children) are eligible to obtain health insurance from the same medical plans available to active employees provided the retiree was previously enrolled in UOSA's, or another, group medical plan for a minimum of one year immediately prior to retirement. UOSA contributes 2% toward the total cost of the selected coverage for every year of accrued service up to 40 years. Partial years of service are counted in increments of one month. Participation in UOSA's health insurance plan ends once the retiree becomes eligible for Medicare at age 65. At that time, the retiree's dependents will be offered health care coverage under COBRA and the Medicare eligible retiree's post-65 benefit begins.

Post-65 Health Subsidy

Retirees age 65 and older are provided a monthly health care subsidy based on years of service to help offset any expenses not covered by Medicare. UOSA pays each participating Post-65 retiree \$5 per month per year of service with a subsidy minimum of \$50 and maximum of \$150. Employees who retired prior to age 65 do not need to participate in the health insurance plan to receive the monthly health care subsidy at age 65. The health care benefits end at the death of the retiree.

Current UOSA Pre-65 retirees who qualify for health insurance benefits receive an implicit rate subsidy by participating in the active employee health care risk pool.

Employees Covered by Benefit Terms

At July 1, 2021, the following employees were covered by the benefit terms:

Active employees	175
Inactive employees currently receiving benefits	65
Total Covered Employees	240

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Contributions

The contribution requirements of plan members are established and may be amended by UOSA's Board of Directors. UOSA is not required to fund the Plan for an amount greater than the pay-as-you-go balance necessary to provide current benefits to retirees. As of June 30, 2022, UOSA has not established a trust fund to irrevocably segregate assets to fund the OPEB liability; however, UOSA's Board of Directors designated \$175,000 in fiscal year 2022, \$175,000 in fiscal year 2021, \$175,000 in fiscal year 2020, \$175,000 in fiscal year 2019, \$110,000 in fiscal year 2018, \$175,000 in fiscal year 2017, \$145,000 in fiscal year 2016, \$145,000 in fiscal year 2015, \$300,000 in fiscal year 2014 and \$250,000 in each of the four preceding fiscal years for a total of \$2,575,000 toward future OPEB funding.

(2) Total OPEB Liability

UOSA's Total OPEB Liability was measured as of June 30, 2021, and was determined by census data as of July 1, 2021 and rolled forward to the measurement date of June 30, 2022.

Actuarial Assumptions

The Total OPEB Liability in the June 30, 2021 census data was determined using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2022, unless otherwise specified:

Inflation	2.5%
Salary increases, including inflation	3.50% - 5.35%
Discount rate	2.45% as of June 30, 2020 1.92% as of June 30, 2021
Healthcare cost trend rates: Pre-65	6.00% for fiscal 2022, 5.80% for fiscal 2023, to an ultimate rate of 3.94% for 2075 and beyond

Discount rates used to measure Total OPEB Liability were based on an index rate for 20-year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher as of the respective measurement dates.

The mortality assumption has been updated to the Private Sector tables released by the Society of Actuaries with the MP-2021 mortality improvement scale.

Claims data or the community rating algorithm were not disclosed. Accordingly, gross claims for employees and retirees are based on age adjusted premiums.

(3) Changes in OPEB Liability

	Total OPEB Liability
Total at June 30, 2020	\$ 5,647,875
Changes for the Year:	
Service cost	195,298
Interest	134,493
Differences between expected	
and actual experience	344,750
Changes in assumptions	75,612
Benefit payments	(267,581)
Net Changes	482,572
Total at June 30, 2021	\$ 6,130,447

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June 30, 2022 and 2021

	Total OPEB Liability
Total at June 30, 2019	\$ 5,279,266
Changes for the Year:	
Service cost	164,264
Interest	160,503
Differences between expected	
and actual experience	(46,714)
Changes in assumptions	346,569
Benefit payments	(256,013)
Net Changes	368,609
Total at June 30, 2020	\$ 5,647,875

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

The following presents UOSA's Total OPEB Liability calculated using the discount rate of 1.92% for the fiscal year ended June 30, 2021 and 2.45% for the fiscal year ended June 30, 2020. It also presents what UOSA's Total OPEB Liability would be if it were calculated using a discount rate one percentage point lower and one percentage point higher than the current rate.

		June 30, 2021	
	1% Decrease (0.92%)	Current Discount Rate (1.92%)	1% Increase (2.92%)
UOSA's Total OPEB Liability	\$ 6,776,989	\$ 6,130,447	\$ 5,576,984
		June 30, 2020	
	1% Decrease (1.45%)	Current Discount Rate (2.45%)	1% Increase (3.45%)
UOSA's Total OPEB Liability	\$ 6,217,491	\$ 5,647,875	\$ 5,148,560

$Sensitivity\ of\ the\ Total\ OPEB\ Liability\ to\ Changes\ in\ the\ Healthcare\ Cost\ Trend\ Rates$

The following presents UOSA's Total OPEB Liability calculated using the current healthcare trend rates. It also presents what UOSA's Total OPEB Liability would be if it were calculated using healthcare trend rates that are one percentage point lower or one percentage point higher than the current rates.

		June 30, 2021	
	1% Decrease (2.94%)	Current Discount Rate (3.94%)	1% Increase (4.94%)
UOSA's Total OPEB Liability	\$ 5,511,890	\$ 6,130,447	\$ 6,869,051
		June 30, 2020	
	1% Decrease (2.90%)	Current Discount Rate (3.90%)	1% Increase (4.90%)
UOSA's Total OPEB Liability	\$ 4,960,711	\$ 5,647,875	\$ 6,486,617

June 30, 2022 and 2021

(4) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources

For the years ended June 30, 2022 and 2021, UOSA recognized OPEB expense of \$469,182 and \$380,086, respectively.

At June 30, 2022, UOSA reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and				
actual experience	\$	485,118	\$	(46,844)
Changes in assumptions		344,809		(139,274)
Employer contributions subsequent				
to the measurement date		332,815		_
Total at June 30, 2022	\$	1,162,742	\$	(186,118)

At June 30, 2021, UOSA reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and				
actual experience	\$	261,648	\$	(56,887)
Changes in assumptions		343,021		(184,944)
Employer contributions subsequent				
to the measurement date		267,580		_
Total at June 30, 2021	\$	872,249	\$	(241,831)

The \$332,815 and \$267,580, reported as deferred outflows of resources related to OPEB resulting from UOSA's contributions subsequent to the measurement date, will be recognized as a reduction of the Total OPEB Liability in the years ending June 30, 2023 and ended 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year ending June 30	Deferred Outflows (Inflows) of Resources
2023	\$ 139,391
2024	139,391
2025	139,388
2026	182,806
2027	42,833

(b) VRS Group Life Insurance Program

(1) Plan Description

All full-time, salaried permanent employees of the state agencies, teachers and employees of participating political subdivisions are automatically covered by the VRS Group Life Insurance Program upon employment. This plan is administered by the Virginia Retirement System (the System), along with pensions and other OBEB plans, for public employer groups in the Commonwealth of Virginia.

In addition to the Basic Group Life Insurance benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. For members who elect the optional group life insurance coverage, the insurer bills employers directly for the premiums. Employers deduct these premiums from members' paychecks and pay the premiums to the insurer. Since this is a separate and fully insured program, it is not included as part of the Group Life Insurance Program OPEB.

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Group Life Insurance Program Plan Provisions

Eligible Employees

The Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program.

Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their accumulated retirement member contributions and accrued interest.

Benefit Amounts

The benefits payable under the Group Life Insurance Program have several components.

- Natural Death Benefit The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled.
- · Accidental Death Benefit The accidental death benefit is double the natural death benefit.
- Other Benefit Provisions In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include:
 - Accidental dismemberment benefit
 - Safety belt benefit
 - Repatriation benefit
 - Felonious assault benefit
 - Accelerated death benefit option

Reduction in Benefit Amounts

The benefit amounts provided to members covered under the Group Life Insurance Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.

Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)

For covered members with at least 30 years of service credit, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at \$8,000 by statute in 2015. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment calculation and is currently \$8,722 as of June 30, 2022.

(2) Contributions

The contribution requirements for the Group Life Insurance Program are governed by \$51.1-506 and \$51.1-508 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the Group Life Insurance Program was 1.34% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.80% (1.34% X 60%) and the employer component was 0.54% (1.34% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2022 was 0.54% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. UOSA's employer contributions to the Group Life Insurance Program were \$77,922 and \$78,322 for the years ended June 30, 2022 and June 30, 2021, respectively.

