

In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the Series 2019 Fresh Water Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax; and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Series 2019 Fresh Water Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Interest on the Series 2019 Fresh Water Bonds may be subject to certain federal taxes imposed only on certain corporations. For a more complete discussion of the tax aspects, see “TAX MATTERS” herein.



**OFFICIAL STATEMENT OF THE
OHIO WATER DEVELOPMENT AUTHORITY**
Relating to the Original Issuance of
\$150,000,000
STATE OF OHIO
WATER DEVELOPMENT REVENUE BONDS
FRESH WATER SERIES 2019

Dated: Date of Delivery

Due: As shown herein

The Ohio Water Development Authority (the “Authority”) is issuing its \$150,000,000 State of Ohio Water Development Revenue Bonds Fresh Water Series 2019 (the “Series 2019 Fresh Water Bonds”) for the purposes of providing the funds necessary to (a) make loans to Local Governmental Agencies in the State of Ohio as part of the Authority’s Fresh Water Program to pay certain costs of planning, designing, constructing or acquiring certain wastewater treatment facilities, interceptor sewer facilities, sewage collection facilities and water supply and distribution facilities; (b) fund the Debt Service Reserve Fund for the Series 2019 Fresh Water Bonds; and (c) pay issuance expenses relating to the issuance of the Series 2019 Fresh Water Bonds.

The Series 2019 Fresh Water Bonds are secured under the Trust Agreement (as herein described) by a pledge of the Pledged Revenues, consisting primarily of certain loan payments made by Local Governmental Agencies (as herein described) in the State of Ohio to the Authority pursuant to the Cooperative Agreements (as herein described) entered into as part of the Authority's Fresh Water Program, and by certain of the Funds as defined in and created by the Trust Agreement. See "THE SERIES 2019 FRESH WATER BONDS" and "SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS."

Interest on the Series 2019 Fresh Water Bonds is payable semiannually on June 1 and December 1, commencing June 1, 2020. The Series 2019 Fresh Water Bonds will be issued as fully registered bonds without coupons, one for each interest rate for each maturity, under a book entry method, registered in the name of Cede & Co. as nominee for The Depository Trust Company (“DTC”). Individual purchases of Series 2019 Fresh Water Bonds will be made in book entry only form, with those book entry interests in the principal amount of \$5,000 or integral multiples thereof. Purchasers of the Series 2019 Fresh Water Bonds will not receive certificates representing their interests in the Series 2019 Fresh Water Bonds. Ownership by the beneficial owners of the Series 2019 Fresh Water Bonds will be evidenced by entries on the records of the Direct and Indirect Participants in the book entry only system. The principal of and interest on the Series 2019 Fresh Water Bonds will be paid by The Bank of New York Mellon Trust Company, N.A., Trustee. As long as Cede & Co. is the registered owner as nominee of DTC, payments on the Series 2019 Fresh Water Bonds will be made to such registered owner and disbursement of such payments to the beneficial owners will be the responsibility of DTC and the DTC Participants. DTC is required by its rules and procedures to remit such payments to DTC participants for subsequent disbursement to the beneficial owners. See “APPENDIX F – Book Entry Only System.”

The maturities, interest rates and offering prices or yields of the Series 2019 Fresh Water Bonds are set forth on the inside cover page of this Official Statement. The Series 2019 Fresh Water Bonds are subject to optional redemption prior to maturity as more fully described herein. See “THE SERIES 2019 FRESH WATER BONDS – Optional Redemption.”

The Series 2019 Fresh Water Bonds are special obligations of the Authority, payable solely out of certain revenues pledged therefor and secured solely by certain security interests granted therefor by the Authority under the Trust Agreement. The Series 2019 Fresh Water Bonds do not constitute a debt, or the pledge of the faith and credit, of the State of Ohio or of any political subdivision thereof, and the Holders or owners of the Series 2019 Fresh Water Bonds have no right to have taxes levied by the General Assembly of the State of Ohio or by the taxing authority of any political subdivision thereof, for the payment of the principal of, or interest or any redemption premium on, the Series 2019 Fresh Water Bonds.

THIS COVER PAGE CONTAINS CERTAIN 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 THE MAKING OF AN INFORMED INVESTMENT DECISION.

The Series 2019 Fresh Water Bonds are offered when, as and if issued and received by the Underwriters, subject to the approving opinion of Squire Patton Boggs (US) LLP, Bond Counsel. Certain legal matters will be passed upon for the Underwriters by Bricker & Eckler LLP, Underwriters' Counsel, and for the Authority by its General Counsel, Benesch, Friedlander, Coplan & Aronoff LLP. It is expected that the Series 2019 Fresh Water Bonds will be available for delivery to DTC in New York, New York on or about November 19, 2019.

LOOP CAPITAL MARKETS

UBS

Drexel Hamilton, LLC

Goldman Sachs & Co. LLC

Huntington Capital Markets

The date of this Official Statement is November 5, 2019.

MATURITY SCHEDULE

\$150,000,000 FRESH WATER SERIES 2019

<u>Maturity Date</u>	<u>Maturity Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP No.</u> [†]
12/01/2029	\$2,000,000	2.000%	1.670%	67765Q GY6
06/01/2030	2,000,000	5.000	1.750 [±]	67765Q GZ3
12/01/2030	2,000,000	5.000	1.780 [±]	67765Q HA7
06/01/2031	3,000,000	5.000	1.820 [±]	67765Q HB5
12/01/2031	3,000,000	5.000	1.830 [±]	67765Q HC3
06/01/2032	3,000,000	5.000	1.880 [±]	67765Q HD1
12/01/2032	3,000,000	5.000	1.890 [±]	67765Q HE9

\$6,000,000, 5.000% Term Bond Maturing December 1, 2033, Yield 1.910%[±], CUSIP[†] 67765Q HF6

\$6,000,000, 5.000% Term Bond Maturing December 1, 2034, Yield 1.950%[±], CUSIP[†] 67765Q HG4

\$6,000,000, 5.000% Term Bond Maturing December 1, 2035, Yield 2.000%[±], CUSIP[†] 67765Q HH2

\$13,000,000, 5.000% Term Bond Maturing December 1, 2036, Yield 2.040%[±], CUSIP[†] 67765Q HJ8

\$22,000,000, 5.000% Term Bond Maturing December 1, 2037, Yield 2.080%[±], CUSIP[†] 67765Q HK5

\$24,000,000, 5.000% Term Bond Maturing December 1, 2038, Yield 2.120%[±], CUSIP[†] 67765Q HL3

\$20,000,000, 5.000% Term Bond Maturing December 1, 2039, Yield 2.150%[±], CUSIP[†] 67765Q HM1

\$35,000,000, 5.000% Term Bond Maturing June 1, 2044, Yield 2.280%[±], CUSIP[†] 67765Q HN9

[†] Copyright © 2019; American Bankers Association. CUSIP data herein are approved by S&P Global Marketing Intelligence, a division of S&P Global Inc. The CUSIP numbers listed above are being provided solely for the convenience of the Holders of the Series 2019 Fresh Water Bonds only as of this date, and the Authority makes no representation with respect to such numbers or undertakes any responsibility for their accuracy now or at any time in the future. The CUSIP Number for a specific maturity is subject to being changed after the date hereof as a result of procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of the Series 2019 Fresh Water Bonds.

[±]Yield to call date of December 1, 2029.

OHIO WATER DEVELOPMENT AUTHORITY MEMBERS

		Expiration of <u>Term</u>	<u>Business Affiliation</u>
JIMMY STEWART	Chairman	July 1, 2027	Ohio Gas Association
SAM GERHARDSTEIN	Vice Chairman	July 1, 2023	Consultant
CHRISTOPHER WHISTLER	Member	July 1, 2025	CareSource
MICHAEL REESE	Member	July 1, 2021	Ice Miller Whiteboard
WILLIAM STANLEY	Member	July 1, 2024	The Nature Conservancy
LYDIA MIHALIK	Ex Officio Member	Not applicable	Director – Development Services Agency
MARY MERTZ	Ex Officio Member	Not applicable	Director - Department of Natural Resources
LAURIE STEVENSON	Ex Officio Member	Not applicable	Director - Ohio EPA

EXECUTIVE STAFF OF THE OHIO WATER DEVELOPMENT AUTHORITY

KEN J. HEIGEL, Executive Director
TODD SKRUCK, Chief Financial Officer – Debt, Investments and Fund Management/Secretary-
Treasurer of the Board
ROBYN MCCOMB – Chief Financial Officer – Loans and Operations
DANIEL P. GILL – Chief Engineer

GENERAL COUNSEL TO THE AUTHORITY

BENESCH, FRIEDLANDER, COPLAN & ARONOFF LLP
Cleveland, Ohio

BOND COUNSEL

SQUIRE PATTON BOGGS (US) LLP
Cleveland, Ohio

TRUSTEE

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
New Albany, Ohio

FRESH WATER CONSTRUCTION FUND TRUSTEE

THE HUNTINGTON NATIONAL BANK
Columbus, Ohio

INDEPENDENT AUDITORS

Clark, Schaefer, Hackett & Co.

REGARDING THE USE OF THIS OFFICIAL STATEMENT

This Official Statement does not constitute an offering of any security other than the original offering of the Series 2019 Fresh Water Bonds identified on the cover hereof. No person has been authorized by the State or the Authority to give any information or to make any representations, other than those contained in this Official Statement, and if given or made such other information or representations must not be relied upon as having been given or authorized by the State or the Authority. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there shall not be any sale of the Series 2019 Fresh Water Bonds by any person, in any jurisdiction in which it is unlawful to make such offer, solicitation or sale.

The information contained in this Official Statement has been obtained from the Authority and other sources deemed reliable, but no representation or guarantee is made by the Underwriters as to the accuracy or the completeness of such information. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority since the date hereof.

Upon issuance, the Series 2019 Fresh Water Bonds will not be registered by the Authority under the Securities Act of 1933, as amended, or any state securities law, and will not be listed on any stock or other securities exchange. Neither the Securities and Exchange Commission nor any other federal, state or other governmental entity or agency will have passed upon the accuracy or adequacy of this Official Statement or approved the Series 2019 Fresh Water Bonds for sale. This Official Statement includes the cover page, inside cover page and appendices attached hereto.

THE UNDERWRITERS HAVE PROVIDED THE FOLLOWING SENTENCE FOR INCLUSION IN THIS OFFICIAL STATEMENT: THE UNDERWRITERS HAVE REVIEWED THE INFORMATION IN THIS OFFICIAL STATEMENT IN ACCORDANCE WITH, AND AS PART OF, THEIR RESPECTIVE RESPONSIBILITIES TO INVESTORS UNDER THE FEDERAL SECURITIES LAWS AS APPLIED TO THE FACTS AND CIRCUMSTANCES OF THIS TRANSACTION, BUT THE UNDERWRITERS DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2019 FRESH WATER BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME WITHOUT NOTICE.

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**OFFICIAL STATEMENT OF THE
OHIO WATER DEVELOPMENT AUTHORITY
Relating to the Original Issuance of**

**\$150,000,000
STATE OF OHIO
WATER DEVELOPMENT REVENUE BONDS
FRESH WATER SERIES 2019**

INTRODUCTION

The purpose of this Official Statement of the Ohio Water Development Authority (the “Authority”), which includes the cover page, inside cover page and appendices hereto, is to set forth information with respect to the \$150,000,000 State of Ohio Water Development Revenue Bonds Fresh Water Series 2019 (the “Series 2019 Fresh Water Bonds”), to be issued by the Authority. This Official Statement describes the Authority and the purposes, terms and sources of payment of, and security for, the Series 2019 Fresh Water Bonds. The Authority has provided all financial and other data included herein, except where specifically attributed to other sources.

This Official Statement also includes descriptions of certain regulations of the Authority, certain provisions of the Trust Agreement (as hereinafter defined) securing the Fresh Water Bonds, and certain other materials. These descriptions are qualified by reference to the entire text of the Trust Agreement and other materials, copies of which are available upon request to the Authority, at 480 South High Street, Columbus, Ohio 43215, attn.: Executive Director.

Definitions of certain capitalized terms which are used in this Official Statement are set forth in the Glossary at Appendix D.

AUTHORIZATION AND PURPOSES OF THE SERIES 2019 FRESH WATER BONDS

The Series 2019 Fresh Water Bonds are authorized pursuant to the Series 2019 Fresh Water Bonds Resolution and issued on a parity with the Series 1995 Fresh Water Bonds, the Series 1998 Fresh Water Bonds, the Series 2001A Fresh Water Bonds, the Series 2001B Fresh Water Refunding Bonds, the Series 2002 Fresh Water Bonds, the Series 2004 Fresh Water Bonds, the Series 2005 Fresh Water Refunding Bonds, the Series 2009A Fresh Water Bonds, the Series 2009B Fresh Water Refunding Bonds, the Series 2010A Fresh Water Bonds, the Series 2013A Fresh Water Bonds, the Series 2016A Fresh Water Bonds, the Series 2016B Fresh Water Bonds, the Series 2018 Fresh Water Bonds and any other Fresh Water Bonds that may be issued in the future under the Trust Agreement (together, the “Fresh Water Bonds”). The Series 2019 Fresh Water Bonds are issued under and pursuant to the provisions of Section 2i of Article VIII of the Constitution of the State of Ohio and Chapter 6121, Ohio Revised Code, particularly Section 6121.06 thereof. The Authority has previously issued its Series 1995 Fresh Water Bonds (a portion of which was advance refunded by the Series 2001B Fresh Water Refunding Bonds), Series 1998 Fresh Water Bonds (a portion of which was advance refunded by the Series 2005 Fresh Water Refunding Bonds and a portion of which was currently refunded by the Series 2009A and 2009B Fresh Water Bonds), Series 2001 Fresh Water Bonds (the portion thereof constituting the Series 2001A Fresh Water Bonds was partially advance refunded by the Series 2005 Fresh Water Refunding Bonds and partially advance refunded by the Series 2009B Fresh Water Refunding Bonds), the Series 2002 Fresh Water Bonds (a portion of which was advance refunded by the Series 2005 Fresh Water Refunding Bonds and a portion of which was advance refunded by the 2009B Fresh Water Refunding Bonds), the Series 2004 Fresh Water Bonds (a portion of which was currently refunded by the Series 2009B Fresh Water Refunding Bonds), the Series 2006A Refunding Bonds, the Series 2009A Fresh Water Bonds, the Series 2009B Fresh Water Refunding Bonds, the Series 2010A Fresh Water Bonds, the Series 2013A Fresh

Water Bonds, the Series 2016A Fresh Water Bonds, the Series 2016B Fresh Water Bonds, and the Series 2018 Fresh Water Bonds, all of which, together with any other Fresh Water Bonds which may be issued in the future, constitute Parity Bonds with the Series 2019 Fresh Water Bonds. Such Parity Bonds are sometimes referred to herein collectively as the “Prior Bonds.” The Authority issues the Fresh Water Bonds under, and secures them by, the Trust Agreement among the Authority, The Bank of New York Mellon Trust Company, N.A., New Albany, Ohio, as successor trustee (the “Trustee”), and The Huntington National Bank, Columbus, Ohio, as Fresh Water Construction Fund Trustee. The Trust Agreement incorporates the Series 1995 Fresh Water Resolution (sometimes referred to herein as the Fresh Water General Bond Resolution) and the resolutions for all subsequent Fresh Water Bonds, including the Series 2019 Fresh Water Bonds Resolution.

The Series 2019 Fresh Water Bonds are to be issued for the purpose of (a) making loans to Local Governmental Agencies in the State of Ohio as part of the Authority’s Fresh Water Program to pay certain costs of planning, designing, constructing or acquiring certain wastewater treatment facilities, interceptor sewer facilities, sewage collection facilities and water supply and distribution facilities; (b) funding the Debt Service Reserve Fund for the Series 2019 Fresh Water Bonds; and (c) to pay issuance expenses relating to the issuance of the Series 2019 Fresh Water Bonds. See “SOURCES AND USES OF FUNDS.”