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(3) GLI OPEB Liabilities, GLI OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Group Life Insurance Program OPEB

At June 30, 2022 and June 30, 2021, UOSA reported a liability of \$817,901 and \$1,155,836 respectively for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2021 and the Total GLI OPEB Liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation performed as of June 30, 2020, and rolled forward to the measurement date of June 30, 2021. UOSA's proportion of the Net GLI OPEB Liability was based on UOSA's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2021, relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2021, UOSA's proportion was 0.07025% as compared to 0.06926% at June 30, 2020.

For the years ended June 30, 2022 and 2021, UOSA recognized GLI OPEB expense of \$20,814 and \$30,615, respectively. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2022, UOSA reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

Differences between expected and		Deferred Outflows of Resources		Deferred Inflows of Resources	
actual experience	\$	93,284	\$	(6,232)	
Net difference between projected and actual					
earnings on GLI OPEB program investments	S	-		(195,215)	
Changes in assumptions		45,091		(111,906)	
Changes in proportion		12,189		(52,377)	
Employer contributions subsequent to the					
measurement date		77,922		-	
Total at June 30, 2022	\$	228,486	\$	(365,730)	

At June 30, 2021, UOSA reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

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		Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and					
actual experience	\$	74,136	\$	(10,380)	
Net difference between projected and actual					
earnings on GLI OPEB program investments	5	34,720		-	
Changes in assumptions		57,805		(24,135)	
Changes in proportion		-		(66,885)	
Employer contributions subsequent to the					
measurement date		78,322		-	
Total at June 30, 2021	\$	244,983	\$	(101,400)	

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The \$77,922 and \$78,322, reported as deferred outflows of resources related to the GLI OPEB resulting from UOSA's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the years ending June 30, 2023 and ended 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense as follows:

Year ending June 30	 red Outflows s) of Resources
2023	\$ (52,773)
2024	(43,696)
2025	(40,527)
2026	(67,142)
2027	(11,028)

(4) Actuarial Assumptions

The Total GLI OPEB Liability was based on an actuarial valuation as of June 30, 2020, 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, 2021.

Inflation	2.50%
Salary increases, including inflation	3.50% - 5.35%
Investment rate of return	6.75%, net of investment expenses, including inflation

Mortality Rates:

- Pre-Retirement: Pub-2010 Amount Weighted Safety Employee Rates projected generationally; males set forward 2 years; 105% of rates for females set forward 3 years.
- Post-Retirement: Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 95% of rates for males set forward 2 years; 95% of rates for females set forward 1 year.
- Post-Disablement: Pub-2010 Amount Weighted General Disabled Rates projected generationally; 110% of rates for males set forward 3 years; 110% of rates for females set forward 2 years.
- · Beneficiaries and Survivors: Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally.
- · Mortality Improvement Scale: Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of MP-2020 rates.

The actuarial assumptions used in the June 30, 2020, 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 based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Updated to Pub-2010 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 from 75 to 80 for all
Withdrawal rates	Adjusted rates to better fit experience at each age and service decrement through 9 years of service
Disability rates	No change
Salary scale	No change
Discount rate	No change

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(5) Net GLI OPEB Liability

The Net OPEB Liability (NOL) for the Group Life Insurance Program represents the program's Total OPEB Liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of the measurement date of June 30, 2021, NOL amounts for the Group Life Insurance Program are as follows (amounts expressed in thousands):

		Group Life Insurance OPEB Program			
Total GLI OPEB liability Plan fiduciary net position		3,577,346 2,413,074			
Employers' Net GLI OPEB Liability	\$	1,164,272			
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability		67.45%			

The Total GLI OPEB Liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The Net GLI OPEB Liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

(6) Long-Term Expected Rate of Return

The long-term expected rate of return on the System's 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 System's investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

			Weighted Average
	Long-Term Target	Arithmetic Long-Term	Long-Term Expected
Asset Class (Strategy)	Asset Allocation	Expected Rate of Return	Expected Rate of Return*
Public Equity	34.00%	5.00%	1.70%
Fixed Income	15.00	0.57	0.09
Credit Strategies	14.00	4.49	0.63
Real Assets	14.00	4.76	0.67
Private Equity	14.00	9.94	1.39
MAPS - Multi-Asset Public Strategies	6.00	3.29	0.20
PIP - Private Investment Partnership	3.00	6.84	0.21
Total	100.00%		4.89%
Inflation			2.50
Expected Arithmetic Nominal Retur	n*		7.39%

^{*} The above allocation provides a one-year return of 7.39%. 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. These results provide a range of returns over various time periods that ultimately provide a median return of 6.94%, including expected inflation of 2.50%. On October 10, 2019, the VRS Board elected a long-term rate of 6.75% which is roughly at the 40th percentile of excepted long-term results of the VRS fund asset allocation at that time, providing a median return of 7.11%, including expected inflation of 2.50%.

(7) Discount Rate

The discount rate used to measure the Total GLI OPEB Liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy and at rates equal to the actuarially determined contribution rates adopted by the VRS Board of Trustees. Through the fiscal year ended June 30, 2021, the rate contributed by UOSA for the GLI OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2021 on, employers are assumed to

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contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the Total GLI OPEB Liability.

(8) Sensitivity of UOSA's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The following presents UOSA's proportionate share of the Net GLI OPEB Liability using the discount rate of 6.75%. It also presents what UOSA's proportionate share of the Net GLI OPEB Liability would be if it were calculated using discount rate one percentage point lower (5.75%) and one percentage point higher (7.75%) than the current rate.

	1%	6 Decrease (5.75%)	Currer	nt Discount Rate (6.75%)	19	% Increase (7.75%)
UOSA's Proportionate Share of the Group Life Insurance Program Net OPEB Liability at June 30, 2022	\$	1,194,983	\$	817,901	\$	513,390
UOSA's Proportionate Share of the Group Life Insurance Program Net OPEB Liability at June 30, 2021	\$	1,519,435	\$	1,155,836	\$	860,559

(9) Group Life Insurance Program Fiduciary Net Position

Detailed information about the Group Life Insurance Program's Fiduciary Net Position is available in the separately issued VRS 2021 Annual Comprehensive Financial Report (Annual Report). A copy of the 2021 VRS Annual Report may be downloaded from the VRS website at varetire.org/Pdf/Publications/2021-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

(10) Payable to the Group Life Insurance Program

For the years ended June 30, 2022 and 2021, UOSA reported a current payable for the outstanding amount of contributions to the VRS Group Life Insurance Program required for the year of \$0 and \$16,370, respectively.

(c) VACORP Hybrid Disability Program

(1) Plan Description

All UOSA's full-time, salaried general employees who are in the VRS Hybrid Retirement Plan benefit structure are covered by the Virginia Association of Counties Risk Pool (VACORP) Hybrid Disability Program. Political subdivisions are required by Title 51.1 of the Code of Virginia, as amended to provide short-term and long-term disability benefits for their Hybrid employees either through a local plan or through the Virginia Local Disability Program. UOSA made an irrevocable election to opt out of the state's Virginia Local Disability Program and entered into the VACORP Hybrid Disability Program. The VACORP Hybrid Disability Program is administered by Anthem Life. Anthem Life handles the policy administration and VACORP handles the billing for the program. UOSA pays the employees on short-term disability while Anthem Life processes the claims and advises payment. The long-term disability benefit is fully insured by Anthem Life. The obligation for the payment of long-term disability benefits has been effectively transferred from UOSA to Anthem Life.

VACORP Hybrid Disability Program Plan Provisions

Eligible Employees

The VACORP Hybrid Disability Program provides short-term and long-term disability benefits for non-work-related and work-related disabilities for employees with Hybrid retirement benefits.

Eligible employees are covered automatically upon employment. They include:

• Full-time general employees of public political subdivisions covered under the VRS Hybrid Retirement Plan described in § 51.1-169 of the *Code of Virginia*.

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- Actively At Work at least the minimum hours per week required by the Employer for coverage under the Program, but in no event less than 10 hours each week (for purposes of the Member definition, Actively At Work will include regularly scheduled days of, holidays or vacation days, so long as the person is capable of Active Work on those days).
- · A citizen or resident of the United States or Canada.

Member does not include a temporary or seasonal employee, a full-time member of the armed forces of any country, a leased employee, or an independent contractor.

Benefit Amounts

The VACORP Hybrid Disability Program provides the following benefits for eligible employees:

Short-Term Disability -

- The program provides a short-term disability benefit beginning after a seven calendar-day waiting period from the first day of disability. Employees become eligible for non-work-related short-term disability coverage after one year of continuous participation in VRS Hybrid Retirement Plan with UOSA.
- During the first five years of continuous participation in VRS Hybrid Retirement Plan with UOSA, employees are eligible for 60% of their pre-disability income if they go out on non-work-related or work-related disability.
- Short-term benefit payments are made to the employees directly from UOSA.
- · Once the eligibility period is satisfied, employees are eligible for higher income replacement levels.