Fresh Water Program

The Authority established the Fresh Water Program in August, 1992 to provide a continuing financing source for Local Governmental Agencies for costs of planning, designing, acquiring or constructing wastewater treatment facilities, interceptor sewer facilities, sewage collection facilities, and water supply and water distribution facilities. A portion of the proceeds of the Pure Water Refunding Bonds issued by the Authority in 1992 provided the initial source of funding for the Fresh Water Program by a deposit of approximately \$126,000,000 (the “Fresh Water Initial Deposit”) to the Fresh Water Construction Fund held by the Fresh Water Construction Fund Trustee. The Authority has used the Fresh Water Initial Deposit and a portion of the net proceeds of various Fresh Water Bonds to make loans to those Local Governmental Agencies identified in Appendix B. The payments that the Authority receives from outstanding Fresh Water Loans (evidenced by the Existing Cooperative Agreements) as well as those from any future Fresh Water Loans funded from the proceeds of the Series 2019 Fresh Water Bonds, Parity Bonds and Subordinate Obligations deposited in the Fresh Water Construction Fund, secure the Fresh Water Bonds, and on a subordinate basis, the Subordinate Obligations. See “SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS.”

On December 10, 2015, the Authority implemented an interest rate subsidy program under which the Authority has set aside funds that it will contribute to pay a portion of the interest due from Local Governmental Agencies on certain outstanding loans, including, but not limited to, Fresh Water Loans. For a discussion of this program, see “ COOPERATIVE AGREEMENT – Interest Rates.”

Fresh Water Construction Fund

Moneys in the Fresh Water Construction Fund (*i.e.*, the Fresh Water Initial Deposit and proceeds of Fresh Water Bonds and Subordinate Obligations, other than the proceeds of Fresh Water Bonds and Subordinate Obligations used to refund other Fresh Water Bonds or Subordinate Obligations) are to be used for the purpose of making Fresh Water Loans to Local Governmental Agencies in the State of Ohio as part of the Authority’s Fresh Water Program. The Fresh Water Construction Fund, except the Encumbered Balance in the Fresh Water Construction Fund, is pledged as security for the Fresh Water Bonds and, on a subordinated basis, the Subordinate Obligations. See “SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS.”

SOURCES AND USES OF FUNDS

The proceeds of the Series 2019 Fresh Water Bonds together with other available moneys will be applied by the Trustee, pursuant to the terms of the Trust Agreement, for the following uses and in the following amounts:

Sources of Funds

Series 2019 Fresh Water Bonds	\$150,000,000.00
Net Premium	<u>38,757,260.00</u>
Total Sources of Funds	\$188,757,260.00

Uses of Funds

Deposit to 2019 Project Fund	\$184,825,420.73
Deposit to Debt Service Reserve Fund	2,825,894.00
Cost of Issuance ⁽¹⁾	<u>1,105,945.27</u>
Total Uses of Funds	\$188,757,260.00

- (1) Includes Underwriters' discount, legal fees, financial advisor fees, Trustee fees, rating agency fees, and printing expenses.

SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS

General

Security and Source of Payment. The Fresh Water Bonds, including any Parity Bonds that may be issued in the future, will be payable solely from, and be secured equally and ratably by, a pledge of the Pledged Revenues consisting of (i) all amounts in the Revenue Fund, Fresh Water Construction Fund (except the Encumbered Balance in the Fresh Water Construction Fund), Debt Service Fund, Debt Service Reserve Fund, Fresh Water Surplus Fund and Cross-Collateralization Fund created by the Trust Agreement (except any amounts which are required to be transferred to the Rebate Fund); and (ii) the Revenues, including all moneys received by the Authority in repayment of the principal of and for payment of the interest on all loans made by the Authority pursuant to the Cooperative Agreements, except those moneys which have been depledged as authorized by the Trust Agreement. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS-Application of Special Funds—Depledging of Fresh Water Loans." See also Appendix E—"SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT – Establishment and Application of Special Funds" and "Deposit of Revenues."

Deposit and Disposition of Revenues. Under the Trust Agreement, all Revenues will be deposited as received in the Revenue Fund. Under the Cooperative Agreements, the Authority is entitled to receive payments from the Local Governmental Agencies on the first day of each January and July. Such payments are deposited by the Authority into the Revenue Fund held by the Trustee. On the first day of each May and November, the Trustee will allocate or pay out moneys or investments then on hand in the Revenue Fund in the following order:

FIRST: To the payment of the amounts requisitioned by the Trustee for the payment of its fees or fees of the Paying Agents or the Fresh Water Construction Fund Trustee for the performance of their duties under the terms of the Trust Agreement, approved by the Authority and remaining unpaid.

SECOND: To the Debt Service Fund (i) a sum which, when added to any balance then on deposit in said fund and available for such purpose, will be equal to the interest due on the next ensuing Interest Payment Date on all Fresh Water Bonds outstanding, (ii) commencing on the first day of the month preceding the first mandatory redemption date of any Term Fresh Water Bonds, a sum which will be equal to the next ensuing mandatory redemption requirement, and (iii) commencing on the first day of the month preceding the first date on which principal of the Fresh Water Bonds is to be retired at stated maturity, a sum which will be equal to the next ensuing principal maturity. Until spent for interest on the related Fresh Water Bonds, Capitalized Interest in the Capitalized Interest Account in the Debt Service Fund shall remain in that fund even if the balance at any time exceeds the interest due on the next ensuing Interest Payment Date.

THIRD: To the Debt Service Reserve Fund, so much of the balance remaining in the Revenue Fund after the deposit under the preceding paragraph Second as may be necessary to maintain in said Debt Service Reserve Fund, cash, certain Eligible Investments and Qualified Reserve Credit Facilities having an aggregate value at least equal to the Required Reserve Fund Balance (i.e., generally one-half of the maximum annual Bond Service Charges required to be paid in that year or any succeeding year). So long as the Debt Service Reserve Fund is at the Required Reserve Fund Balance, the income realized from the investment of the Debt Service Reserve Fund and any income realized from the investment of such income shall be transferred to the Debt Service Fund on the first day of November of each year prior to making allocations or payments of moneys on hand in the Revenue Fund, but any increase in the principal value of the Debt Service Reserve Fund shall be retained in that Fund.

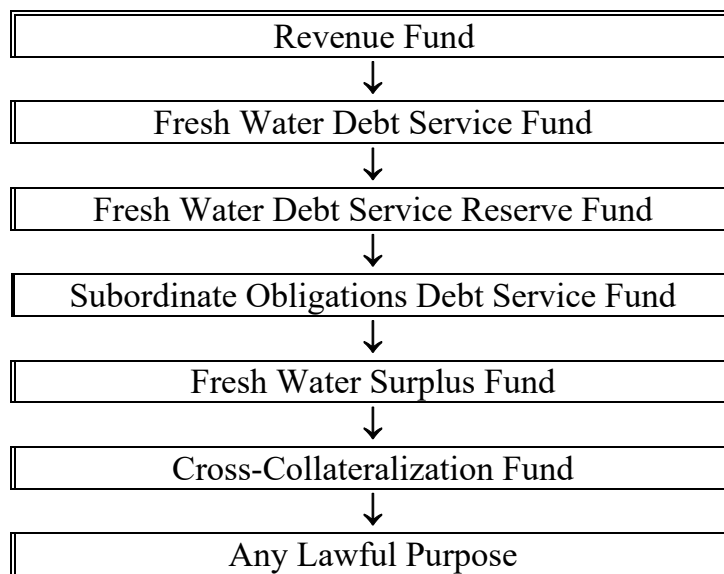
FOURTH: To the Subordinate Obligations Debt Service Fund (i) a sum which, when added to any balance then on deposit in said fund and available for such purpose, will be equal to the interest due on the next ensuing interest payment date on all Subordinate Obligations outstanding and (ii) a sum which will be equal to the next ensuing principal maturity.

On the first day of June and December of each year the Trustee shall allocate to the Fresh Water Surplus Fund the entire remainder, if any, of moneys then in the Revenue Fund, excluding any Revenues which may be contained therein for the next ensuing due date for repayments from Local Governmental Agencies but only after first making all of the then current required payments as set forth in paragraph First to paragraph Fourth above.

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Application of Special Funds

The following chart depicts a simplified flow of Revenues through the Special Funds, except the Fresh Water Construction Fund:



This chart is for illustrative purposes only, is in no way comprehensive or definitive, and must be read in conjunction with the entire Official Statement, including but not limited to “SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS.”

Use of Special Funds. The Debt Service Fund is to be used solely to pay Bond Service Charges as they become due. Bond Service Charges do not include Subordinate Obligation Service Charges. If after making the allocation from the Revenue Fund, the amount in the Debt Service Fund is less than the amount of the Bond Service Charges due on the next Interest Payment Date, the Trustee shall transfer to the Debt Service Fund amounts from the following funds in the following order to the extent necessary to make good such deficiency or deficiencies:

- i) The Fresh Water Surplus Fund;
- ii) The Subordinate Obligations Debt Service Fund;
- iii) The Cross-Collateralization Fund;
- iv) The Debt Service Reserve Fund;
- v) The Fresh Water Construction Fund except the Encumbered Balance in the Fresh Water Construction Fund.

Fresh Water Surplus Fund. The Fresh Water Surplus Fund will be used first to make up any deficiency existing at any time in the amounts required to be on hand in the Debt Service Fund and Debt Service Reserve Fund. At any time when money in the Fresh Water Surplus Fund is needed to cure a deficiency in the Subordinate Obligations Debt Service Fund and is not needed to cure a deficiency in the Fresh Water Debt Service Fund or the Debt Service Reserve Fund, then such money shall be transferred to the Subordinate Obligations Debt Service Fund. Under any circumstance in which the Trust Agreement requires that moneys in the Fresh Water Surplus Fund be used to cure any deficiency in the Fresh Water Debt Service Fund or the Fresh Water Debt Service Reserve Fund, moneys in the Subordinate Obligations Debt Service Fund shall be deemed to be in the Fresh Water Surplus Fund after all other moneys in the Fresh Water Surplus Fund have been exhausted for that purpose.

The moneys in the Fresh Water Surplus Fund, to the extent not needed to make up any deficiency existing at any time in the amounts required to be on hand in the Fresh Water Debt Service Fund, the Debt Service Reserve Fund, or the Subordinate Obligation Debt Service Fund, may be transferred to the Cross-Collateralization Fund at any time, but in any event, shall be transferred to the Cross-Collateralization Fund no later than twenty-four months from the date of being deposited in the Fresh Water Surplus Fund. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS – Application of Special Funds – Cross Collateralization Fund."

Subordinate Obligations Debt Service Fund. The Trust Agreement establishes the Subordinate Obligations Payment Account in the Subordinate Obligations Debt Service Fund. Subject to the required first use thereof to cure any deficiency in the Fresh Water Debt Service Fund or the Fresh Water Debt Service Reserve Fund, the Subordinate Obligations Payment Account is to be used solely to pay Subordinate Obligation Service Charges as they become due. There shall be deposited in the Subordinate Obligations Payment Account, as and when received:

- (i) any proceeds from the sale of Subordinate Obligations or Fresh Water Bonds issued to refund or retire Subordinate Obligations; and
- (ii) to the extent needed to pay Subordinate Obligation Service Charges after any deposit described in (i) above, any moneys in the Fresh Water Surplus Fund not needed to cure any deficiency in the Fresh Water Debt Service Fund or the Fresh Water Debt Service Reserve Fund, and any Revenues that would otherwise be required to be deposited in the Fresh Water Surplus Fund under the Fresh Water General Bond Resolution and not needed to cure any such deficiency.

Cross-Collateralization Fund. Each of the trust agreements that secure the Authority's bonds issued under its Clean Water Program, Safe Water Program and Pure Water Program, respectively (collectively, the "Prior Agreements"), created a surplus fund into which that Program's loan repayments were deposited to the extent they were not required for deposit into the debt service fund or debt service reserve fund established under each Program's respective trust agreement. Currently, because no Bonds are outstanding under the Prior Agreements, in each case, such moneys are transferred directly to the Cross-Collateralization Fund. The moneys which have been in the Fresh Water Surplus Fund are also required to be transferred to the Cross-Collateralization Fund within twenty-four months of deposit into the Fresh Water Surplus Fund.

Moneys in the Cross-Collateralization Fund are to be used first for the purposes of making up a deficiency in the Debt Service Fund or the Debt Service Reserve Fund, or making up any respective deficiency in any debt service fund or debt service reserve fund that the Authority may establish in connection with the issuance of debt obligations to provide funds for any program that may supersede the Fresh Water Program. Any moneys in the Cross-Collateralization Fund that are not required to be applied at the time to eliminate any deficiency in the Debt Service Fund or the Debt Service Reserve Fund may be used for any lawful purpose of the Authority subject to a required use, if needed, for the payment of debt service charges on bonds issued for the Authority's Community Assistance Program. The Authority may grant to the holders of those debt obligations a pledge of and lien on the Cross-Collateralization Fund on parity with the pledge and lien granted by the Trust Agreement to the Holders of the Fresh Water Bonds. See Appendix E – "SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT" – "Establishment and Application of Special Funds."

Debt Service Reserve Fund. The Debt Service Reserve Fund is to be used solely to make transfers from the Debt Service Reserve Fund to the Debt Service Fund for the payment of Bond Service Charges as they become due. The holders of the Subordinate Obligations have no interest in, and no right to payment from, the Fresh Water Debt Service Reserve Fund. There is no debt service reserve fund for

the Subordinate Obligations. Prior to making the allocations from the Revenue Fund described above and under “Deposit and Disposition of Revenues” in Appendix E, the Trustee is to transfer all amounts resulting from investment earnings from the Debt Service Reserve Fund to the Debt Service Fund that are in excess of the Required Reserve Fund Balance. If at any time the Value of the moneys, Eligible Investments and Qualified Reserve Credit Facilities on deposit in the Debt Service Reserve Fund is less than the Required Reserve Fund Balance, the Trustee is to transfer to the Debt Service Reserve Fund amounts from the following funds in the following order to the extent necessary to make good such deficiency or deficiencies:

- i) The Fresh Water Surplus Fund and the Subordinate Obligations Debt Service Fund;
- ii) The Cross-Collateralization Fund;
- iii) The Fresh Water Construction Fund except the Encumbered Balance in the Fresh Water Construction Fund.

See Appendix E – “SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT – Establishment and Application of Special Funds.”

Fresh Water Construction Fund. The Fresh Water Construction Fund is to be used (i) for making loans to Local Governmental Agencies which will provide funds for the purpose of paying costs of Projects being financed pursuant to Cooperative Agreements, and (ii) for paying the costs of issuance of Fresh Water Bonds, except that the Fresh Water Construction Fund may be used for the payment of Bond Service Charges or the maintenance of the Required Reserve Fund Balance (except to the extent of the Encumbered Balance in the Fresh Water Construction Fund), for transfers to the Pure Water Refunding Construction Fund (but only to make up a deficiency for the funding of loans under the Pure Water Program, which is not expected by the Authority) or for the purchase of Fresh Water Bonds, all in accordance with and subject to the terms and limitations of the Trust Agreement. See Appendix E—”Summary of Certain Provisions of the Trust Agreement—Establishment, Application and Investment of Fresh Water Construction Fund.”

Cooperative Agreements: Covenant to Maintain Rates. The Cooperative Agreements set forth the obligation of each Local Governmental Agency to repay the moneys loaned by the Authority, the interest rate to be paid by each Local Governmental Agency on such loans, and other repayment provisions. Each Cooperative Agreement also contains a covenant by the Local Governmental Agency to maintain rates at all times sufficient, after the use of any special assessment funds for such repayment, to enable it to make the repayments required thereby and provides that such duty is enforceable by an action in mandamus. See “COOPERATIVE AGREEMENTS-Local Governmental Agencies’ Covenants to Maintain Rates.”

The Authority does not have a mortgage on or right to operate the sewer or water system of any Local Governmental Agency, and the agreements of the Local Governmental Agencies to make the payments called for by the Cooperative Agreements are not general obligations of the Local Governmental Agencies. In the event of a failure to make a required payment by a Local Governmental Agency, the Authority’s primary remedies would be an action in contract or mandamus to compel the Local Governmental Agency to make the payment and, if necessary, an action in mandamus to compel an increase in sewer or water rates.

Appendix A hereto contains a schedule of Bond Service Charges for the Fresh Water Bonds, a schedule of projected Revenues from the Existing Cooperative Agreements, and projected deposits to the Fresh Water Surplus Fund.

Depledging of Fresh Water Loans. The Authority may from time to time cause the amounts to be received by the Authority as payments for principal of and interest on one or more Fresh Water Loans to be removed from Revenues and Pledged Revenues and thereby terminate the pledge of such amounts as security and a source of payments for the Fresh Water Bonds. In order to depledge one or more Fresh Water Loans, the Executive Director must certify to the Trustee the following, and accompany the certification with respect to coverage provided for in paragraph (b), below, with a report by an independent public accounting firm of national reputation, and reasonably acceptable to the Trustee, verifying the mathematical accuracy of schedules provided by or on behalf of the Authority to demonstrate fulfillment of such requirements:

- (a) The purpose for the removal of the payments on the designated Fresh Water Loan or Loans from Revenues and Pledged Revenues is to permit the payment of the principal of and interest on such Fresh Water Loan or Loans to secure debt obligations other than the Fresh Water Bonds, except that payments on any Fresh Water Loan that at any time constituted a Non-qualified Fresh Water Loan may be depledged for any purpose, regardless of whether such Fresh Water Loan constitutes a Non-qualified Fresh Water Loan at the time of the removal;
- (b) After the removal of the payments on such Fresh Water Loan or Loans from Revenues, the sum of the Projected Payments (payments expected to be received from Local Governmental Agencies from then existing Cooperative Agreements, other than any previously depledged) to be received during each calendar year shall be at least 105% of the amount required to be paid into the Debt Service Fund during each calendar year to pay the Bond Service Charges due in such year, less an amount equal to any capitalized interest to be applied against the Bond Service Charges in such year, on all Fresh Water Bonds then outstanding; and
- (c) The method of selecting the particular Fresh Water Loan or Fresh Water Loans to be removed from Revenues shall be a “last in - first out” basis determined by the date of the Loan or Loans, except that any Fresh Water Loan that at any time constituted a Non-qualified Fresh Water Loan may be removed by designation of the Executive Director, regardless of the “last in - first out” basis and regardless of whether such Fresh Water Loan constitutes a Non-qualified Fresh Water Loan at the time of the removal.

The certification of the Executive Director is to be accompanied by a certified list of all Cooperative Agreements then existing, listed in order of their date, and following any depledging, the Authority and the Trustee will enter into a Supplemental Agreement relating to that depledging. In addition, the Authority has agreed to give the Rating Agencies 60 days prior notice of any action to effect such a removal.

Upon receipt of the applicable certification of the Executive Director and the verification report of an independent public accounting firm of national reputation, the Trustee is to provide a written acknowledgment of the removal of the payments on such Fresh Water Loan or Loans from Revenues and Pledged Revenues. Thereupon the pledge of such payments as security and a source of payments for the Fresh Water Bonds shall terminate, and the Holders of Fresh Water Bonds shall have no interest in any payments on such Fresh Water Loan or Loans or in any other loans funded from bonds secured by the payments on the depledged Fresh Water Loan or Loans. For purposes of authorized depledging as provided herein, any Fresh Water Loan may be divided into portions, and the payments of principal of and interest on any such portion may be removed from Revenues and Pledged Revenues as provided herein. See Appendix E—“SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT – Depledging.” To date, no Fresh Water Loans have been depledged.

The Fresh Water Bonds are special obligations of the Authority and are payable solely out of certain revenues pledged by the Authority or required to be used therefor under the Trust Agreement and are secured solely by a grant of a security interest by the Authority under the Trust Agreement. The Fresh Water Bonds do not constitute a debt, or the pledge of the faith and credit of the State of Ohio or of any political subdivision thereof, and the Holders or owners of the Fresh Water Bonds have no right to have taxes levied by the General Assembly of the State of Ohio or the taxing authority of any political subdivision thereof, for the payment of the principal of, or interest or any redemption premium on, the Fresh Water Bonds.

APPENDIX B is a listing as of August 31, 2019 of the Local Governmental Agencies participating in the Fresh Water Program pursuant to the Existing Cooperative Agreements. For information on how the fixed interest rate borne by each of the Existing Cooperative Agreements entered into on or after January 1, 1998 has been determined and how the fixed rate to be borne by a new Cooperative Agreement is determined, see “COOPERATIVE AGREEMENTS – Interest Rates” herein.

As of August 31, 2019, there were 343 Local Governmental Agencies with 1046 Projects being financed pursuant to Existing Cooperative Agreements, all of which are included within the Fresh Water Program. Of the original \$2,046,534,234 in principal amount of loans awarded that are still outstanding, a principal balance of \$1,538,523,584 remains outstanding. The twelve Local Governmental Agencies listed below have the largest principal amounts outstanding (as of August 31, 2019):

Significant Local Governmental Agency Participants

Local Governmental Agency	Number of Projects	Project Costs Funded with Fresh Water Loans	Projected Remaining Loan Repayments	Percent of Projected Amount of all Loans Remaining to be Repaid
Columbus	29	\$ 261,205,186	\$ 283,920,115	13.64%
Lima	9	84,535,341	109,989,830	5.28%
Fremont	1	66,171,603	104,395,571	5.02%
Medina County	36	105,423,768	86,854,225	4.17%
Toledo	10	56,228,224	69,682,371	3.35%
Piqua	2	48,734,330	69,651,794	3.35%
Erie County	23	64,144,348	63,861,143	3.07%
Avon Lake	11	55,537,959	63,764,619	3.06%
Lorain	20	62,828,823	63,560,405	3.05%
Akron	20	55,187,707	59,591,197	2.86%
Sandusky	14	69,103,709	51,034,274	2.45%
Southwest Licking Community Water and Sewer District	42	80,080,889	47,171,550	2.27%
	217	\$1,009,181,887	\$1,073,477,094	51.57%

COOPERATIVE AGREEMENTS

General

Pursuant to the Existing Cooperative Agreements, the Authority has financed sewer construction projects and water projects. It anticipates financing additional projects of these types pursuant to Cooperative Agreements that provide for both planning and long-term loans.

Sewer construction projects involve the acquisition and construction of sewage treatment facilities, interceptor sewers or sewage collection systems. Water projects involve the acquisition and construction of water supply or distribution systems. Planning loans are used in the planning or designing

of sewage or water facilities. Planning loans are financed by the Authority only in those instances where the Local Governmental Agency has a financing plan or an existing utility system capable of satisfying the repayment requirements under the applicable Cooperative Agreements.

Under the Cooperative Agreements, the Local Governmental Agencies agree to construct projects constituting wastewater treatment facilities or water supply and distribution facilities meeting the applicable requirements of the Authority and the water pollution control enforcement agencies of the State and proceed with the construction of these projects, submitting their bills to the Authority for payment. The Authority lends money to the Local Governmental Agencies to pay project costs by authorizing a trustee to pay the construction bills. The Authority charges interest on the loans from the date money is actually disbursed. After construction is complete and a final accounting occurs, the final annual payments are determined based upon the actual construction costs. The repayments of planning loans are pledged to the payment of Bond Service Charges, but the repayments of such loans are paid into the Construction Fund, which is also pledged to the payment of Bond Service Charges except for the Encumbered Balance in the Construction Fund.

Application Procedure. In order to determine whether a Local Governmental Agency making application to the Authority can make the payments required under its proposed Cooperative Agreement, the Authority requires that the Local Governmental Agency file an amortization schedule setting forth all projected income from the utility system of which the project is to become a part, estimated operating and maintenance expenses, and debt service for all of its indebtedness which is supported in any way by the revenues of such utility system. If the amortization schedule shows that the existing rate structure would not support the additional payments required by the proposed Cooperative Agreement, after deducting any portion thereof to be paid from special assessments, then, prior to entering into the Cooperative Agreement with the Local Governmental Agency, the Authority requires that existing rate legislation be amended or new rate legislation be adopted so that sufficient utility system revenues would, based on such computations, be produced to meet all of the obligations payable from the revenues of such utility system and to make the payments called for by the proposed Cooperative Agreement. (For a discussion of the Local Governmental Agencies' covenant to maintain rates, see "COOPERATIVE AGREEMENTS—Local Governmental Agencies' Covenants to Maintain Rates.")

Construction and Ownership

Ownership of each Project financed by the Authority remains with the Local Governmental Agency. The Local Governmental Agencies agree in the Cooperative Agreements to segregate the revenues, funds and properties of the Project facilities from all other revenues, funds and properties of the Local Governmental Agency. Under Cooperative Agreements, the Local Governmental Agencies agree to maintain insurance coverage in such amounts as are satisfactory to the Authority on the Project facilities in such amounts and against such perils as is customary for similar facilities by political subdivisions similar to the Local Governmental Agencies.

Local Governmental Agencies' Covenants to Maintain Rates

Each Local Governmental Agency agrees in its Cooperative Agreement to maintain water or sewer rates that are sufficient to provide for the repayment of amounts loaned under the Cooperative Agreement after (i) deduction of the operation and maintenance expenses of the system of which the project is a part and (ii) payment of (a) all amounts required by any mortgage, indenture of mortgage, trust indenture or other instrument granted or entered into to secure bonds and notes issued by the Local Governmental Agency either prior to or after entering into the Cooperative Agreement and (b) contractual obligations of the Local Governmental Agency under any other Cooperative Agreement between the

Local Governmental Agency and the Authority, to the extent that payments under (a) and (b) above are payable solely from the revenues of such system.

The Authority does not have a mortgage on or right to operate the sewer or water system of any Local Governmental Agency, and the agreements of the Local Governmental Agencies to make the payments called for by Cooperative Agreements are not general obligations of the Local Governmental Agencies. In the event of a failure to make a required payment by a Local Governmental Agency, the Authority's primary remedies would be an action in contract to compel the Local Governmental Agency to make the payment and, if necessary, an action in mandamus to compel an increase in sewer or water rates.

Costs Repayable by Local Governmental Agencies

Local Governmental Agencies financing sewer construction projects, planning projects or water projects are required to repay the Authority all of the Project costs, which include, among others, interest during construction, land acquisition costs, and administrative costs of the Authority.

Period of Years for Repayments; No Prepayment

Repayment by the Local Governmental Agency to the Authority may be made over a period of 5 to 30 years as selected by the Local Governmental Agency and commences on the earliest of three dates: (i) a date indicated in the Cooperative Agreement; (ii) the January 1 or July 1 following the completion of construction; or (iii) the January 1 or July 1 following the commencement of operation. Repayment must commence in most cases within 29 months after entering into the Cooperative Agreement.

Once the repayment periods are fixed, the Local Governmental Agency has no right to change such periods, and there is no right of prepayment. The Local Governmental Agency has the option, exercised at the time the Cooperative Agreement is entered into, of repaying by means of either level debt service payments or equal annual principal payments. Payments are made semiannually and in amounts equal to one-half of the total annual payment due.

Interest Rates

The rates per annum at which interest accrues on the moneys loaned to the Local Governmental Agencies under each of the Existing Cooperative Agreements have been fixed for the term of each of the Existing Cooperative Agreements and are set forth for each Existing Cooperative Agreement in Appendix B hereto. For prospective Cooperative Agreements, effective December 11, 2014, the current interest rate is equal to the most recent eight week average as of such business day of MMD AA GO 20 year rate plus 0.30% for loans with terms of 5 to 20 years and the MMD AA GO 30 years rate plus 0.30% for loans with a term of 21 to 30 years. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS-Significant Local Governmental Agency Participants" above.

Effective January 1, 2002, the Authority implemented certain changes to the Fresh Water Program affecting the terms on which Fresh Water Loans are made. These changes include an increase from 25 to 30 years in the maximum term of a loan made to a Local Governmental Agency. In addition, the Authority offers a 0.5% reduction in its loan rates for each of the following situations applicable to a Local Governmental Agency at the time its loan is made, up to a maximum reduction of 1%: if (i) the Local Governmental Agency is under findings and orders from the Ohio Environmental Protection Agency; (ii) the Local Governmental Agency is connecting to other systems for treatment services; (iii) the Local Governmental Agency has previously borrowed from the Authority and is current on loan

repayments; (iv) the Local Governmental Agency is purchasing another system; and (v) the Local Government Agency is in compliance with a “balanced growth plan,” as certified by the State.

On December 10, 2015, the Authority established a program (the “Interest Rate Subsidy Program”) pursuant to which the Authority will, under certain conditions, pay a portion of the interest on certain outstanding loans of Local Government Agencies, including loans made under the Authority’s Clean Water, Pure Water and Fresh Water Programs. The Authority set aside an aggregate amount of \$31,517,164 in surplus funds for such payments during the period from January 1, 2016 through July 1, 2046; of this amount, approximately \$16,855,366.00 remains and is expected to be applied toward Fresh Water Loans. The funds allocated for the Interest Rate Subsidy Program are not Pledged Revenues and are not subject to the pledge of the Trust Agreement until paid to the Trustee for deposit in the Revenue Fund. In order for a loan to be eligible for the Interest Rate Subsidy Program, that loan must bear interest at a rate greater than 4.00% per annum and the Local Government Agency obligated for repayment of such loan must meet all of its repayment obligations to the Authority. The portion of interest paid by the Authority on qualified loans will be equal to the amount necessary to reduce the effective rate of those loans to 4.00% during the remaining life of each loan.

Enforcement Process for Collection of Revenues

The Authority has covenanted that it will take all necessary actions to collect the Revenues when due from the Local Governmental Agencies. This includes (i) sending invoices or any other appropriate demand for payment at least 15 days prior to the due date; (ii) making demand for payment of any amount in default within 20 days after such default; (iii) giving notice that if the default is not remedied within two months from the date of default, the Authority will file suit in the Common Pleas Court of Franklin County, Ohio, the Common Pleas Court of the County in which the Local Governmental Agency is located, or in the Ohio Supreme Court to collect such amount which is in default; and (iv) filing such suit within three months of the date of default if the default is not remedied. Since the Authority began its first program in 1968, the Authority has needed to file suit against only eight Local Governmental Agencies. All of the suits have been completed and resulted in the repayment or restructuring of each loan.

Fiscal Emergency Act

Chapter 118 of the Ohio Revised Code, known as the Fiscal Emergency Act, applies to municipal corporations, counties and townships that are determined to have circumstances that constitute a fiscal emergency condition. Such conditions include default on any debt obligation, failure to meet payrolls, excessive past due accounts, excessive deficits and insufficient cash and investments. If a fiscal emergency condition is determined to exist, the municipality, county or township is subjected to State oversight through a Financial Planning and Supervision Commission (the “Commission”), assisted by certified public accountants engaged by the Commission. The Commission must approve the amount and purpose of any issue of debt obligations by a municipality, county or township subject to the Fiscal Emergency Act. If the conditions described in the Fiscal Emergency Act occur with respect to a Local Government Agency, such Local Government Agency may be subject to State fiscal supervision, including control of its debt issuance and expenditures of the Local Government Agency.