Long-Term Disability -

- The program provides a long-term disability benefit beginning after 125 workdays of short-term disability. Members are eligible if they are unable to work at all or are working fewer than 20 hours per week.
- Members approved for long-term disability will receive 60% of their pre-disability income. If approved for work-related long-term disability, the benefit will be offset by the workers' compensation benefit. Members will not receive a long-term disability benefit if their workers' compensation benefit is greater than the long-term disability benefit.
- Long-term benefit payments are fully insured and paid to the employees from Anthem Life. In the event of Anthem Life's insolvency, the long-term disability benefits will be paid by the Virginia Life, Accident and Sickness Insurance Guaranty Association.

(2) VACORP Hybrid Disability Program OPEB Expense

UOSA recognized VACORP Hybrid Disability Program OPEB expense of \$23,126 and \$20,085 for the years ended June 30, 2022 and June 30, 2021, respectively.

9. OPERATING REVENUES

Operating revenues consist of billings to the Member Jurisdictions for treatment of sewage. Revenues earned for the fiscal years ended June 30, 2022 and 2021 were as follows:

	2022	2021
Fairfax County	\$ 11,693,893	\$ 11,584,801
Prince William County	12,506,714	12,366,532
City of Manassas	5,925,468	6,059,280
City of Manassas Park	1,199,017	1,362,606
Other	561,335	1,113,678
Total	\$ 31,886,427	\$ 32,486,897

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10. OPERATING EXPENSES

Operating expenses include reimbursable septage receiving facility and pump station/meter station charges. Operating expenses for the fiscal years ended June 30, 2022 and 2021 were as follows:

2022		2021
\$ 18,535,730	\$	21,248,367
2,442,379		2,642,809
2,379,769		2,136,855
912,565		871,431
2,974,320		2,842,375
2,073,070		2,395,154
428,106		297,645
433,989		418,487
51,517		(103,509)
29,462,594		29,781,996
\$ 59,694,039	\$	62,531,610
	\$ 18,535,730 2,442,379 2,379,769 912,565 2,974,320 2,073,070 428,106 433,989 51,517 29,462,594	\$ 18,535,730 \$ 2,442,379

11. REVENUES AND EXPENSES FROM RESTRICTED ASSET ACCOUNTS

The following is a schedule of revenues and expenses from restricted asset accounts for the fiscal years ended June 30, 2022 and 2021:

	2022	2021
Revenues		
Bond interest billings	\$ 11,621,160	\$ 14,194,223
Bond principal billings	24,964,139	21,107,329
Investment income	(1,281,124)	(444,116)
Reserve maintenance billings	5,082,891	4,479,824
	40,387,066	39,337,260
Expenses		
Bond interest	18,832,485	18,895,831
Reserve maintenance	1,050,529	991,596
Capital improvement projects	18,127	2,632,542
Landfill closure and postclosure	358,576	200,149
	20,259,717	22,720,118
Revenues in Excess of Expenses From		
Restricted Asset Accounts	\$ 20,127,349	\$ 16,617,142
Financial Statement Presentation		
Revenues from restricted accounts	\$ (4,836,790)	\$ (4,490,187)
Capital contributions	24,964,139	21,107,329

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12. LANDFILL CLOSURE AND POSTCLOSURE COST

State and Federal laws and regulations require UOSA to place a final cover on its landfill when it stops accepting waste and to perform certain maintenance and monitoring functions at the site for thirty years after closure. Although closure and post closure care costs will be paid only near or after the date that the landfill stops accepting waste, UOSA reports a portion of these closure and post closure care costs as an expense chargeable to restricted asset accounts in each period based on landfill capacity used as of each balance sheet date. A review of the estimated landfill closure and post closure care costs was most recently performed by SCS Engineers in 2019. An aerial survey was last performed in 2022. The aerial survey calculated the volume consumed and volume remaining. The \$4,978,422 and \$4,619,846 reported as landfill closure and post closure care liability at June 30, 2022 and June 30, 2021, respectively, represents the cumulative amount reported to date based on the use of 62.6% and 60.1%, respectively, of the estimated capacity of Phase I of the landfill. UOSA will recognize the remaining estimated cost of closure and post closure care of \$2,970,962 for Phase I as the remaining estimated capacity is filled. These amounts are based on what it would cost to perform all closure and post closure care in 2022. Based on engineer's estimates, the landfill is expected to reach capacity in 2039. Actual cost may be higher due to inflation, changes in technology, or changes in regulations. The subsequent phases of the landfill will be constructed as required in the future.

13. ARBITRAGE REBATE ASSET

The U.S. Treasury has issued regulations on calculating the rebate due the Federal Government on arbitrage earnings and determining compliance with the arbitrage rebate provisions of the Tax Reform Act of 1986. Arbitrage earnings arise when UOSA temporarily invests the proceeds of tax exempt debt in securities with yields higher than the arbitrage rate. An estimated rebate receivable increases interest income from restricted assets and is recorded as an asset on the Statement of Net Position. All estimated rebates are recorded net.

Pursuant to Section 148 of the Internal Revenue Code of 1986, UOSA was required to make an interim rebate payment, if a liability existed, within 60 days of the end of its fifth bond year. Accordingly, UOSA issued a rebate payment in the amount of \$1,800,000 in August 2000 in order to satisfy minimum requirements to reduce its rebate liability. Effective March 2001, bond proceeds were invested in securities with yields lower than the arbitrage rate. During fiscal year 2022, the rebate receivable was determined to be unrecoverable from the IRS. As of June 30, 2022 and 2021, the rebate receivable was \$0 and \$1,800,000, respectively.

14. COMMITMENTS AND CONTINGENCIES

(a) Construction

UOSA has a major Capital improvement and expansion program funded by fixed rate revenue bonds. At June 30, 2022, UOSA has outstanding commitments for contracts in progress of approximately \$9,408,843.

(b) Litigation

UOSA is contingently liable with respect to lawsuits and other claims that arise in the normal course of its operations. Although the outcome of these matters is not presently determinable, in the opinion of UOSA's management, the resolution of these matters will not have a material, adverse effect on the financial conditions of UOSA.

(c) Letter of Credit

As of June 30, 2022, UOSA had a letter of credit outstanding in the amount of \$5,564,569 for landfill closure and \$894,903 for 2011B Bond Series Debt Service Reserve.

(d) Operating Costs

UOSA has commitments for a block of energy at \$29.50/MWhr or below plus FTRs of not more than \$3.00/MWhr delivered between July 1, 2021 and June 30, 2023.

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Schedule of Changes in UOSA's Net Pension (Asset) Liability and Related Ratios

Last 10 Fiscal Years*

Measurement Date	Jı	une 30, 2021	J	une 30, 2020	Jı	une 30, 2019	J	une 30, 2018
Total Pension Liability								
Service cost Interest Differences between expected	\$	1,180,289 4,634,498	\$	1,214,200 4,429,378	\$	1,226,020 4,293,189	\$	1,183,395 4,040,244
and actual experience Changes of assumptions Benefit payments, including refunds		(1,450,738) 1,792,977		275,808 -		(448,022) 1,928,937		802,608 -
of employee contributions		(3,047,114)		(2,714,023)		(2,707,932)		(2,117,578)
Net Change in Total Pension Liability Total pension liability - beginning		3,109,912 70,182,791		3,205,363 66,977,428		4,292,192 62,685,236		3,908,669 58,776,567
Total Pension Liability - Ending (a)	\$	73,292,703	\$	70,182,791	\$	66,977,428	\$	62,685,236
Plan Fiduciary Net Position								
Contributions - employer Contributions - employee Net investment income Benefit payments, including refunds of	\$	1,135,025 689,802 16,055,794	\$	999,574 682,776 1,119,610	\$	1,020,089 691,183 3,726,109	\$	1,104,020 682,430 3,893,207
employee contributions Administrative expenses Other		(3,047,114) (40,093) 1,510		(2,714,023) (38,328) (1,326)		(2,707,932) (37,020) (2,345)		(2,117,578) (33,264) (3,479)
Net Change in Plan Fiduciary Net Position Plan fiduciary net position - beginning		14,794,924 58,789,789		48,283 58,741,506		2,690,084 56,051,422		3,525,336 52,526,086
Plan Fiduciary Net Position - Ending (b)	\$	73,584,713	\$	58,789,789	\$	58,741,506	\$	56,051,422
Net Pension (Asset) Liability - Ending (a) - (b)	\$	(292,010)	\$	11,393,002	\$	8,235,922	\$	6,633,814
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability - End of Year		100.40%		83.77%		87.70%		89.42%
Covered Payroll	\$	14,503,927	\$	14,254,554	\$	14,318,372	\$	13,954,694
Net Pension (Asset) Liability as a Percentage of Covered Payroll		(2.01%)		79.93%		57.52%		47.54%

^{*} Pension schedules are intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

See accompanying notes to required supplementary information.

Schedule of Changes in UOSA's Net Pension (Asset) Liability and Related Ratios

Last 10 Fiscal Years*

Measurement Date	J	une 30, 2017	J	June 30, 2016	J	une 30, 2015	June 30, 2014
Total Pension Liability							
Service cost Interest Differences between expected	\$	1,274,456 3,923,950	\$	1,297,203 3,718,171	\$	1,281,686 3,406,233	\$ 1,223,948 3,208,021
and actual experience Changes of assumptions Benefit payments, including refunds		(330,771) (1,206,725)		(298,056)		1,380,819 -	-
of employee contributions		(1,881,539)		(1,673,711)		(1,551,242)	(1,649,501)
Net Change in Total Pension Liability Total pension liability - beginning		1,779,371 56,997,196		3,043,607 53,953,589		4,517,496 49,436,093	2,782,468 46,653,625
Total Pension Liability - Ending (a)	\$	58,776,567	\$	56,997,196	\$	53,953,589	\$ 49,436,093
Plan Fiduciary Net Position							
Contributions - employer Contributions - employee Net investment income Benefit payments, including refunds of	\$	1,131,806 720,658 5,751,870	\$	1,233,195 696,937 818,981	\$	1,225,219 666,439 2,016,563	\$ 1,164,966 650,780 5,946,776
employee contributions Administrative expenses Other		(1,881,539) (32,643) (5,133)		(1,673,711) (28,118) (343)		(1,551,242) (26,861) (429)	(1,649,501) (31,578) 314
Net Change in Plan Fiduciary Net Position Plan fiduciary net position - beginning		5,685,019 46,841,067		1,046,941 45,794,126		2,329,689 43,464,437	6,081,757 37,382,680
Plan Fiduciary Net Position - Ending (b)	\$	52,526,086	\$	46,841,067	\$	45,794,126	\$ 43,464,437
Net Pension (Asset) Liability - Ending (a) - (b)	\$	6,250,481	\$	10,156,129	\$	8,159,463	\$ 5,971,656
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability - End of Year		89.37%		82.18%		84.88%	87.92%
Covered Payroll	\$	13,850,680	\$	13,501,791	\$	13,390,415	\$ 13,021,097
Net Pension (Asset) Liability as a Percentage of Covered Payroll		45.13%		75.22%		60.94%	45.86%

^{*} Pension schedules are intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

See accompanying notes to required supplementary information.

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Schedule of UOSA's Pension Contributions

Last 10 Fiscal Years*

Fiscal Year	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	UOSA's Covered Payroll	Contributions as a Percentage of Covered Payroll
2022	\$ 1,211,807	\$ 1,211,807	\$ -	\$ 14,429,905	8.40%
2021	1,221,230	1,221,230	-	14,503,927	8.42
2020	1,074,415	1,074,415	-	14,254,554	7.54
2019	1,077,718	1,077,718	-	14,318,372	7.53
2018	1,144,857	1,144,857	-	13,954,694	8.20
2017	1,131,806	1,131,806	-	13,850,680	8.17
2016	1,233,195	1,233,195	-	13,501,791	9.13
2015	1,225,219	1,225,219	-	13,390,415	9.15
2014	1,164,966	1,164,966	-	13,021,097	8.95

^{*} Pension schedules are intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

See accompanying notes to required supplementary information.

Schedule of Changes in UOSA's Total OPEB Liability and Related Ratios – Health Care Benefit Plan Last 10 Fiscal Years*

Measurement Date	J	une 30, 2021	J	une 30, 2020	J	une 30, 2019	J	une 30, 2018	Ju	une 30, 2017
Total OPEB Liability										
Service cost Interest Differences between expected	\$	195,298 134,493	\$	164,264 160,503	\$	141,671 167,626	\$	137,586 164,933	\$	153,526 139,482
and actual expense Changes of assumptions Benefit payments		344,750 75,612 (267,581)		(46,714) 346,569 (256,013)		366,308 64,346 (220,453)		(26,956) (18,088) (236,523)		- (347,275) (202,074)
Net Change in Total OPEB Liability Total OPEB liability - beginning		482,572 5,647,875		368,609 5,279,266		519,498 4,759,768		20,952 4,738,816		(256,341) 4,995,157
Total OPEB Liability - Ending	\$	6,130,447	\$	5,647,875	\$	5,279,266	\$	4,759,768	\$	4,738,816
Covered Payroll Total OPEB Liability as a Percentage of Covered Payroll	\$	14,503,927 42.27%	\$	14,254,554 39.62%	\$	14,318,372 36.87%	\$	13,954,694 34.11%	\$	13,850,680 34.21%
or Covered Payroll		42.27%		59.62%		36.87%		54.11%		34.21%

^{*} The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

See accompanying notes to required supplementary information.

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Schedule of UOSA's Proportionate Share of the Net OPEB Liability - VRS Group Life Insurance Program

Last 10 Fiscal Years*

Measurement Date	J	une 30, 2021	J	une 30, 2020	J	une 30, 2019	June 30, 2018	Ju	une 30, 2017
UOSA's Proportion of the Net GLI OPEB Liability		0.07025%		0.06926%		0.07304%	0.07337%		0.07512%
UOSA's Proportionate Share of the Net GLI OPEB Liability	\$	817,901	\$	1,155,836	\$	1,188,555	\$ 1,114,000	\$	1,130,000
Covered Payroll	\$	14,503,927	\$	14,254,554	\$	14,318,372	\$ 13,954,694	\$	13,850,680
UOSA's Proportionate Share of the Net GLI OPEB Liability as a Percentage of Covered Payroll		5.64%		8.11%		8.30%	7.98%		8.16%
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability		67.45%		52.64%		52.00%	51.22%		48.86%

^{*} The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

Schedule of UOSA's OPEB Contributions - VRS Group Life Insurance Program

Last 10 Fiscal Years*

Fiscal Year	R	ntractually equired ntribution	R Co	atribution in elation to ntractually ed Contribution	Defi	ribution ciency cess)	UOSA's Covered Payroll	Contributions as a Percentage of Covered Payroll
2022	\$	77,922	\$	77,922	\$	-	\$ 14,429,905	0.54%
2021		78,322		78,322		-	14,503,927	0.54
2020		74,122		74,122		-	14,254,554	0.52
2019		74,455		74,455		-	14,318,372	0.52
2018		73,010		73,010		-	13,954,694	0.52
2017		72,050		72,050		-	13,850,680	0.52
2016		64,892		64,892		-	13,501,791	0.48
2015		64,274		64,274		-	13,390,415	0.48
2014		62,501		62,501		-	13,021,097	0.48

^{*} The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.

See accompanying notes to required supplementary information.

See accompanying notes to required supplementary information.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

For the Years Ended June 30, 2022 and 2021

A. PENSION TREND DATA - VRS

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

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period from July 1, 2016 through June 30, 2020, except for the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Updated to Pub-2010 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
Discount rate	No change

B. OPEB TREND DATA - HEALTH CARE BENEFIT PLAN

Note 1 - Changes of Assumptions

Changes in assumptions reflect the effects of a change in the discount rate and multiple assumptions. As of the June 30, 2021 actuarial valuation, the long-term healthcare cost trend was updated to the latest model released by the Society of Actuaries on October 30, 2021. The retirement, withdrawal, disability, and salary scale assumptions were updated to be consistent with the VRS experience study dated September 10, 2021. The mortality assumption was updated to the Private Sector tables released by the Society of Actuaries with the MP-2021 Mortality Improvement Scale. The following are the discount rates used in each fiscal year.