The following four Governmental Agencies that are borrowing under Fresh Water Loans are currently subject to State financial supervision under the Fiscal Emergency Act; however, all of these Governmental Agencies are current on Fresh Water Loan payments:

Governmental Agency	Outstanding Fresh Water Loan Amount	Final Payment Date
Village of Trimble	\$ 194,638	01/01/2046
Village of Green Camp	666,632	07/01/2046
Village of Mount Sterling	13,279,735	07/01/2047
City of Portsmouth	8,025,840	07/01/2045

Bankruptcy Considerations

The enforceability of the Cooperative Agreements of the Local Governmental Agencies is subject to the provisions of Chapter 9 of Title 11 (the “Bankruptcy Code”) of the United States Code and other laws affecting creditors’ rights generally. Chapter 9 of the Bankruptcy Code relates to the adjustment of debts of a state’s political subdivisions, public agencies and instrumentalities (“eligible entities”), such as the Local Governmental Agencies. Under Chapter 9 of the Bankruptcy Code and in certain circumstances described therein, an eligible entity may be authorized to initiate proceedings under Chapter 9 without prior notice to or consent of its creditors, which proceedings may result in material and adverse modification or alteration of the rights of its secured and unsecured creditors, including parties to its contracts. Under Section 133.36 of the Ohio Revised Code, the Ohio Revised Code authorizes governmental agencies to initiate such proceedings only if they receive the approval of the Tax Commissioner of the State.

PARITY BONDS AND BOND ANTICIPATION NOTES; OTHER SUBORDINATE OBLIGATIONS

Conditions for the Issuance of Parity Bonds

The Authority may issue Parity Bonds from time to time for the purpose only of (i) paying costs of, or making loans to Local Governmental Agencies to pay costs of, planning, designing, acquiring or constructing wastewater treatment facilities, interceptor sewer facilities, sewage collection facilities and appurtenant sewerage facilities necessary for the effective operation thereof, and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof, (ii) refunding or advance refunding any outstanding Fresh Water Bonds or outstanding Subordinate Obligations, (iii) paying issuance costs and capitalized interest, if any, and (iv) providing the amount, if any, necessary to deposit in the Debt Service Reserve Fund for the Fresh Water Bonds. Parity Bonds are payable from the Special Funds and any moneys requisitioned from the Fresh Water Surplus Fund and shall be secured by a pledge of the Pledged Revenues on a parity with all the outstanding Fresh Water Bonds.

The Trust Agreement imposes the following condition, among others, on the Authority’s issuance of Parity Bonds under the Trust Agreement (“Additional Bonds Test”):

- (a) The Executive Director will certify that the Authority is not in default in the performance of any of its covenants or obligations contained in the Trust Agreement, including any Supplemental Agreement, or the Parity Bonds, and the authentication and delivery of the Parity Bonds will not result in any such default.
- (b) The sum of the Projected Payments to be received during each calendar year will aggregate an amount at least equal to 105% of the amount required to be paid into the Debt Service Fund during each such calendar year to pay the Bond Service Charges due in such year,

less an amount equal to any Capitalized Interest to be applied against the Bond Service Charges in such year, on all Fresh Water Bonds to be outstanding after the issuance of such Fresh Water Bonds (including any Subordinate Obligations over an Assumed Amortization Period), and the Authority will have furnished to the Trustee a certificate of the Executive Director or the Fiscal Officer of the Authority making and setting forth the calculations required by this paragraph.

(c) The Executive Director will certify that, after the issuance of such Parity Bonds and the deposit in the Debt Service Reserve Fund of any proceeds thereof or other moneys, certain Eligible Investments, or Qualified Reserve Credit Facilities to be deposited therein pursuant to the applicable Supplemental Agreement, the Value of cash, certain Eligible Investments, and Qualified Reserve Credit Facility in the Debt Service Reserve Fund will equal or exceed the Required Reserve Fund Balance.

(d) The Executive Director will certify that other conditions precedent to the issuance of such series of Parity Bonds set forth in the applicable Series Resolution have been met.

The Series Resolution authorizing the issuance of a series of Fresh Water Bonds constituting Parity Bonds will incorporate the covenants and requirements of the Fresh Water General Bond Resolution insofar as they are applicable to all Fresh Water Bonds. The Series Resolution will set forth the findings of the Authority that the requirements described in paragraphs (a), (b), (c) and (d) above are or will be timely satisfied for purposes of issuing such Fresh Water Bonds. Such findings will be confirmed by a certificate of an Authorized Officer, in form satisfactory to the Trustee and filed with the Trustee prior to authentication of such series of Fresh Water Bonds, and the Trustee may reasonably require further evidence of the satisfaction of such requirements. The authentication of such Fresh Water Bonds by the Trustee will be conclusive evidence that such requirements have been met for purposes of the validity and binding effect of those Fresh Water Bonds and the right of the Holders thereof to share in the Revenues and certain other funds and moneys as provided in the Fresh Water General Bond Resolution, the Trust Agreement and the applicable Series Resolution or Supplemental Trust Agreement.

For a discussion of the various types of Parity Bonds that may be issued and the computation of Bond Service Charges thereon, see Appendix E—“SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT—Computation of Bond Service Charges With Respect to Parity Bonds.”

Bond Anticipation Notes

In anticipation of the issuance of any series of Fresh Water Bonds, the Authority may issue one or more series of Bond Anticipation Notes. All requirements of the Trust Agreement applicable to Fresh Water Bonds shall apply to Bond Anticipation Notes, including, without limitation the conditions precedent for the issuance of a series of Fresh Water Bonds. For the purposes of determining (1) whether Fresh Water Bonds, regardless of whether they are to be Bond Anticipation Notes, may be issued in compliance with the requirements of the Fresh Water General Bond Resolution when any Bond Anticipation Notes are outstanding, (2) whether Fresh Water Bonds that are Bond Anticipation Notes may be issued in compliance with the requirements of the Fresh Water General Bond Resolution, and (3) the amount of the Required Reserve Fund Balance attributable to Bond Anticipation Notes, the Bond Service Charges on such Bond Anticipation Notes will be determined in accordance with the provisions of the Trust Agreement pertaining to Balloon Bonds and described in Appendix E—“SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT—Computation of Bond Service Charges With Respect to Parity Bonds - Balloon Bonds.”

Existing Subordinate Obligation

The Authority has entered into a Revolving Credit Facility with PNC Bank, National Association and State Street Public Lending Corporation (together, the “Series 2017 Lenders”), which authorizes the Authority to sell, and the Series 2017 Lenders to purchase, the State of Ohio, Water Development Revenue Notes, Fresh Water Series 2017 (Federally Taxable) (the “Series 2017 Fresh Water Taxable Notes”), from time to time in a total amount not to exceed \$200,000,000*, all pursuant to the Series 2017 Fresh Water Note General Resolution, and of which the aggregate principal amount of \$21,900,000.00 has been issued and is outstanding as of the date of this Official Statement. These notes are Subordinate Obligations and are therefore secured and payable on a subordinate basis to the Fresh Water Bonds. Any Series 2017 Fresh Water Taxable Notes issued pursuant to the Series 2017 Fresh Water Note General Resolution will need to meet the Additional Bonds Test described above (with the exception of any debt service reserve requirement) as if they were issued as Balloon Bonds.

INVESTMENTS

The Special Funds may be invested only in Eligible Investments as provided for in the Agreement. See Appendix E—“SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT—Investment of Special Funds” and the definition of Eligible Investments in Appendix D—“GLOSSARY”. However, moneys in the Revenue Fund, the Debt Service Fund and the Debt Service Reserve Fund may be invested only in (i) Government Obligations, (ii) Government Certificates, (iii) repurchase agreements that qualify as Eligible Investments under paragraph (g) in the definition of Eligible Investments, and (iv) investment agreements that are either (A) entered into with entities rated “AAA”, “Aaa” or the equivalent by all Rating Agencies, or (B) fully collateralized by Government Obligations and Government Certificates that are marked to market daily. Investments of moneys in the Fresh Water Construction Fund, Debt Service Fund and Revenue Fund shall mature or be redeemable at the times and in the amounts necessary to provide moneys to make the payments for which those funds are established (in the case of the Revenue Fund, payments of Bond Service Charges). Investments of moneys in the Debt Service Reserve Fund shall mature, or be redeemable by the holders, not later than five years from the date of investment, or in the case of investment agreements, shall be subject to withdrawal by the Authority or the Trustee at any time the Trust Agreement may permit or require withdrawal from the Debt Service Reserve Fund for the payment of Bond Service Charges. Debt Service Reserve Fund investments, except investment of income realized, must be of a type which pay interest at least annually.

The uninvested moneys in all Special Funds shall at all times be secured by the depository or custodian thereof by pledge of obligations of the United States to the extent and in the manner required by law for the security of deposits of public funds.

THE SERIES 2019 FRESH WATER BONDS

General

The Series 2019 Fresh Water Bonds are issuable as fully registered bonds, in book entry form, and are dated, bear interest at the rates per annum, have yields to maturity at the rates per annum and mature, as set forth on the cover page and inside front cover page of this Official Statement and as

* The Authority is currently negotiating with the Series 2017 Lenders with the intent of increasing the total amount of Series 2017 Fresh Water Taxable Notes that may be issued to \$250,000,000, of which an aggregate principal amount of \$25,000,000 is expected to be issued and outstanding.

described more fully herein in APPENDIX F, “Book Entry Only System.” Interest will be computed on the basis of a 360-day year consisting of twelve 30-day months.

The Trustee will serve as the Authenticating Agent, Bond Registrar, and Paying Agent and will keep all books and records necessary for registration, exchange and transfer, if any, in accordance with the terms of the Trust Agreement.

Bond Service Charges on Series 2019 Fresh Water Bonds are payable when due without deduction for the services of the Paying Agent. The principal is payable to the Holder (initially Cede & Co.) upon presentation and surrender at the office of the Bond Registrar.

Interest on the Series 2019 Fresh Water Bonds is payable by the Trustee by check or draft, mailed on each June 1 and December 1 (the “Interest Payment Dates”), commencing June 1, 2020, to the Holder of record on the Register as of the 15th day of the month next preceding the Interest Payment Date. So long as the Series 2019 Fresh Water Bonds are immobilized in the custody of a depository pursuant to a book entry system, interest on the Series 2019 Fresh Water Bonds will be payable by wire transfer to the Holder (initially DTC) on each Interest Payment Date.

Optional Redemption

The Series 2019 Fresh Water Bonds maturing on or after June 1, 2030 are subject to prior redemption by and at the sole option of the Authority in whole multiples of \$5,000, either in whole or in part (as selected by the Authority) on any date on or after December 1, 2029, at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the redemption date.

Mandatory Sinking Fund Redemption

The Series 2019 Fresh Water Bonds maturing on December 1 in the years 2033 through 2039 and June 1, 2044 (collectively, the “Term Bonds”), are subject to mandatory sinking fund redemption by the Authority at par, plus accrued interest to the redemption date pursuant to the mandatory sinking fund requirements of the Trust Agreement as follows:

Series 2019 Term Bonds Maturing December 1, 2033		Series 2019 Term Bonds Maturing December 1, 2034	
Mandatory Redemption Date	Principal Amount to be Redeemed	Mandatory Redemption Date	Principal Amount to be Redeemed
June 1, 2033	\$3,000,000	June 1, 2034	\$3,000,000
December 1, 2033**	3,000,000	December 1, 2034**	3,000,000
**Stated Maturity		**Stated Maturity	
Series 2019 Term Bonds Maturing December 1, 2035		Series 2019 Term Bonds Maturing December 1, 2036	
Mandatory Redemption Date	Principal Amount to be Redeemed	Mandatory Redemption Date	Principal Amount to be Redeemed
June 1, 2035	\$3,000,000	June 1, 2036	\$3,000,000
December 1, 2035**	3,000,000	December 1, 2036**	10,000,000
**Stated Maturity		**Stated Maturity	

**Series 2019 Term Bonds Maturing
December 1, 2037**

<u>Mandatory Redemption Date</u>	<u>Principal Amount to be Redeemed</u>
June 1, 2037	\$10,000,000
December 1, 2037**	12,000,000

**Stated Maturity

**Series 2019 Term Bonds Maturing
December 1, 2038**

<u>Mandatory Redemption Date</u>	<u>Principal Amount to be Redeemed</u>
June 1, 2038	\$12,000,000
December 1, 2038**	12,000,000

**Stated Maturity

**Series 2019 Term Bonds Maturing
December 1, 2039**

<u>Mandatory Redemption Date</u>	<u>Principal Amount to be Redeemed</u>
June 1, 2039	\$12,000,000
December 1, 2039**	8,000,000

**Stated Maturity

**Series 2019 Term Bonds Maturing
June 1, 2044**

<u>Mandatory Redemption Date</u>	<u>Principal Amount to be Redeemed</u>
June 1, 2040	\$5,000,000
December 1, 2040	5,000,000
June 1, 2041	5,000,000
December 1, 2041	5,000,000
June 1, 2042	5,000,000
December 1, 2042	4,000,000
June 1, 2043	2,000,000
December 1, 2043	2,000,000
June 1, 2044**	2,000,000

**Stated Maturity

The principal amount of the Term Bonds required to be redeemed by operation of the mandatory sinking fund schedules set forth above may be reduced by the principal amount of any Series 2019 Fresh Water Bonds of the applicable maturity which have been theretofore delivered by the Authority to the Trustee for cancellation, or theretofore redeemed (but not through the operation of the mandatory sinking fund) or purchased or determined to be purchased by the Trustee and which have not theretofore been made the basis of such reduction, as provided in the Trust Agreement (the “mandatory sinking fund credit”).

Extraordinary Optional Redemption

For the reasons described below, the Series 2019 Fresh Water Bonds are subject to extraordinary mandatory redemption by the Authority at any time during the ninety-day period following November 19, 2022, in whole or in part, at a redemption price set forth below, plus accrued and unpaid interest to the redemption date. The particular Series 2019 Fresh Water Bonds to be redeemed will be selected from such maturities as shall be determined by the Authority, upon advice from Bond Counsel.

<u>Maturity</u>	<u>Interest Rate</u>	<u>CUSIP</u>	<u>Redemption Price†</u>
12/01/2029	2.000%	67765Q GY6	104.163%
06/01/2030	5.000	67765Q GZ3	123.260
12/01/2030	5.000	67765Q HA7	123.042
06/01/2031	5.000	67765Q HB5	122.750
12/01/2031	5.000	67765Q HC3	122.677
06/01/2032	5.000	67765Q HD1	122.315
12/01/2032	5.000	67765Q HE9	122.243
12/01/2033	5.000	67765Q HF6	122.098
12/01/2034	5.000	67765Q HG4	121.809
12/01/2035	5.000	67765Q HH2	121.450
12/01/2036	5.000	67765Q HJ8	121.164
12/01/2037	5.000	67765Q HK5	120.877
12/01/2038	5.000	67765Q HL3	120.593
12/01/2039	5.000	67765Q HM1	120.379
06/01/2044	5.000	67765Q HN9	119.459

† The redemption prices set forth above are approximately 102% of the accreted value of each maturity on February 1, 2023.