Year Ended June 30	Discount Rate
2021	1.92%
2020	2.45
2019	3.13
2018	3.62
2017	3.58
2016	2.85

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NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

For the Years Ended June 30, 2022 and 2021

C. OPEB TREND DATA - VRS GROUP LIFE INSURANCE PROGRAM

Note 1 - Changes of Benefit Terms

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

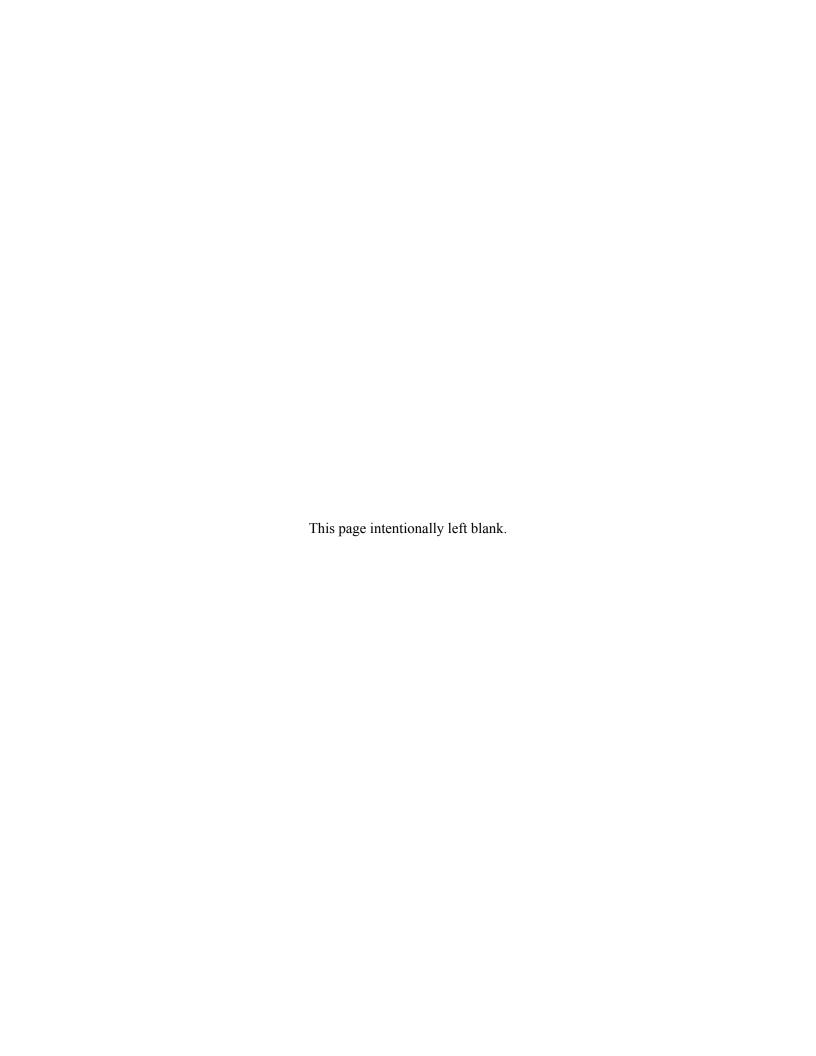
Note 2 - Changes of Assumptions

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period from July 1, 2016 through June 30, 2020, except for the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Updated to Pub-2010 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 from 75 to 80 for all
Withdrawal rates	Adjusted termination rates to better fit experience at each year age and service
Disability rates	No change
Salary scale	No change
Discount rate	No change

APPENDIX I

FORM OF BOND COUNSEL OPINION



APPENDIX I

FORM OF BOND COUNSEL OPINION

Set forth below is the opinion of Hunton Andrews Kurth LLP, Bond Counsel. It is preliminary and subject to change prior to delivery of the 2022 Bonds.

December 15, 2022

Upper Occoquan Sewage Authority 14631 Compton Road Centreville, Virginia 20121

> Upper Occoquan Sewage Authority \$48,830,000 Regional Sewerage System Revenue Bonds, Series 2022

Ladies and Gentlemen:

We have examined the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2, Code of Virginia of 1950, as amended (the "Act"), and certified copies of proceedings and documents relating to the organization of Upper Occoquan Sewage Authority ("UOSA") and the issuance by UOSA of its \$48,830,000 Regional Sewerage System Revenue Bonds, Series 2022 (the "Bonds"). Reference is made to the form of the Bonds for information concerning their details, including payment and redemption provisions, and the proceedings pursuant to which they are issued.

Proceeds of the Bonds will be used, together with other funds, (a) to finance improvements to UOSA's regional advanced wastewater treatment plant and delivery system (collectively, the "System"), (b) to fund, in part, a debt service reserve fund and (c) to pay costs of issuing the Bonds.

The Bonds are issued under and are equally and ratably secured by a Restated Agreement of Trust dated as of December 1, 1995, as previously supplemented and amended and as further supplemented by a Sixteenth Supplemental Restated Agreement of Trust dated as of December 1, 2022, as the same may be further supplemented and amended from time to time (the "Trust Agreement"), between UOSA and U.S. Bank Trust Company, National Association, as successor trustee (the "Trustee"), on a parity with UOSA's other outstanding Regional Sewerage System Revenue Bonds (the "Parity Bonds"), as provided in the Trust Agreement. Additional bonds secured on a parity with the Bonds and the Parity Bonds may be issued on the terms provided in the Trust Agreement.

Reference is made to the opinions of counsel for UOSA and counsel for the Cities of Manassas and Manassas Park, Virginia, and the Counties of Fairfax and Prince William, Virginia (such cities and counties being the "Member Jurisdictions"), as to the continued enforceability of a Restated Service Agreement dated as of May 15, 1972, and executed in restated form most recently in December 2007, as supplemented and amended (the "Service Agreement"), relating to the construction, expansion, financing and operation of the System, the allocation of sewage capacity, the rates and charges to the Member Jurisdictions and improvements to and expansion of the System, upon which you are relying as to matters therein. No opinion as to such matters is expressed herein.

Without undertaking to verify the same by independent investigation, we have relied on certifications by representatives of UOSA and the Member Jurisdictions as to certain facts relevant to both our opinion and requirements of the Internal Revenue Code of 1986, as amended (the "Code"). UOSA has covenanted to comply with the provisions of the Code regarding, among other matters, the use, expenditure and investment of the proceeds of the Bonds and the timely payment to the United States of any arbitrage rebate amounts with respect to the Bonds, all as set forth in the proceedings and documents relating to the issuance of the Bonds (the "Covenants").

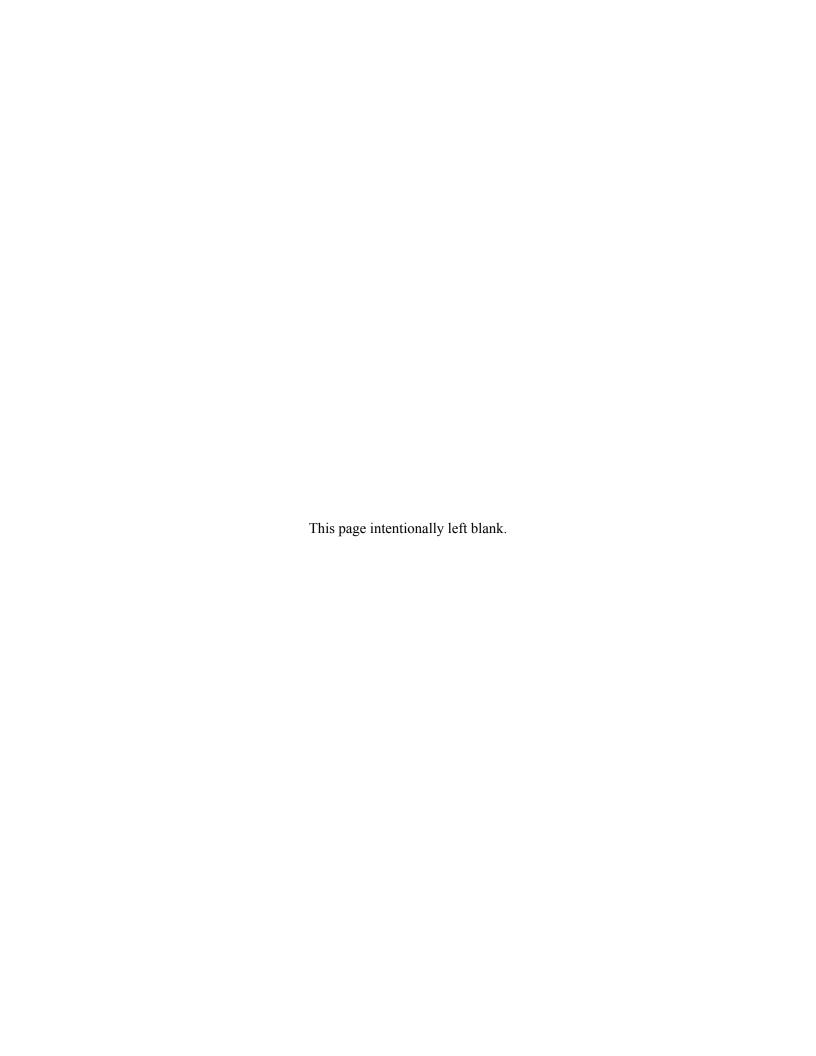
Based on the foregoing, in accordance with customary opinion practice and assuming the due authorization, execution and delivery of the Trust Agreement by the Trustee, we are of the opinion that:

- 1. UOSA is a valid and existing public body politic and corporate, has been duly created under the Act, is in good standing under the laws of the Commonwealth of Virginia as certified by the State Corporation Commission, and has lawful authority to acquire, construct, expand, own and operate the System.
- 2. The issuance of the Bonds is permitted under the terms of the Trust Agreement. The Bonds (a) have been duly authorized and issued in accordance with the Constitution and statutes of the Commonwealth of Virginia and constitute valid and binding limited obligations of UOSA payable as to principal and interest solely from certain net revenues to be derived from the ownership or operation of the System, as the same may from time to time exist, certain pledged reserves, income from investments and proceeds of insurance, which net revenues and other moneys have been pledged pursuant to the Trust Agreement to secure payment of the Bonds, and (b) are secured on a parity with the Parity Bonds and any additional bonds subsequently issued on a parity with the Bonds and the Parity Bonds as provided in the Trust Agreement. The Bonds and the interest thereon do not constitute a pledge of the faith and credit of the Commonwealth of Virginia or of any political subdivision thereof, including UOSA and the Member Jurisdictions.
- 3. UOSA is required to fix, revise, charge and collect such charges for the use of and for the services furnished by the System so that such charges will be sufficient in each fiscal year to pay the cost of operation and maintenance of the System, the cost of replacements and necessary improvements which do not increase the capacity or scope of the System and the principal of and interest on the Bonds, the Parity Bonds and any additional bonds subsequently issued on a parity therewith, as the same become due, and to provide certain reserves therefor.
- 4. The Trust Agreement has been duly authorized, executed and delivered by UOSA, constitutes a valid and binding agreement of UOSA, pledges as security for payment of the principal of and interest on the Bonds certain revenues derived from the ownership or operation of the System and moneys in certain funds created by the Trust Agreement, and is enforceable against UOSA in accordance with its terms.
- 5. The rights of the holders of the Bonds and the enforceability of such rights, including the enforcement by the Trustee of the obligations of UOSA under the Trust Agreement, may be limited or otherwise affected by (a) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance and other laws affecting the rights of creditors generally and (b) principles of equity, whether considered at law or in equity.
- 6. Under current law, interest, including accrued original issue discount ("OID"), on the Bonds (a) is not included in gross income for federal income tax purposes, (b) is not an item of tax preference for purposes of the federal alternative minimum tax, and (c) may have to be taken into account by applicable corporations (as defined in Section 59(k) of the Code) for the alternative minimum tax imposed on such corporations for tax years beginning after December 31, 2022. The opinion in (a) and (b) of the preceding sentence is subject to the condition that there is compliance subsequent to the issuance of the Bonds with all requirements of the Code that must be satisfied in order that interest thereon not be included in gross income for federal income tax purposes. Failure by UOSA to comply with the Covenants, among other things, could cause interest, including accrued OID, on the Bonds to be included in gross income for federal income tax purposes retroactively to their date of issue. In the case of the Bonds maturing in the years 2048, 2051 and 2054 (the "OID Bonds"), the difference between (x) the stated principal amount of the OID Bonds and (y) the initial offering price to the public (excluding bond houses and brokers) at which a substantial amount of such maturities of OID Bonds is sold will constitute OID; OID will accrue for federal income tax purposes on a constant yield-to-maturity method; and a holder's basis in such a Bond will be increased by the amount of OID treated for federal income tax purposes as having accrued on such Bond while the holder holds the Bond. We express no opinion regarding other federal tax consequences of the ownership of or receipt or accrual of interest on the Bonds.
- 7. Under current law, interest on the Bonds is exempt from income taxation by the Commonwealth of Virginia.

The opinions set forth above are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. Our services as bond counsel to UOSA have been limited to delivering the foregoing opinion based on our review of such proceedings and documents as we deem necessary to approve the validity of the Bonds and the tax-exempt status of the interest thereon. We express no opinion herein as to the financial resources of UOSA, its ability to provide for payment of the Bonds or the accuracy or completeness of any information, including UOSA's Preliminary Official Statement dated November 22, 2022, and its Official Statement dated December 1, 2022, that may have been relied upon by anyone in making the decision to purchase

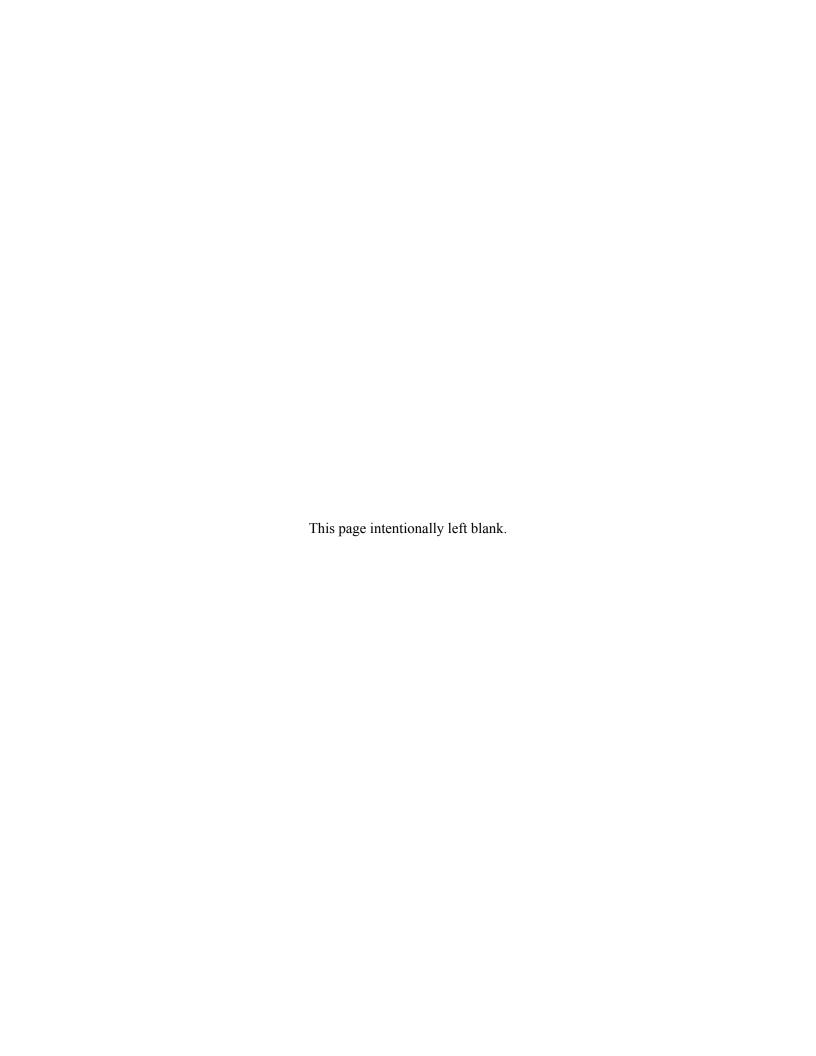
Bonds. We assume no duty to update or supplement these opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in any law or the interpretation thereof that may hereafter occur or become effective.

Very truly yours,



APPENDIX J

FORM OF DISCLOSURE AGREEMENT



DISCLOSURE AGREEMENT

THIS AGREEMENT, made as of the 1st day of December, 2022, by and between the UPPER OCCOQUAN SEWAGE AUTHORITY, a public body politic and corporate duly created pursuant to the Virginia Water and Sewer Authorities Act (now the Virginia Water and Waste Authorities Act) ("UOSA"), and the CITY OF MANASSAS and the CITY OF MANASSAS PARK, municipal corporations of the Commonwealth of Virginia, and the BOARD OF SUPERVISORS OF FAIRFAX COUNTY and the BOARD OF COUNTY SUPERVISORS OF PRINCE WILLIAM COUNTY, acting for and on behalf of said counties (such four parties being called collectively the "Political Subdivisions" and individually a "Political Subdivision");

WITNESSETH:

WHEREAS, pursuant to the Virginia Water and Waste Authorities Act ((formerly the Virginia Water and Sewer Authorities Act) Chapter 51, Title 15.2, Code of Virginia of 1950, as amended) (the "Act"), and a Restated and Amended Service Agreement dated as of May 15, 1972, and executed in restated form in December 2007, as amended (the "Service Agreement"), UOSA operates an advanced wastewater treatment system which treats sewage collected by the Political Subdivisions; and

WHEREAS, UOSA expects to issue revenue bonds on or about December 15, 2022, for the purpose of financing and refinancing costs of its system (the "Revenue Bonds") and the charges paid by the Political Subdivisions to UOSA will be based, in part, on the debt service for such Revenue Bonds and will be payable from revenues of the sewer systems operated by or on behalf of each Political Subdivision (the "Member Systems"); and

WHEREAS, the Revenue Bonds are expected to be sold in a public offering with an official statement of UOSA providing relevant information concerning UOSA, its system and the revenues thereof, including financial information and operating data relating to the Member Systems (the "Official Statement"); and