The Tax Increase Prevention and Reconciliation Act of 2005 (the “2006 Tax Act”) imposed additional requirements and conditions for the interest on bonds issued by state and local governments for pooled financing programs to be and remain exempt from federal income taxation. Among those requirements are the following: (i) as of the date of issuance of an issue of bonds, the issuer must reasonably expect (a) that within the 1-year period beginning on the date of issuance (the “First Year Period”), at least 30% of the net proceeds of the issue would be used directly or indirectly to make or finance loans to ultimate borrowers, and (b) that within the 3-year period beginning on the date of issuance (the “Third Year Period”), at least 95% of the net proceeds of the issue would be used directly or indirectly to make or finance loans to ultimate borrowers; and (ii) to the extent that less than 30% of the proceeds of the issue are actually used in the First Year Period, or less than 95% of the proceeds of the issue are actually used in the Third Year Period, the issuer must (a) use an amount of proceeds equal to the excess of 30 percent of the proceeds over the amount actually used to make loans by the close of the First Year Period to redeem outstanding bonds within 90 days after the end the First Year Period, and (b) use an amount of proceeds equal to the excess of 95 percent of the proceeds over the amount actually used to make loans by the close of the Third Year Period to redeem outstanding bonds within 90 days after the end of the Third Year Period.

On the date of issuance of the Series 2019 Fresh Water Bonds, a portion of the proceeds of the Series 2019 Fresh Water Bonds will be used to reimburse the Authority for Fresh Water Loans previously made by the Authority in the amount of not less than an aggregate amount of \$149,304,187.29, which is approximately 79.36% of the total proceeds of Series 2019 Fresh Water Bonds, and which meets the requirements with respect to the First Year Period discussed above. The Authority reasonably expects to lend more than 95% of the proceeds of the Series 2019 Fresh Water Bonds prior to November 19, 2022 (the third anniversary of the Closing Date), but in order to enable the Authority to comply with the potential application of the above-described provision of the 2006 Tax Act to the Series 2019 Fresh Water Bonds in the event those expectations are not met, the Series 2019 Fresh Water Bonds are being made subject to extraordinary mandatory redemption as described above. The Series 2019 Fresh Water Bonds will be subject to extraordinary mandatory redemption only during the ninety-day period following November 19, 2022.

The Authority anticipates that substantially all of the proceeds of the Series 2019 Fresh Water Bonds will be encumbered for Fresh Water Loans on the Closing Date. The Authority currently monitors, and will continue to monitor projected Fresh Water Loan disbursements on a weekly basis and has the ability to substitute Fresh Water Loans which have a faster disbursement schedule to help achieve compliance with the 2006 Tax Act. In the numerous bond and note issues that the Authority has completed for its revolving loan programs subject to the 2006 Tax Act's requirements, the Authority has complied with all expenditure requirements without having to redeem any outstanding obligations for that purpose.

Notice of Redemption

Unless waived by any Holder of Series 2019 Fresh Water Bonds to be redeemed, official notice of any redemption will be given by the Registrar on behalf of the Authority by mailing a copy of an official redemption notice by registered or certified mail at least 30 days and not more than 60 days prior to the date fixed for redemption to the Holder of the Series 2019 Fresh Water Bonds or Series 2019 Fresh Water Bonds to be redeemed at the address shown on the Register or at such other address as is furnished in writing by such Holder to the Registrar.

All official notices of redemption will be dated and will state:

- (1) the redemption date,

- (2) the redemption price,
- (3) if less than all outstanding Series 2019 Fresh Water Bonds are to be redeemed, the identification (and, in the case of partial redemption, the respective principal amounts) of the Series 2019 Fresh Water Bonds to be redeemed,
- (4) that on the redemption date the redemption price will become due and payable upon each such Series 2019 Fresh Water Bonds or portion thereof called for redemption, and that interest thereon shall cease to accrue from and after said date, and
- (5) the place where such Series 2019 Fresh Water Bonds are to be surrendered for payment of the redemption price, which place of payment shall be the principal office of the Registrar.

Prior to any redemption date, the Authority will deposit with the Registrar an amount of money sufficient to pay the redemption price of all the Series 2019 Fresh Water Bonds or portions of Series 2019 Fresh Water Bonds which are to be redeemed on that date.

Official notice of redemption having been given as described above, the Series 2019 Fresh Water Bonds or portions of the Series 2019 Fresh Water Bonds so to be redeemed will, on the redemption date, become due and payable at the redemption price therein specified, and from and after such date (unless the Authority shall default in the payment of the redemption price) such Series 2019 Fresh Water Bonds or portions of Series 2019 Fresh Water Bonds thereof will cease to bear interest. Upon surrender of such Series 2019 Fresh Water Bonds for redemption in accordance with the notice, such Series 2019 Fresh Water Bonds will be paid by the Registrar at the redemption price. Installments of interest due on or prior to the redemption date will be payable as provided for in the Trust Agreement for payment of interest. Upon surrender for any partial redemption of any Series 2019 Fresh Water Bonds, there will be prepared for the Holder a new Series 2019 Fresh Water Bonds. Series 2019 Fresh Water Bonds which have been redeemed will be canceled and destroyed by the Registrar and shall not be reissued.

In the case of an optional redemption, the notice may state (i) that it is conditioned upon the deposit of moneys, in an amount equal to the amount necessary to effect the redemption, with the Registrar no later than the redemption date, or (ii) that the Authority retains the right to rescind such notice at any time prior to the scheduled redemption date if the Authority delivers a certificate to the Registrar instructing the Registrar to rescind the redemption notice, and such notice and optional redemption shall be of no effect if such moneys are not so deposited or if the notice is rescinded as described herein. The Registrar will give prompt notice of such rescission to the affected Holders.

Upon the payment of the redemption price of the Series 2019 Fresh Water Bonds being redeemed, each check or other transfer of funds issued for such purpose will bear the CUSIP number identifying, by issue and maturity, the Series 2019 Fresh Water Bonds being redeemed with the proceeds of such check or other transfer.

If less than all outstanding Series 2019 Fresh Water Bonds are called for redemption at one time, they will be called in the order determined by the Authority. If less than all of the Series 2019 Fresh Water Bonds of a single maturity are to be redeemed, the selection of Series 2019 Fresh Water Bonds of a single maturity and of the portions thereof in amounts of \$5,000 or any integral multiple thereof, will be made by lot by the Trustee in any manner which the Trustee may determine.

In the case of a partial redemption of Series 2019 Fresh Water Bonds by lot when Series 2019 Fresh Water Bonds of denominations greater than \$5,000 are then outstanding, each \$5,000 unit of face value of principal thereof will be treated as though it were a separate Series 2019 Fresh Water Bonds of

the denomination of \$5,000. If it is determined that one or more, but not all of the \$5,000 units of face value represented by a Series 2019 Fresh Water Bonds are to be called for redemption, then upon notice of redemption of a \$5,000 unit or units, the Holder of that Series 2019 Fresh Water Bonds will surrender the Series 2019 Fresh Water Bonds to the Trustee or other Paying Agent (a) for payment of the redemption price of the \$5,000 unit or units of face value called for redemption (including without limitation, the interest accrued to the date fixed for redemption and any premium), and (b) for issuance, without charge to the Holder thereof, of a Series 2019 Fresh Water Bonds or Series 2019 Fresh Water Bonds of the same series, of any authorized denomination or denominations in an aggregate principal amount equal to the unmatured and unredeemed portion of, and bearing interest at the same rate and maturing on the same date as, the Series 2019 Fresh Water Bonds surrendered

So long as the Series 2019 Fresh Water Bonds are in book entry form, any notice of redemption will be sent by registered mail, certified mail or overnight delivery service, in each case with return receipt requested. Any failure of DTC to notify any participant of DTC, or of any such participant to notify the book entry interest owner (under the Book Entry Only System) of any such notice, will not affect the validity of the respective redemption of the Series 2019 Fresh Water Bonds. If less than all the Series 2019 Fresh Water Bonds of a single maturity are to be redeemed, the selection of the Series 2019 Fresh Water Bonds or portions thereof in amounts of \$5,000 or in an integral multiple thereof, will, so long as the Series 2019 Fresh Water Bonds remain in book entry form be made by DTC (or any successor securities depository) and the participants of DTC through a lottery process, and otherwise will be made at random by the Trustee in such manner as the Trustee in its discretion may determine.

THE AUTHORITY

In 1968, the Ohio General Assembly enacted Chapter 6121, Ohio Revised Code, creating the Authority. The Authority is a body both corporate and politic, constituting an agency and instrumentality of the State and performing essential governmental functions and public purposes of the State. The Authority consists of eight members. Five members of the Authority, no more than three of which shall be members of the same political party, are appointed by the Governor for eight-year, staggered terms, with the advice and consent of the State Senate. In addition, the Director of Natural Resources, the Director of Environmental Protection and the Director of Development Services Agency of the State are members *ex-officio* of the Authority, entitled to vote and participate in Authority activities on an equal basis with the other Authority members. The Chairperson and Vice Chairperson of the Authority are elected from among the appointed members. The current members, officers, and staff of the Authority are identified on the page following the inside cover page of this Official Statement and in the section captioned "THE AUTHORITY - Executive Staff of the Authority." The Authority's office is in Columbus, Ohio.

Powers of the Authority

The Authority has broad statutory authority to carry out its governmental functions, including the power to acquire public or private lands by the exercise of the right of condemnation; to make and enter into all contracts and agreements and execute all instruments necessary or incidental to the carrying out of its powers; to issue revenue bonds and notes of the State; to charge, alter, and collect rentals and other charges for the use of services of any water development project; and to do all acts necessary or proper to carry out the powers expressly granted in Chapters 6121 and 6123 of the Ohio Revised Code. The Authority and the Local Governmental Agencies are authorized to cooperate in the acquisition, construction and financing of projects, and to enter into agreements which may be necessary to effectuate such cooperation.

Executive Staff of the Authority

Ken J. Heigel, Executive Director. Mr. Heigel became Executive Director to the Authority in August 2019. Previously, Mr. Heigel had served as Assistant Executive Director since January 2018, Chief Program Officer to the Authority since 2015, and as the Chief Engineer to the Authority from 2003 to 2015. Prior to that, Mr. Heigel worked for 13 years in private consulting specializing in water distribution, water treatment, wastewater collection, and wastewater treatment. From 1987 to 1990 he worked for a general contractor. Mr. Heigel has a Bachelor's Degree in Civil Engineering and a Master's Degree in Business Administration from the University of Dayton. He is a licensed professional engineer in the State of Ohio.

Todd E. Skruck, Chief Financial Officer of Debt, Investments and Fund Management. Mr. Skruck became Chief Financial Officer of Debt, Investment and Fund Management in 2018. From 2005 to 2017, he served as Senior Accounting Manager for the Authority. Prior to 2005, he was an Audit Manager with the Auditor of the State of Ohio's office. He received his license as a certified public accountant in 2007. He earned a Bachelor of Science in Business Administration degree in Accounting from The Ohio State University.

Robyn McComb, Chief Financial Officer of Loans and Operation. Ms. McComb became Chief Financial Officer of Loans and Operations in 2018. Previously, Ms. McComb had served as a Senior Accounting Manager to the Authority since 2012 and Accounting Manager to the Authority from 1999 to 2012. Ms. McComb has been employed by the Authority since 1997. Prior to 1997, she was employed with a national public accounting firm. She received her license as a certified public accountant in 2002. She earned a Bachelor of Science in Accounting from The Pennsylvania State University.

Daniel P. Gill, Chief Engineer. Mr. Gill became Chief Engineer in January 2019. Previously, Mr. Gill served as Engineer to the Authority since 2014. Prior to that, Mr. Gill worked for 8 years at Ohio EPA specializing in wastewater collection, wastewater treatment, combined sewer overflows and NPDES permitting. Mr. Gill has a Bachelor's Degree in Biological Engineering from the Ohio State University and a Master's Degree in Geology from the University of New Orleans. He is a licensed professional engineer in the State of Ohio.

PROGRAMS OF THE AUTHORITY

Fresh Water and Related Programs

In 1968, the electors of the State adopted a new section of the Ohio Constitution, Article VIII, Section 2i, which authorized the issuance of general obligation bonds and notes and revenue bonds, notes or other obligations of the State for the purpose, among others, of abating water pollution. Following the issuance of general obligation bonds by the State pursuant to this new constitutional authority, the Ohio General Assembly appropriated to the Authority \$100,000,000 of the proceeds thereof. Pursuant to the provisions of Section 2i of Article VIII of the Ohio Constitution and in accordance with the provisions of Chapter 6121, as amended from time to time, the Authority has issued bonds and notes for the purpose of making loans to Local Governmental Agencies to pay certain costs of projects which abate water pollution.

Since its creation in 1968, the Authority has created and operated programs that have provided funding to Local Governmental Agencies for the cost of planning, designing, acquiring or constructing wastewater treatment facilities, interceptor sewer facilities, sewage collection facilities and water supply and distribution facilities. The Authority has issued bonds and notes in series under several different (but substantially similar) programs to provide a continuing financing source for Local Governmental

Agencies to fund the costs of such projects. In order of their creation and with their years of creation indicated parenthetically, these programs were the Pollution Abatement Program (1969), the Clean Water Program (1975), the Safe Water Program (1980), the Pure Water Program (1985) (collectively “Prior Programs”). The current Fresh Water Program was established in 1992. The Authority funded a total of 696 loans aggregating approximately \$2.2 billion under the Pollution Abatement, Clean Water, Safe Water and Pure Water Programs. As of August 31, 2019, under the Fresh Water Program the Authority had funded 1,947 loans aggregating approximately \$2,502,267,135 and had approximately \$90,069,026 available for additional loans.

Other Bond-Funded Programs of the Authority

The following information describes the current programs of the Authority, other than the Fresh Water and related programs. None of such programs, and none of the other Revenue Bonds and Notes described below, are related in any way to the issuance of the Fresh Water Bonds or the security therefor.

Water Pollution Control Loan Fund. Under the Clean Water Act, the United States Environmental Protection Agency (the “USEPA”) is authorized to make capitalization grants through the Environmental Protection Agency Automated Clearing House (“EPA-ACH System”) to states for deposit in state water pollution control revolving loan funds such as the State’s Water Pollution Control Loan Fund (the “WPCLF”). From a capitalization grant, the State may provide loans and other forms of financial assistance, but not grants, to Local Governmental Agencies for the construction of publicly-owned wastewater treatment facilities, the implementation of nonpoint source management programs and the development and implementation of estuary conservation and management programs.

The WPCLF was established under Section 6111.036 of the Ohio Revised Code on May 26, 1989. That Section authorizes the Director of the OEPA to develop and implement the WPCLF in accordance with the 1987 amendments to the Clean Water Act and provides that any moneys deposited in the WPCLF shall be held in trust by the Authority. The Authority assists the Director of OEPA in managing and administering certain aspects of the WPCLF.

The State must agree to match the funds provided under the capitalization grant with a deposit into the WPCLF of an amount equaling at least 20% of the total amount of all federal grant payments under the EPA-ACH System (the “WPCLF State Match”). Historically, WPCLF State Matches have been provided by the Authority from net proceeds of its various Water Pollution Control Loan Fund Revenue Bonds, State Match Series. Bonds in the State Match Series were payable from the interest portion of the payments of WPCLF loans (the “State Match Portion”). The Authority then leveraged the principal component of WPCLF loans through the issuance of its Water Pollution Control Loan Fund Revenue Bonds, Water Quality Series (the “Leveraged Portion”).

In May 2014, the Authority created the WPCLF Bond Program, which is subordinate to the State Match Series and the Water Quality Series. The WPCLF Bond Program allows the authority to allocate, as it deems necessary, proceeds of a series of WPCLF Bonds to the State Match Portion and the Leveraged Portion. There are no bonds in the State Match Series outstanding pursuant to the Trust Agreement authorizing such bonds (the “State Match Bond Trust Agreement”); therefore, the State Match Bond Trust Agreement was defeased and released according to its terms. Several bonds in the Water Quality Series remain outstanding, but the Authority has covenanted not to issue any additional Water Quality Series except to provide funds to refund previously issued and then outstanding bonds in the Water Quality Series. Consequently, going forward the Authority will only utilize the WPCLF Bond Program with respect to the WPCLF.

Drinking Water State Revolving Fund. In the Safe Drinking Water Act Amendments of 1996 (the “Amendments”), the United States Congress authorized the Administrator of the USEPA to create a drinking water state revolving fund (“DWSRF”) program to assist public water systems to finance the costs of infrastructure needed to achieve or maintain compliance with the Safe Drinking Water Act requirements and to protect public health. The Administrator awards capitalization grants to the states, which in turn use the grants and their 20% state match funds to provide low cost loans and other types of assistance to eligible drinking water systems.

Under legislation effective November 26, 1997, the State’s General Assembly created an Ohio DWSRF, designated the “Drinking Water Assistance Fund” (the “DWAF”). The DWAF is administered by the Director of OEPA through the OEPA’s Division of Drinking and Groundwaters and the Division of Environmental and Financial Assistance with the assistance of the Authority. Section 6109.22 of the Ohio Revised Code authorizes the Director of OEPA to administer the DWAF in a manner consistent with the Safe Drinking Water Act and to receive and disburse federal capitalization grant funds for the purposes of that Fund.

In order to receive the federal capitalization grant funds, the State must agree to match the federal funds with a deposit into the DWAF of an amount equaling at least 20% of the total amount of all federal grant payments under the EPA-ACH System (the “DWAF State Match”). The DWAF State Match has been funded by a combination of Authority contributions and proceeds of Drinking Water Assistance Fund Revenue Bonds, State Match Series. The Authority has leveraged the principal component of DWAF loans through the issuance of its Drinking Water Assistance Fund Revenue Bonds, Leverage Series.

Relationship of the Fresh Water Program to the State Revolving Funds. The same Local Governmental Agencies are eligible, if certain conditions are met, to apply for loans from the Fresh Water Program, the WPCLF and the DWAF. As previously noted, the WPCLF is limited to wastewater treatment works, nonpoint source pollution management, and estuary conservation management programs, and the DWAF is generally limited to drinking water systems. The Fresh Water Program provides financing for wastewater treatment works, water supply facilities, water distribution facilities, and appurtenant water facilities. The Authority administers the WPCLF and the DWAF jointly with OEPA, and the Director of OEPA is responsible for determining the priorities for funding and the environmental review and enforcement of any environmental conditions for projects funded from the WPCLF or the DWAF. The Fresh Water Program is administered solely by the Authority. The time to complete the WPCLF and DWAF application process is generally longer than the time required to complete the process for the Fresh Water Program.

The interest rate for a WPCLF or DWAF loan is below market and below the rate for a comparable loan under the Fresh Water Program. Currently, the WPCLF and DWAF standard interest rate is set monthly and is calculated by taking the average of (i) the MMD 20 Year GO rate for the most recent eight-week period and subtracting 95 basis points from that average for loans with terms of 5 to 20 years, (ii) the MMD 30 Year GO rate for the most recent eight-week period and subtracting 100 basis points from that average for loans with a term of 21 to 30 years, and (iii) with respect to WPCLF loans, the MMD 30 Year GO rate for the most recent eight week period and subtracting 85 basis point from that average for loans with terms of 31 to 45 years. The WPCLF, the DWAF offer reductions from their standard interest rates if certain conditions are met.

Neither WPCLF loans, DWAF loans, nor Fresh Water Program loans may be prepaid prior to maturity. Under the WPCLF and DWAF an applicant may select a payment schedule ranging from 5 to 20 years and under the Fresh Water Program the applicant may select a payment schedule ranging from 5 to 30 years.

Community Assistance Program. The Authority created the Community Assistance Program in 1983 to provide a financing alternative for Local Governmental Agencies undertaking wastewater and water supply projects for which financing at a market rate of interest would cause undue hardship to the users of the Local Governmental Agency's utility system. Upon determination that a Local Governmental Agency falls within that category, the Local Governmental Agency may enter into a cooperative agreement with the Authority providing for a loan that is repayable over 20 to 30 years, as determined by the Authority at a contract interest rate of 2% per annum or less if the Local Governmental Agency qualifies for certain discounts. This is a self-contained program with loan repayments being credited to the Community Assistance Program. The Authority issued bonds in October 1997 in an aggregate principal amount of \$51,830,000, in December 2003 in an aggregate principal amount of \$53,755,000 and in July of 2007 in the aggregate principal amount of \$24,500,000, and in July of 2010 in the aggregate principal amount of \$29,515,000 to provide additional funds for loans under the Community Assistance Program. The Authority has not issued any additional bonds for the purpose of providing additional funds for additional loans under the Community Assistance Program since 2010. The repayment of existing Community Assistance Program loans provide the source of repayment for these bonds and are pledged to secure such bonds. As of August 31, 2019 the Authority had 297 loans outstanding in the aggregate principal amount of approximately \$145,278,159.

The Rural Development Loan Advance Program. The Authority established the RD Loan Advance Program in January 1996 for the purpose of making loans to Local Governmental Agencies that have received a commitment from RD to provide "Federal Assistance" (i.e., financial assistance in the form of a grant or a loan) for the planning, design, acquisition, construction or improvement of water or wastewater facilities. The purpose of the loans is to enable the Local Governmental Agencies to finance the costs of the projects pending their receipt of the proceeds of the Federal Assistance. Notes issued under the program are paid from the payments made or assigned to the Authority by the Local Governmental Agencies to which the Authority had made loans under the Program, including the Federal Assistance assigned by each such Local Governmental Agency to the Authority.

Other Revenue Bonds and Notes. To assist private industry located in the State in creating or preserving jobs and employment opportunities and in controlling air, water and thermal pollution and solid waste, and in making a safe water supply available to the public, the Authority has issued and may continue to issue revenue bonds and notes, the proceeds of which are used to finance costs of pollution control, solid waste disposal, water supply and energy resource development facilities. Payment of the principal of and interest and any premium on such revenue bonds and notes is made by the user of the facilities pursuant to a lease, loan agreement, conditional or installment sale agreement or other financing document. The Authority has no obligation to pay the debt service on such revenue bonds from any other revenues.

Non-Bond-Funded Programs of the Authority

The Authority has established the following programs and funded them with available revenues other than the proceeds of bonds or other debt obligations. The payments of the principal of and interest on the loans that the Authority makes under these programs are not pledged to the payment of any outstanding bonds of the Authority. The Authority has the discretion to use available revenues to provide additional funding for these programs and to transfer any unencumbered balance currently committed to any of these programs to other programs or to apply them to any other lawful purpose, including, without limitation, the payment of bond service charges on any outstanding bonds or other debt obligations of the Authority or the funding of reserve funds for such bond service charges.

Solid Waste Program. In 1991, the Authority adopted the Solid Waste Financing Program to provide financing for Local Governmental Agencies to implement their solid waste management plans.

The Authority funded the program with initial seed money of \$15,000,000. Additional moneys have been deposited from time to time. Solid waste projects which may be eligible for financing include materials recovery and composting facilities, transfer stations, landfills and incinerators.

Local Economic Development Loan Program. In June 1995, the Authority established its Local Economic Development Loan Program for the purpose of making loans to Local Governmental Agencies for water and wastewater improvement projects that are recommended and requested by the Ohio Development Services Agency based upon expected economic development benefits. The aggregate amount of any loans that may be made under the Program to any Local Governmental Agency for any project and the term of Program loans is based upon a request to do so from the Ohio Development Services Agency. The rate of interest on Program loans is also to be based upon the recommendation of the Ohio Development Services Agency.

Brownfield Program. In 1994, the Ohio General Assembly enacted legislation that establishes the State's Voluntary Action Program to encourage and facilitate the remediation of property contaminated by hazardous substances or petroleum. Among other things, the legislation confers on the Authority the power to make loans to finance "voluntary actions": i.e., measures that may be taken to identify and address potential sources of such property contamination. The Authority has established a Brownfield Fund for that purpose.

Research and Development Grant Program. Pursuant to its power to engage in research and development with respect to wastewater, water management facilities, solid waste facilities, and energy resource development facilities, the Authority has established a grant program for qualifying research and development programs. The eligible participants are Local Governmental Agencies which perform research or development. Projects for which grants are awarded must be of such a nature that the benefits to be derived fulfill a general need in Ohio within the scope of the powers of the Authority. Grants are subject to available funds and recommendation by the director of a department of state government which is responsible for oversight. Priority is given to projects that have statewide environmental and/or natural resource application and grantees must submit a final report.

Village Capital Improvement Fund Program. In 1996, the Authority instituted the Village Capital Improvement Fund ("VCIF") Program to provide loans of up to \$25,000 for planning and \$50,000 for design of water supply and wastewater treatment projects. The VCIF is administered by the Authority jointly with the OEPA and is available only to villages, which are municipal corporations having a population of 5,000 or less. To qualify for a loan from the VCIF, an applicant must meet certain eligibility and priority criteria established for the Program. Repayment is made over a period up to ten years in equal annual payments.

Emergency Relief. In response to serious flood damage that occurred in the spring of 1997, the Authority created the Emergency Relief Fund and funded it with \$5,000,000 from surplus funds. Local Governmental Agencies can receive relief for two semiannual loan repayments if they are in a federal- or state-declared disaster area and have incurred loss or damage to their wastewater or water treatment facilities, equipment, or water and sewer lines.

Dam Safety Linked Deposit Program. To provide a source of advantageous financing for repairs and improvements to privately owned dams in the State, the Authority created its Dam Safety Linked Deposit Program in January 1999. Under the program, the Authority agrees to invest money in certificates of deposit from participating banks and to accept a rate of interest on its investment that is three points less than would otherwise be available for that investment, but in no event less than 3%. The participating bank in turn agrees to lend the invested money to a dam owner to finance dam improvements or repairs. To be eligible for a Program loan, the dam owner must demonstrate that the

dam improvement or repair that the owner proposes to make has been ordered and approved by the Ohio Department of Natural Resources. The Authority requires that the certificates of deposit that it purchases under the Program must be federally insured or, to the extent not insured, collateralized by eligible collateral securities. The obligation of the participating banks to pay the principal of and interest on the certificates of deposit is in no way contingent on the payment by the dam owner of the owner's loan to the bank, for which the Authority assumes no responsibility.

County Coastal Erosion Loan Program. In 1999, the Ohio General Assembly enacted legislation to create a coastal erosion control loan program. Under Ohio Revised Code Section 1507.071, enacted by that legislation, counties may provide financial assistance to property owners for the construction of erosion control structures in areas defined by statute as coastal erosion areas and may obtain loans from the Authority to provide such assistance and has deposited \$10,000,000 in the Fund for that purpose. Eight counties with Lake Erie shorelines contain coastal erosion areas and are eligible to receive loans under the Program.

Emergency Relief Program. In 1997 the Authority established its Emergency Relief Program for the purpose of providing short-term relief from OWDA loan repayments so communities can use their repayment funds to recover from damages to their water, wastewater and solid waste infrastructure resulting from a federal or state declared emergency. A maximum of two semi-annual OWDA loan repayments can be made on behalf of qualifying communities for damages due to a declared federal or state disaster.

Alternative Stormwater Infrastructure Loan Program. In 2010 the Authority established its Alternative Stormwater Infrastructure Loan Program for the purpose of providing financing for Alternative Stormwater Infrastructure that lessens the impact of stormwater events on sewer systems through direct loans which are recommended and requested by the Ohio Department of Development based upon expected economic development and environmental benefits. The aggregate amount of any loans that may be made under the Program to any Local Governmental Agency for any project and the term of Program loans is based upon a request to do so from the Ohio Department of Development. The rate of interest on Program loans is also to be based upon the recommendation of the Ohio Department of Development.

Un-Sewered Area Planning Loan Program. In 2009 the Authority established its Un-Sewered Area Planning Loan Program for the purpose of providing funding for planning and design of a publicly owned sewer system for un-sewered areas that have failing on-lot sanitary systems. Funding will be approved based upon the availability of funds using the following priority system: Communities that have received Findings & Orders from Ohio EPA, Communities that have been referred to Ohio EPA Division of Surface Water, and Communities that have a documented health risk.

Un-Sewered Area Assistance Program. In 2013 the Authority established its Un-Sewered Area Assistance Program for the purpose of providing grants for construction of a publicly owned sewer system for un-sewered areas that have failing on-lot sanitary systems. Grants will be approved based upon the availability of funds using the following priority system: Communities that have received Findings & Orders from Ohio EPA, Communities that have been referred to Ohio EPA Division of Surface Water, and Communities that have a documented health risk.

ELIGIBILITY UNDER OHIO LAW FOR INVESTMENT AND AS SECURITY FOR THE DEPOSIT OF PUBLIC MONEY

To the extent that the subject matter is governed by Ohio law, and subject to any applicable limitations under other provisions of Ohio law, the Series 2019 Fresh Water Bonds under the provisions of Section 6121.15, Ohio Revised Code, are lawful investments of banks, societies for savings, savings and loan associations, deposit guarantee associations, trust companies, trustees, fiduciaries, insurance companies, including domestic for life and domestic not for life, trustees or other officers having charge of sinking and bond retirement or other special funds of political subdivisions and taxing districts of the State, the commissioners of the Sinking Fund of the State, the administrator of workers' compensation, subject to the approval of the workers' compensation board, the state teachers retirement system, the public employees retirement system, the public school employees retirement system, and the police and firemen's disability and pension fund, and are acceptable as security for the deposit for public moneys.

LITIGATION

At the time of original delivery of the Series 2019 Fresh Water Bonds, the Authority will provide a certificate stating that, to the knowledge of the signers thereof, there is no litigation or administrative action or proceeding pending or threatened (i) restraining or enjoining, or seeking to restrain or enjoin, the issuance and delivery of the Series 2019 Fresh Water Bonds, (ii) affecting the Trust Agreement, (iii) materially affecting the payment to or by the Authority of the Revenues, funds or moneys pledged for the payment of the Series 2019 Fresh Water Bonds, or (iv) challenging the right of the Authority to enter into Cooperative Agreements with Local Governmental Agencies.

The Authority is a party to various legal proceedings generally related to its operations but the proceedings currently pending will not, in the opinion of counsel to the Authority, have a material adverse effect on the security of the Series 2019 Fresh Water Bonds, including charging and collecting of the Revenues.

TAX MATTERS

In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law: (i) interest on the Series 2019 Fresh Water Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the Code), and is not an item of tax preference for purposes of the federal alternative minimum tax; and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Series 2019 Fresh Water Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Bond Counsel expresses no opinion as to any other tax consequences regarding the Series 2019 Fresh Water Bonds.

The opinion on federal tax matters will be based on and will assume the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the Authority contained in the transcript of proceedings and that are intended to evidence and assure the foregoing, including that the Series 2019 Fresh Water Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. Bond Counsel will not independently verify the accuracy of the Authority's certifications and representations or the continuing compliance with the Authority's covenants.

The opinion of Bond Counsel is based on current legal authority and covers certain matters not directly addressed by such authority. It represents Bond Counsel's legal judgment as to exclusion of

interest on the Series 2019 Fresh Water Bonds from gross income for federal income tax purposes but is not a guaranty of that conclusion. The opinion is not binding on the Internal Revenue Service (IRS) or any court. Bond Counsel expresses no opinion about (i) the effect of future changes in the Code and the applicable regulations under the Code or (ii) the interpretation and the enforcement of the Code or those regulations by the IRS.

The Code prescribes a number of qualifications and conditions for the interest on state and local government obligations to be and to remain excluded from gross income for federal income tax purposes, some of which require future or continued compliance after issuance of the obligations. Noncompliance with these requirements by the Authority may cause loss of such status and result in the interest on the Series 2019 Fresh Water Bonds being included in gross income for federal income tax purposes retroactively to the date of issuance of the Series 2019 Fresh Water Bonds. The Authority has covenanted to take the actions required of it for the interest on the Series 2019 Fresh Water Bonds to be and to remain excluded from gross income for federal income tax purposes, and not to take any actions that would adversely affect that exclusion. After the date of issuance of the Series 2019 Fresh Water Bonds, Bond Counsel will not undertake to determine (or to so inform any person) whether any actions taken or not taken, or any events occurring or not occurring, or any other matters coming to Bond Counsel's attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the Series 2019 Fresh Water Bonds or the market value of the Series 2019 Fresh Water Bonds.