WHEREAS, the Securities and Exchange Commission has adopted its Rule 15c2-12 (the "SEC Rule") pursuant to the Securities and Exchange Act of 1934, as amended, and amendments to the SEC Rule effective for public offerings of municipal securities such as the Revenue Bonds issued and sold after July 3, 1995, and amendments to the SEC Rule effective for public offerings of municipal securities such as the Revenue Bonds issued and sold after December 1, 2010, and amendments to the SEC Rule effective for public offerings of municipal securities such as the Revenue Bonds issued and sold after February 27, 2019 (collectively, the "Amendments"), require that the underwriters of such securities confirm certain formal undertakings have been made to them with respect to continuing disclosure of information relevant to such municipal securities; and

WHEREAS, UOSA expects to provide the required information as to UOSA, its system and the revenues thereof and needs to have assurances from the Political Subdivisions that they will provide the appropriate financial information and operating data in order for UOSA to satisfy its obligations pursuant to the undertakings required by the SEC Rule;

NOW, THEREFORE, the parties hereto agree as follows:

- **Section 1. Annual Disclosure.** (a) Each Political Subdivision shall provide annually, directly or through an intermediary, financial information and operating data in accordance with the provisions of Section (b)(5)(i) of the SEC Rule as follows:
- (1) audited or, if unavailable, unaudited financial statements of the Member System of such Political Subdivision (or, if such statements are not prepared, audited general purpose financial statements of such Political Subdivision) for such fiscal year, prepared in accordance with generally accepted accounting principles; and
- (2) to the extent not included in the audited financial statements referred to in (1), such information within the knowledge of each of them as is necessary to update as of a date not earlier than the end of the preceding fiscal year the information contained in the Official Statement relating to the Revenue Bonds and described in Exhibit A hereto.

If the financial statements filed pursuant to Section 1(a)(1) are not audited, the Political Subdivision shall file such statements as audited within 15 days of such audited financial statements becoming available.

- (b) Each Political Subdivision shall file annually with the Municipal Securities Rulemaking Board ("MSRB") the financial information and operating data described in subsection (a) above (collectively, the "Annual Disclosure") within 270 days from the end of each fiscal year, commencing with the fiscal year ending June 30, 2023.
- (c) Any Annual Disclosure may be included by specific reference to other documents previously provided to the MSRB or filed with the SEC; provided, however, that any final official statement incorporated by reference must be available from the MSRB.
- (d) The Political Subdivision shall file with the MSRB in a timely manner notice specifying any failure of the Political Subdivision to provide the Annual Disclosure by the date specified.
- Section 2. Responsible Parties. If any financial or other information required to be provided by Section 1 hereof is obtainable, in whole or in part, from any authority created by any Political Subdivision, such Political Subdivision shall cause such authority to agree to provide and to provide such information (or a notice of failure to so provide) within the time periods specified either to UOSA or directly to the MSRB. The Prince William County Service Authority is executing this Agreement to evidence its agreement to provide such information (or a notice of failure to so provide) on behalf of the Board of County Supervisors of Prince William County.
- Section 3. Determination of Relevant Information: Compliance. UOSA hereby identifies "annual financial information" and "operating data" within the meaning of the SEC Rule as the material described in Exhibit A. If UOSA gives to any Political Subdivision a notice to the effect that information provided by such Political Subdivision does not constitute complete compliance with the requirements of Section 1 and specifies the alleged deficiency, such Political Subdivision shall promptly provide such information as required by Section 1; provided, however, such information does not have to be so provided if such Political Subdivision gives to UOSA an opinion of nationally recognized bond counsel addressed to UOSA to the effect that such information is not required to be disclosed in order for UOSA to comply with its undertakings to underwriters in connection with the Revenue Bonds or the Amendments to the SEC Rule.
- **Section 4. Event Disclosure.** Each Political Subdivision will report to the MSRB and UOSA in a timely manner not in excess of ten (10) business days after the occurrence of the event, notice of the occurrence of any of the following events with respect to the Revenue Bonds:
- (a) Receipt of a proposed or final notice or determination with respect to the income tax status of the Revenue Bonds;
 - (b) Bankruptcy, insolvency, receivership or similar event of such Political Subdivision;
- (c) Consummation of a merger, consolidation, or acquisition involving such Political Subdivision or the sale of all or substantially all of the assets of such Political Subdivision, other than 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;
- (d) Incurrence of a Financial Obligation of such Political Subdivision, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of such Political Subdivision, any of which affect holders of the Revenue Bonds, if material; and
- (e) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of such Political Subdivision, any of which reflect financial difficulties.

For purposes of this Section 4, "Financial Obligation" means a (a) debt obligation; (b) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (c) guarantee of (a) or (b). The term "Financial Obligation" does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the SEC Rule.

Section 5. Copies Provided. Copies of all submissions pursuant to Section 1 and Section 4 (or a notice of failure to so provide) shall be provided to UOSA.

- **Section 6. Filing Method.** Any filing required hereunder shall be made by transmitting such disclosure, notice or other information in electronic format to the MSRB through the MSRB's Electronic Municipal Market Access (EMMA) system pursuant to procedures promulgated by the MSRB.
- **Section 7. UOSA Undertaking.** To the extent the SEC Rule requires underwriters for the Revenue Bonds to have contracted formal undertakings from either UOSA or the Political Subdivisions, it is agreed such undertakings shall be given by UOSA.
- **Section 8. Other Communications.** UOSA and any Political Subdivision may from time to time disclose information in addition to that required hereby. Nothing in this Agreement shall create any obligation for UOSA or any Political Subdivision to provide or update such additional information.
- **Section 9. Remedies.** If any Political Subdivision fails to comply with its covenants herein, UOSA may take action to enforce such covenants as permitted by law, including an action for specific performance or mandatory injunction (in which actions UOSA shall not be required to post any bond).
- **Section 10. Amendments.** This Agreement may be amended by mutual agreement of the parties hereto; provided that this Agreement, as so modified, complies with the SEC Rule as it exists at the time of modification. UOSA shall within a reasonable time thereafter send to the MSRB a description of such amendment(s).
- **Section 11. Termination.** This Agreement shall terminate upon payment in full, or provision for payment in full having been made in a manner consistent with the Amendments to the SEC Rule, of the Revenue Bonds.

Section 12. Miscellaneous.

- (a) <u>Severability</u>. In the event any provision of this Agreement shall be held invalid or unenforceable by a court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.
- (b) <u>Execution in Counterparts</u>. This Agreement may be executed in any number of counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.
- (c) <u>Time of Essence</u>. The parties agree that time shall be of the essence in the performance of this Agreement.
- (d) <u>Applicable Law.</u> This Agreement shall be governed by and be construed in accordance with the laws of the Commonwealth of Virginia.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed, and the seals to be affixed and attested by their duly authorized officers, all as of the date appearing next to their signatures.

Date:	UPPER OCCOQUAN SEWAGE AUTHORITY
(SEAL)	By:
ATTEST: Assistant Secretary	Title:
Date:	CITY OF MANASSAS
(SEAL)	By:
ATTEST: Clerk	Title:
Date:	CITY OF MANASSAS PARK
(SEAL)	By:

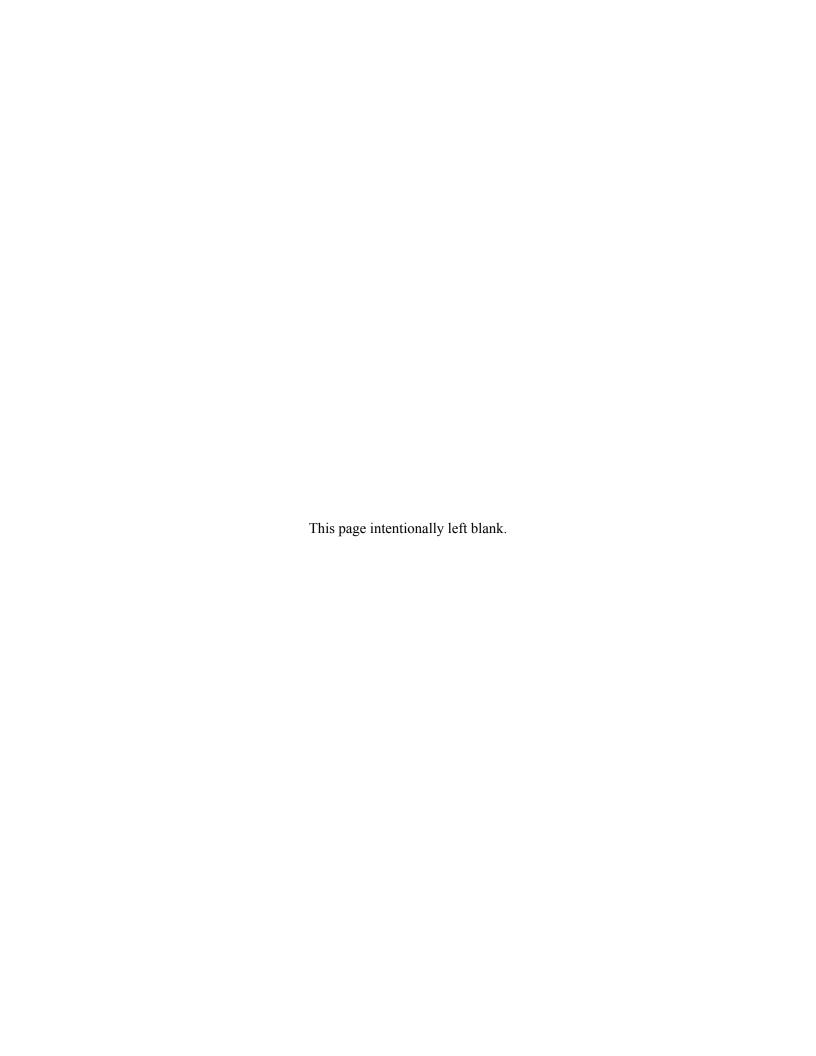
ATTEST:	Title:
ATTEST: Clerk	
Date:	On behalf of BOARD OF SUPERVISORS OF FAIRFAX COUNTY
(SEAL)	TAIM AX COUNTT
ATTECT.	By:
ATTEST: Clerk	Title:
Date:	
(SEAL)	WILLIAM COUNTY
ATTEST:	By:
Clerk	Title:
Date:	PRINCE WILLIAM COUNTY SERVICE AUTHORITY
(SEAL)	By:
ATTEST:	Title:
Clerk	