Interest on the Series 2019 Fresh Water Bonds may be subject to a federal branch profits tax imposed on certain foreign corporations doing business in the United States and to a federal tax imposed on excess net passive income of certain S corporations. Under the Code, the exclusion of interest from gross income for federal income tax purposes may have certain adverse federal income tax consequences on items of income, deduction or credit for certain taxpayers, including financial institutions, certain insurance companies, recipients of Social Security and Railroad Retirement benefits, those that are deemed to incur or continue indebtedness to acquire or carry tax-exempt obligations, and individuals otherwise eligible for the earned income tax credit. The applicability and extent of these and other tax consequences will depend upon the particular tax status or other tax items of the owner of the Series 2019 Fresh Water Bonds. Bond Counsel will express no opinion regarding those consequences.

Payments of interest on tax-exempt obligations, including the Series 2019 Fresh Water Bonds, are generally subject to IRS Form 1099-INT information reporting requirements. If a Series 2019 Fresh Water Bond owner is subject to backup withholding under those requirements, then payments of interest will also be subject to backup withholding. Those requirements do not affect the exclusion of such interest from gross income for federal income tax purposes.

Bond Counsel's engagement with respect to the Series 2019 Fresh Water Bonds ends with the issuance of the Series 2019 Fresh Water Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the Authority or the owners of the Series 2019 Fresh Water Bonds regarding the tax status of interest thereon in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the Series 2019 Fresh Water Bonds, under current IRS procedures, the IRS will treat the Authority as the taxpayer and the beneficial owners of the Series 2019 Fresh Water Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit. Any action of the IRS, including but not limited to selection of the Series 2019 Fresh Water Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the market value of the Series 2019 Fresh Water Bonds.

Prospective purchasers of the Series 2019 Fresh Water Bonds upon their original issuance at prices other than the respective prices indicated on the inside cover of this Official Statement, and prospective purchasers of the Series 2019 Fresh Water Bonds at other than their original issuance, should consult their own tax advisors regarding other tax considerations such as the consequences of market discount, as to all of which Bond Counsel expresses no opinion.

Risk of Future Legislative Changes and/or Court Decisions

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the Series 2019 Fresh Water Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the Series 2019 Fresh Water Bonds will not have an adverse effect on the tax status of interest or other income on the Series 2019 Fresh Water Bonds or the market value or marketability of the Series 2019 Fresh Water Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the Series 2019 Fresh Water Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

For example, the recent federal tax legislation that was enacted on December 22, 2017 reduces corporate tax rates, modifies individual tax rates, eliminates many deductions, repeals the corporate alternative minimum tax and eliminates the tax-exempt advance refunding of tax-exempt bonds, among other things. Additionally, investors in the Series 2019 Fresh Water Bonds should be aware that future legislative actions may increase, reduce or otherwise change (including retroactively) the financial benefits and the treatment of all or a portion of the interest on the Series 2019 Fresh Water Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the Series 2019 Fresh Water Bonds may be affected and the ability of holders to sell their Series 2019 Fresh Water Bonds in the secondary market may be reduced. The Series 2019 Fresh Water Bonds are not subject to special mandatory redemption, and the interest rates on the Series 2019 Fresh Water Bonds are not subject to adjustment, in the event of any such change in the tax treatment of interest on the Series 2019 Fresh Water Bonds.

Investors should consult their own financial and tax advisors to analyze the importance of these risks.

Original Issue Premium

All of the Series 2019 Fresh Water Bonds (“Premium Series 2019 Fresh Water Bonds”) were offered and sold to the public at a price in excess of their stated redemption price at maturity (the principal amount). That excess constitutes bond premium. For federal income tax purposes, bond premium is amortized over the period to maturity of a Premium Series 2019 Fresh Water Bond, based on the yield to maturity of that Premium Series 2019 Fresh Water Bond (or, in the case of a Premium Series 2019 Fresh Water Bond callable prior to its stated maturity, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on that Premium Series 2019 Fresh Water Bond), compounded semiannually. No portion of that Series 2019 Fresh Water Bond premium is deductible by the owner of a Premium Series 2019 Fresh Water Bond. For purposes of determining the owner’s gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a Premium Series 2019 Fresh Water Bond, the owner’s tax basis in the Premium Series 2019 Fresh Water Bond is reduced by the amount of Series 2019 Fresh Water Bond premium that is amortized during the period of ownership. As a result, an owner may realize taxable gain

for federal income tax purposes from the sale or other disposition of a Premium Series 2019 Fresh Water Bond for an amount equal to or less than the amount paid by the owner for that Premium Series 2019 Fresh Water Bond. A purchaser of a Premium Series 2019 Fresh Water Bond in the initial public offering who holds that Premium Series 2019 Fresh Water Bond to maturity (or, in the case of a callable Premium Series 2019 Fresh Water Bond, to its earlier call date that results in the lowest yield on that Premium Series 2019 Fresh Water Bond) will realize no gain or loss upon the retirement of that Premium Series 2019 Fresh Water Bond.

Owners of Premium Series 2019 Fresh Water Bonds should consult their own tax advisors as to the determination for federal income tax purposes of the existence of bond premium, the determination for federal income tax purposes of the amount of bond premium properly amortizable in any period with respect to the Premium Series 2019 Fresh Water Bonds, other federal tax consequences in respect of bond premium, and the treatment of bond premium for purposes of state and local taxes on, or based on, income.

LEGAL MATTERS

Legal matters incident to the issuance of the Series 2019 Fresh Water Bonds and with regard to their tax-exempt status (See “TAX MATTERS”) are subject to the legal opinion of Squire Patton Boggs (US) LLP, Bond Counsel. The signed legal opinion dated as of, and premised on the transcript of proceedings examined and the law in effect on, the date of original delivery of the Series 2019 Fresh Water Bonds, will be delivered to the Underwriters at the time of that original delivery. The text of the opinion will be printed on or appended to the Series 2019 Fresh Water Bonds.

The proposed text of the legal opinion is included herein as Appendix G. The legal opinion to be delivered may vary from that text if necessary to reflect facts and law on the date of delivery. That opinion will speak only as of its date, and subsequent distribution of it by recirculation of the Official Statement or otherwise shall create no implication that Bond Counsel has reviewed or expresses any opinion concerning any of the matters referred to in its opinion subsequent to its date.

Certain legal matters will be passed upon for the Underwriters by their counsel, Bricker & Eckler LLP and for the Authority by its counsel, Benesch, Friedlander, Coplan and Aronoff LLP, general counsel to the Authority.

UNDERWRITING

The Underwriters, acting through Loop Capital Markets LLC as representative (the “Representative”), have agreed, subject to certain conditions, to purchase all, but not less than all of the Series 2019 Fresh Water Bonds from the Authority at a price of \$188,131,314.73 (consisting of the par amount of \$150,000,000.00, plus original issue premium of \$38,757,260.00, less Underwriters’ discount of \$625,945.27). The Series 2019 Fresh Water Bonds may be offered and sold to certain dealers and others at prices less than the public offering prices set forth on the cover page of this Official Statement and such offering prices may be changed from time to time.

The obligations of the Underwriters are subject to certain terms and conditions set forth in the Bond Purchase Agreement dated November 5, 2019, between the Authority and the Representative, including the approval of certain legal matters by Bond Counsel, the existence of no material adverse change (not in the ordinary course of business) in the condition of the Authority from that set forth in this Official Statement and the Appendices hereto and certain other conditions. The Agreement provides that the Underwriters will not be obligated to purchase the Series 2019 Fresh Water Bonds if all the Series 2019 Fresh Water Bonds are not available for purchase and requires the Authority to indemnify the

Underwriters against losses, claims, damages and liabilities arising out of any incorrect or incomplete statement or information contained in this Official Statement pertaining to the Authority and other matters.

In the ordinary course of its various business activities, UBS Financial Services Inc. and its affiliates, officers, directors, and employees may purchase, sell or hold a broad array of investments and may actively trade securities, derivatives, loans, commodities, currencies, credit default swaps, and other financial instruments for their own account and for the accounts of customers. Such investment and trading activities may involve or relate to assets, securities and/or instruments of the Issuer (whether directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the Issuer. UBS Financial Services Inc. and its affiliates also may communicate independent investment recommendations, market advice or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and at any time may hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Drexel Hamilton, LLC, has entered into a distribution agreement with Multi-Bank Securities, Inc., (“MBS”). Under this distribution agreement, Drexel Hamilton may share with MBS a negotiated portion of the selling concession applicable to any Bonds that MBS sells.

CONTINUING DISCLOSURE

The Authority has entered into a Continuing Disclosure Agreement with the Trustee dated as of the date of delivery of the Series 2019 Fresh Water Bonds to the Underwriters (the “Continuing Disclosure Agreement”) for the benefit of Holders of the Series 2019 Fresh Water Bonds to provide certain financial and operating information (the “Annual Report”) not later than the June 30 following the end of the preceding calendar year, commencing June 30, 2020 and to provide notices of certain enumerated events, if material. Specifically, the Authority agrees to provide the Annual Report to the Municipal Securities Rulemaking Board (“MSRB”) through its Electronic Municipal Market Access (“EMMA”) system and to provide timely notice of the occurrence of the enumerated events to the MSRB through the EMMA system. The Authority has not been delinquent in meeting its obligations previously undertaken in connection with the execution of prior continuing disclosure agreements.

The Annual Report will consist generally of the audited financial statements of the Authority, current information regarding the Fresh Water Program and the Local Governmental Agencies of the type contained in Appendix B hereto and information of the type contained herein under the caption “SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS – Significant Local Governmental Agency Participants.” Furthermore, the Authority has agreed to include in its Annual Report the financial statements of each Local Governmental Agency (if any) which is a party to a Cooperative Agreement or Agreements under which the sum of the repayments made during the most recently ended calendar year equaled or exceeded twenty percent (20%) of all repayments under all Cooperative Agreements made in such year. All planning loans are excluded from the foregoing calculation. During calendar year 2018 there were no Local Governmental Agencies whose repayments under their respective Cooperative Agreements exceeded 20% of the repayments made under all Cooperative Agreements during such year. Any of the above-described financial and operating information may be supplied by including in its Annual Report specific reference to information previously supplied to each National Repository and the State Depository or to the Securities and Exchange Commission (the “SEC”). Information will not be included by reference to a final official statement unless such final official statement is available from the MSRB.

The Continuing Disclosure Agreement is being executed by the Authority to assist the Underwriters in complying with Rule 15c2-12 promulgated by the SEC. The Authority has agreed to give notice in a timely manner to the MSRB of any failure to supply the information required to be provided in the Continuing Disclosure Agreement; however, any such failure will not constitute a default under the Trust Agreement or the terms of the Series 2019 Fresh Water Bonds.

The Authority has in a timely manner made all filings, and given all notices required, under its prior continuing disclosure undertakings (for purposes of Rule 15c2-12).

FINANCIAL ADVISOR

PFM Financial Advisors LLC (the “Financial Advisor”) is employed as Financial Advisor to the Authority for the purpose of the issuance of the Series 2019 Fresh Water Bonds. The fees paid the Financial Advisor for services rendered in connection with the issuance and sale of the Series 2019 Fresh Water Bonds are based on the amount of Series 2019 Fresh Water Bonds actually issued, sold and delivered, and therefore such fees are contingent on the sale and delivery of the Series 2019 Fresh Water Bonds. The Financial Advisor is not obligated to undertake, and has not undertaken to make, an independent verification of or assume responsibility for the accuracy, completeness, or fairness of the information in this Official Statement.

RATINGS

Moody’s Investors Service, Inc. (“Moody’s”) and S&P Global Ratings, a division of S&P Global Inc. (“S&P”) have given the Series 2019 Fresh Water Bonds ratings of “Aaa” and “AAA,” respectively. Such ratings reflect only the view of such rating agencies. Any explanation of the significance of the ratings may only be obtained from the rating agencies. No application for a rating has been made by the Authority to any other rating service.

The Authority furnished to each rating agency certain information and materials, some of which may not have been included in this Official Statement, relating to the Series 2019 Fresh Water Bonds, the Local Governmental Agencies which are parties to the Existing Cooperative Agreements and the Authority. Generally, rating agencies base their ratings on such information and other investigations, studies and assumptions they deem appropriate. The ratings are not recommendations to buy, sell or hold the Series 2019 Fresh Water Bonds. There can be no assurance that the ratings when assigned will continue for any period of time or that they will not be revised or withdrawn entirely by the respective rating agency, if in its judgment circumstances so warrant. Any revision or withdrawal of a rating may have an adverse effect on the marketability and/or market price of the Series 2019 Fresh Water Bonds.

CONCLUDING STATEMENT

Any quotations from and summaries and explanations of the Constitution of the State of Ohio, the Ohio Revised Code, the Cooperative Agreements, the Trust Agreement and the Regulations do not purport to be complete, and reference is made to the pertinent provisions of the Constitution of the State of Ohio, Ohio Revised Code and such documents for their complete provisions.

To the extent that any statements in this Official Statement involve matters of opinion or estimates, whether or not expressly stated to be such, those statements are made as such and not as representations of fact or certainty, and no representation is made that any of these statements will be realized. Information in this Official Statement has been derived by the Authority from official and other sources and is believed by the Authority to be reliable, but information other than that obtained from official records of the Authority has not been independently confirmed or verified by the Authority and its

accuracy is not guaranteed. This Official Statement is not to be construed as a contract or agreement between the State of Ohio or the Authority and the Underwriters or subsequent Beneficial Owners of any of the Series 2019 Fresh Water Bonds.

The Authority has furnished the information in this Official Statement relating to its operations, including information in Appendix A and Appendix B.

Information in Appendix F relating to the Book Entry Only System maintained by the Depository Trust Company (“DTC”) was summarized from information made publicly available by DTC.

The financial statements of the Authority as of December 31, 2018 and the individual fund and group financial statements of the Authority as of and for the year ended December 31, 2018 included in this Official Statement have been audited by the Auditor of the State, Ohio as stated in the Independent Auditor’s Report appearing in Appendix C.

Additional copies of this Official Statement are available upon request to the Underwriters. Copies of other relevant documents including the Trust Agreement and the form of the Cooperative Agreements are available upon request to the Authority.

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This Official Statement has been prepared, approved and delivered, for and on behalf of the Authority and executed by the undersigned in their official capacity.