Exhibit A

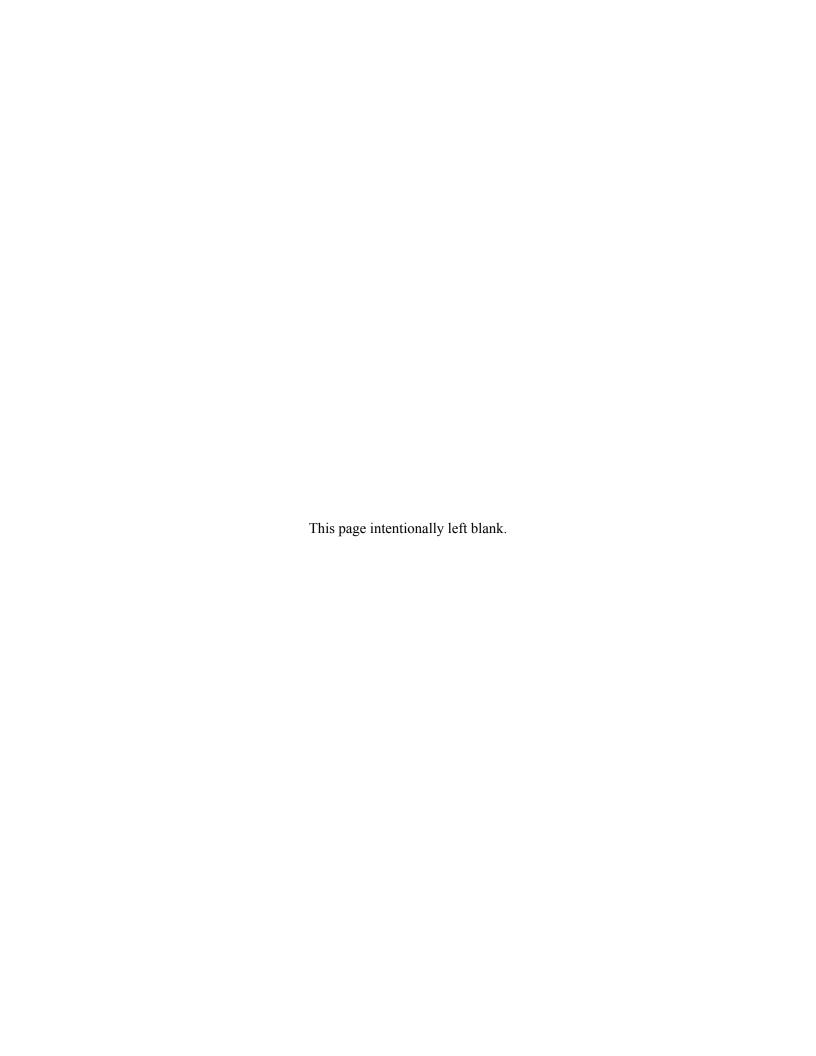
Unless and until changed by UOSA, the following is identified as "annual financial information" and "operating data" pursuant to Section 3 of the attached Disclosure Agreement for each Political Subdivision and its Member System:

For the most recent complete fiscal year:

- (a) Number of connections (or accounts).
- (b) Rate schedule.
- (c) Total amounts for:
 - (1) Service charge revenues
 - (2) Availability/connection fee revenues
 - (3) Interest income revenues
 - (4) Total System revenues
- (5) System operating and maintenance expenses (not including expense payments to UOSA or debt service payments on UOSA obligations)
 - (6) Expense payments to UOSA
 - (7) Debt service payments on debt treated as senior to UOSA obligations
 - (8) Debt service payments on debt treated as on parity with UOSA obligations
 - (9) Debt service payments on UOSA obligations
 - (10) Debt service payments on debt treated as subordinate to UOSA obligations
- (d) Identity of any customer of the Member System paying over 5% of the total service charge revenues of the Member System and the specific percentage for such customer.
 - (e) System capacity (flows in mgd).



APPENDIX K BOOK-ENTRY ONLY SYSTEM



APPENDIX K

BOOK-ENTRY ONLY SYSTEM

The description that follows of the procedures and recordkeeping with respect to beneficial ownership interests in the 2022 Bonds, payments of principal and interest on the 2022 Bonds to DTC, its nominee, Direct or Indirect Participants (each as defined herein) or Beneficial Owners, confirmation and transfer to beneficial ownership interests in the 2022 Bonds and other bond—related transactions by and between DTC, Direct and Indirect Participants and Beneficial Owners is based solely on information furnished by DTC.

The Depository Trust Company ("DTC") will act as securities depository for the 2022 Bonds. The 2022 Bonds will be issued as fully–registered bonds 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 2022 Bond certificate will be issued for each respective maturity of the 2022 Bonds of each series in the aggregate principal amount of such maturity, and such certificates will be deposited with DTC.

DTC 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 U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments 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 2022 Bonds, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of 2022 Bond certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of 2022 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2022 Bonds on DTC's records. The ownership interest of each actual purchaser of each 2022 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2022 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in 2022 Bonds, except in the event that use of the book—entry system for the 2022 Bonds is discontinued.

To facilitate subsequent transfers, all 2022 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 2022 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 2022 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2022 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Beneficial Owners of 2022 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2022 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the 2022 Bond documents. For example, Beneficial Owners of 2022 Bonds may wish to ascertain that the nominee holding the 2022 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 registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2022 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to 2022 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to UOSA 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 2022 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments of amounts with respect to the 2022 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 UOSA or the Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC (nor its nominee), the Trustee or UOSA, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of amounts with respect to the 2022 Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of UOSA or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2022 Bonds at any time by giving reasonable notice to UOSA or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, 2022 Bond certificates are required to be printed and delivered. UOSA may decide to discontinue use of the system of book—entry transfers through DTC (or a successor securities depository). In that event, 2022 Bond certificates will be printed and delivered.

NONE OF UOSA, THE TRUSTEE, ANY MEMBER JURISDICTION OR ANY UNDERWRITER WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO PARTICIPANTS, TO INDIRECT PARTICIPANTS OR TO ANY BENEFICIAL OWNER WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY DIRECT PARTICIPANT, OR ANY INDIRECT PARTICIPANT; (II) THE PAYMENT BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OF OR INTEREST ON THE 2022 Bonds; (III) ANY NOTICE WHICH IS PERMITTED OR REQUIRED TO BE GIVEN TO BONDHOLDERS; (IV) ANY CONSENT GIVEN BY DTC OR OTHER ACTION TAKEN BY DTC AS BONDHOLDER; OR (V) THE SELECTION BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF THE 2022 Bonds.

So long as Cede & Co. is the registered owner of the 2022 Bonds, as nominee of DTC, references in this Official Statement to the Owner or Owners of the 2022 Bonds or Owners shall mean Cede & Co. and shall not mean the Beneficial Owners, and the Trustee will treat Cede & Co. as the only Owner or Bondholder of the 2022 Bonds for all purposes under the Indenture.

UOSA may enter into amendments to its agreement with DTC or any successor depository without the consent of the Beneficial Owners.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that UOSA believes to be reliable, but UOSA takes no responsibility for the accuracy thereof.