OHIO WATER DEVELOPMENT AUTHORITY

By: /s/ Jimmy Stewart
Chairman

By: /s/ Ken J. Heigel
Executive Director

APPENDIX A

DEBT SERVICE SCHEDULE AND COVERAGE

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Ohio Water Development Authority
Fresh Water Debt Service Schedule and Coverage as of 8/31/2019

	A	B	C	D	E	F = (B + C + D + E)	G = (A - F)	H = (A / F)
	Total Revenue Available for Debt Service (a & b) ^	Combined Fresh Water Debt Service ^	Hypothetical Fresh Water Series 2017 - 22 Note Debt Service (c)	Fresh Water Series 2018A Debt Service (d)	Fresh Water Series 2019A Debt Service	Total Fresh Water Debt Service ^	Estimated Surplus	Coverage
6/1/2020	65,265,064	39,007,585	768,639	4,160,125	3,968,000	47,904,349	17,360,715	1.36
12/1/2020	64,953,870	38,133,676	768,639	4,160,125	3,720,000	46,782,439	18,171,431	1.39
6/1/2021	64,895,683	37,952,768	768,639	5,660,125	3,720,000	48,101,532	16,794,151	1.35
12/1/2021	64,521,011	37,468,418	768,639	5,622,625	3,720,000	47,579,682	16,941,329	1.36
6/1/2022	63,871,751	36,518,761	768,639	5,585,125	3,720,000	46,592,524	17,279,226	1.37
12/1/2022	62,826,660	35,934,097	768,639	5,547,625	3,720,000	45,970,361	16,856,299	1.37
6/1/2023	62,257,932	35,516,214	768,639	5,510,125	3,720,000	45,514,978	16,742,954	1.37
12/1/2023	61,436,867	32,759,246	768,639	6,472,625	3,720,000	43,720,509	17,716,357	1.41
6/1/2024	60,779,572	32,793,677	768,639	6,410,125	3,720,000	43,692,441	17,087,131	1.39
12/1/2024	59,258,939	30,786,936	768,639	6,347,625	3,720,000	41,623,200	17,635,739	1.42
6/1/2025	58,764,456	30,934,208	768,639	6,285,125	3,720,000	41,707,972	17,056,485	1.41
12/1/2025	57,592,831	29,736,265	768,639	6,222,625	3,720,000	40,447,529	17,145,302	1.42
6/1/2026	56,553,762	29,076,685	768,639	6,160,125	3,720,000	39,725,449	16,828,313	1.42
12/1/2026	55,297,458	28,316,262	768,639	6,097,625	3,720,000	38,902,526	16,394,932	1.42
6/1/2027	53,830,637	27,398,259	768,639	6,035,125	3,720,000	37,922,023	15,908,615	1.42
12/1/2027	52,907,002	26,487,732	768,639	5,972,625	3,720,000	36,948,995	15,958,007	1.43
6/1/2028	52,105,822	28,043,979	768,639	5,910,125	3,720,000	38,442,743	13,663,080	1.36
12/1/2028	51,813,937	28,568,797	768,639	4,609,779	3,720,000	37,667,214	14,146,723	1.38
6/1/2029	50,819,612	27,858,289	768,639	4,609,779	3,720,000	36,956,707	13,862,905	1.38
12/1/2029	50,159,436	27,757,631	768,639	4,609,779	5,720,000	38,856,049	11,303,388	1.29
6/1/2030	48,094,403	26,031,967	768,639	4,609,779	5,700,000	37,110,385	10,984,018	1.30
12/1/2030	47,382,721	25,581,615	768,639	4,609,779	5,650,000	36,610,032	10,772,689	1.29
6/1/2031	45,898,576	23,955,344	768,639	4,609,779	6,600,000	35,933,761	9,964,814	1.28
12/1/2031	44,657,501	23,530,324	768,639	4,609,779	6,525,000	35,433,741	9,223,760	1.26
6/1/2032	44,045,522	22,509,376	768,639	4,609,779	6,450,000	34,337,794	9,707,728	1.28
12/1/2032	43,369,795	22,097,138	768,639	4,609,779	6,375,000	33,850,556	9,519,240	1.28
6/1/2033	42,760,233	21,643,965	768,639	4,609,779	6,300,000	33,322,382	9,437,851	1.28
12/1/2033	41,651,626	21,225,898	768,639	4,609,779	6,225,000	32,829,315	8,822,311	1.27
6/1/2034	40,686,893	20,592,035	768,639	4,609,779	6,150,000	32,120,452	8,566,441	1.27
12/1/2034	39,911,156	19,888,835	768,639	4,609,779	6,075,000	31,342,253	8,568,904	1.27
6/1/2035	38,195,632	18,852,461	768,639	4,609,779	6,000,000	30,230,879	7,964,753	1.26
12/1/2035	36,877,014	17,427,194	768,639	4,609,779	5,925,000	28,730,612	8,146,403	1.28
6/1/2036	35,373,088	16,417,050	768,639	4,609,779	5,850,000	27,645,468	7,727,621	1.28
12/1/2036	33,229,429	7,587,234	768,639	4,609,779	12,775,000	25,740,651	7,488,778	1.29
6/1/2037	32,367,023	7,154,917	768,639	4,609,779	12,525,000	25,058,334	7,308,688	1.29
12/1/2037	31,198,378	3,989,115	768,639	4,609,779	14,275,000	23,642,533	7,555,846	1.32
6/1/2038	29,346,519	2,973,437	768,639	4,609,779	13,975,000	22,326,854	7,019,665	1.31
12/1/2038	28,529,496	2,905,622	768,639	4,609,779	13,675,000	21,959,039	6,570,456	1.30
6/1/2039	27,540,961	2,667,930	768,639	4,609,779	13,375,000	21,421,348	6,119,613	1.29
12/1/2039	22,190,288	2,604,541	-	4,609,779	9,075,000	16,289,320	5,900,968	1.36
6/1/2040	17,584,293	2,176,274	-	4,609,779	5,875,000	12,661,053	4,923,240	1.39
12/1/2040	16,227,530	2,122,104	-	4,609,779	5,750,000	12,481,883	3,745,647	1.30
6/1/2041	15,684,928	1,418,057	-	4,609,779	5,625,000	11,652,836	4,032,092	1.35
12/1/2041	14,772,032	1,380,113	-	4,609,779	5,500,000	11,489,892	3,282,140	1.29
6/1/2042	13,750,927	512,293	-	4,609,779	5,375,000	10,497,071	3,253,856	1.31
12/1/2042	11,775,746	-	-	4,609,779	4,250,000	8,859,779	2,915,967	1.33
6/1/2043	11,182,766	-	-	4,609,779	2,150,000	6,759,779	4,422,987	1.65
12/1/2043	10,408,121	-	-	4,609,779	2,100,000	6,709,779	3,698,343	1.55
6/1/2044	10,272,963	-	-	4,609,779	2,050,000	6,659,779	3,613,184	1.54
12/1/2044	9,307,947	-	-	4,609,779	-	4,609,779	4,698,169	2.02
6/1/2045	8,542,894	-	-	4,609,779	-	4,609,779	3,933,115	1.85
12/1/2045	8,111,789	-	-	4,609,779	-	4,609,779	3,502,010	1.76
6/1/2046	7,943,819	-	-	4,609,779	-	4,609,779	3,334,041	1.72
12/1/2046	7,776,090	-	-	4,609,779	-	4,609,779	3,166,311	1.69
6/1/2047	5,478,839	-	-	-	-	-	5,478,839	-
12/1/2047	4,666,972	-	-	-	-	-	4,666,972	-
6/1/2048	2,629,871	-	-	-	-	-	2,629,871	-
12/1/2048	2,411,612	-	-	-	-	-	2,411,612	-
6/1/2049	2,143,909	-	-	-	-	-	2,143,909	-
12/1/2049	1,940,137	-	-	-	-	-	1,940,137	-
6/1/2050	1,406,250	-	-	-	-	-	1,406,250	-
12/1/2050	1,179,729	-	-	-	-	-	1,179,729	-
6/1/2051	583,679	-	-	-	-	-	583,679	-
12/1/2051	580,906	-	-	-	-	-	580,906	-
	2,109,582,306	958,294,328	29,976,908	268,721,434	284,823,000	1,541,815,670	567,766,636	

^ Fresh Water loan repayments due July 1, 2019 totaling \$63.1 million were collected to fund debt service of \$44.1 million due December 1, 2019.

- (a) The amounts shown are the aggregate of the amounts required to be paid by Local Governmental Agencies under the Existing Cooperative Agreements, which amounts have been assigned by the Authority in the Trust Agreement for deposit in the revenue fund. Amounts shown are semi-annual amounts and do not include any interest earnings thereon. Payments by the Local Governmental Agencies are due semiannually on January 1 and July 1.
- (b) These amounts also include projected direct payments of the federal BAB's subsidy related to the Fresh Water Bonds issued as build America bonds. With respect to the effect of sequestration on the receipt by the Authority of such direct payments, the subsidy amount is assumed to be 32.83% of the applicable interest rates through 6/1/2024. The subsidy amounts are expected to be received through 2034 and are no greater than \$2,291,233 in any given year.

**Ohio Water Development Authority
Fresh Water Debt Service Schedule and Coverage as of 8/31/2019**

- (c) Hypothical equal payment Debt Service of \$25,000,000 Fresh Water Series 2017 - 22 Floating Rate Notes at 2.10% for 20 years.
- (d) Actual amortization through June 1, 2028. Hypothical equal payment Debt Service of the \$136,405,000 Fresh Water Series 2018 Bonds June 1, 2028 bullet maturity at 2.67% for 18.5 years beginning on June 1, 2028.

APPENDIX B

LOCAL GOVERNMENTAL AGENCIES PARTICIPATING IN THE FRESH WATER PROGRAM PURSUANT TO THE FIXED RATE COOPERATIVE AGREEMENTS

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**LOCAL GOVERNMENTAL AGENCIES PARTICIPATION IN THE FRESH WATER PROGRAM
PURSUANT TO THE EXISTING COOPERATIVE AGREEMENTS
As of August 31, 2019**

Governmental Agency	Total Estimated Project Costs(1)	Interest Rate	Term	First Payment Date	Projected Remaining Fresh Water Series Repayments
Adams County Regional Water District	677,977	5.56%	25.0	7/1/2000	277,858
Adams County Regional Water District	1,399,498	5.86%	25.0	1/1/2000	540,130
Adams County Regional Water District	8,503,662	6.39%	25.0	1/1/2002	4,799,748
Adams County Regional Water District	39,433	5.15%	20.0	1/1/2003	9,545
Akron	800,202	4.72%	20.0	7/1/2012	778,251
Akron	2,189,031	4.14%	20.0	7/1/2012	2,025,183
Akron	412,715	4.14%	20.0	7/1/2012	381,823
Akron	470,615	3.55%	20.0	1/1/2013	429,835
Akron	4,852,622	3.15%	20.0	1/1/2015	4,933,151
Akron	223,741	4.24%	10.0	1/1/2014	110,738
Akron	766,560	3.62%	20.0	7/1/2015	840,003
Akron	1,427,663	3.66%	20.0	1/1/2015	1,519,377
Akron	639,657	3.66%	10.0	1/1/2015	384,805
Akron	2,275,148	3.65%	20.0	7/1/2015	2,499,791
Akron	9,967,037	4.15%	20.0	1/1/2016	11,813,182
Akron	3,449,162	3.95%	20.0	7/1/2016	4,142,640
Akron	1,479,248	3.45%	20.0	1/1/2015	1,545,038
Akron	6,243,284	3.34%	20.0	1/1/2016	6,887,282
Akron	936,700	2.26%	20.0	7/1/2016	964,823
Akron	1,115,471	2.04%	20.0	7/1/2016	1,125,349
Akron	6,564,391	2.26%	20.0	7/1/2016	6,761,473
Akron	4,433,515	2.45%	20.0	7/1/2016	4,648,585
Akron	1,299,344	2.21%	10.0	7/1/2016	945,973
Akron	2,148,048	1.56%	20.0	1/1/2018	2,257,955
Akron	2,919,239	2.51%	30.0	7/1/2018	3,963,807
Akron	574,313	2.89%	10.0	7/1/2019	632,133
Allen County	429,009	3.42%	18.0	7/1/2010	272,976
Allen County	482,944	3.42%	19.0	7/1/2010	330,352
Allen County	375,581	3.74%	20.0	7/1/2015	415,975
Allen County	3,318,241	3.65%	20.0	7/1/2015	3,645,877
Allen County	10,329,653	3.45%	20.0	1/1/2016	11,508,338
Allen County	2,395,715	3.95%	20.0	1/1/2016	2,790,197
Allen Water District	133,999	5.77%	25.0	7/1/2001	66,233
Allen Water District	152,785	6.72%	25.0	1/1/1996	12,782
Allen Water District	708,487	6.72%	25.0	1/1/1997	118,540
Allen Water District	203,668	6.24%	25.0	7/1/1995	8,149
Allen Water District	156,999	5.94%	25.0	7/1/1998	42,741
Allen Water District	109,000	6.32%	25.0	7/1/1999	39,545
Allen Water District	597,004	5.66%	25.0	7/1/1999	203,416
Allen Water District	430,002	5.54%	25.0	1/1/2000	160,908
Allen Water District	175,002	6.13%	25.0	7/1/2001	89,514
Allen Water District	169,002	6.13%	25.0	7/1/2001	86,445
Allen Water District	640,004	6.41%	25.0	7/1/2001	336,061
Allen Water District	77,001	6.39%	25.0	7/1/2001	40,357
Allen Water District	240,000	4.28%	25.0	1/1/2004	141,553
Allen Water District	190,000	4.28%	25.0	1/1/2004	112,063
Allen Water District	681,000	4.16%	25.0	1/1/2005	440,753
Allen Water District	100,000	4.00%	25.0	1/1/2006	70,011
Allen Water District	514,161	4.09%	25.0	1/1/2007	396,418
Allen Water District	800,512	3.82%	10.0	7/1/2015	533,858
Allen Water District	97,583	2.92%	20.0	7/1/2019	126,288
Amanda	109,999	5.01%	30.0	7/1/2004	103,324
Andover	76,749	2.04%	20.0	7/1/2016	77,429
Andover	439,118	2.39%	20.0	7/1/2016	457,847
Anna	308,195	3.24%	20.0	7/1/2014	305,345
Anna	684,408	3.10%	15.0	1/1/2020	861,018
Ansonia	144,000	4.60%	20.0	7/1/2005	60,994
Antwerp	55,159	3.02%	30.0	7/1/2019	82,852
Apple Creek	148,302	3.04%	20.0	7/1/2016	164,190

**LOCAL GOVERNMENTAL AGENCIES PARTICIPATION IN THE FRESH WATER PROGRAM
PURSUANT TO THE EXISTING COOPERATIVE AGREEMENTS
As of August 31, 2019**

Governmental Agency	Total Estimated Project Costs(1)	Interest Rate	Term	First Payment Date	Projected Remaining Fresh Water Series Repayments
Arcadia	571,313	6.13%	20.0	7/1/2002	124,884
Arcanum	1,077,740	4.84%	30.0	7/1/2004	992,836
Arcanum	58,480	2.87%	10.0	1/1/2019	60,920
Arcanum	8,465	3.14%	9.5	7/1/2019	9,337
Arlington	176,286	2.70%	10.0	1/1/2019	182,101
Ashtabula	933,994	3.18%	30.0	1/1/2016	1,262,012
Ashtabula County	196,919	5.77%	20.0	1/1/2001	16,723
Ashtabula County	13,214,897	4.34%	30.0	1/1/2004	11,087,250
Ashtabula County	79,013	3.85%	20.0	1/1/2004	22,804
Ashtabula County	1,096,319	4.48%	20.0	1/1/2006	501,392
Ashtabula County	102,882	4.00%	20.0	1/1/2006	45,131
Ashtabula County	358,333	3.92%	30.0	1/1/2008	367,521
Ashtabula County	308,754	2.92%	20.0	7/1/2020	409,822
Athens County	488,091	6.12%	25.0	1/1/1998	63,043
Athens County	148,181	5.15%	30.0	7/1/2003	131,663
Atwood Regional Water & Sewer District	356,936	5.77%	25.0	7/1/2001	176,425
Atwood Regional Water & Sewer District	559,811	0.95%	20.0	7/1/2017	539,001
Atwood Regional Water & Sewer District	2,234,752	1.30%	30.0	7/1/2016	2,390,252
Atwood Regional Water & Sewer District	278,126	2.95%	20.0	7/1/2017	323,910
Avon Lake	4,764,656	4.51%	20.0	1/1/2006	2,184,701
Avon Lake	1,356,266	4.28%	20.0	7/1/2009	965,289
Avon Lake	1,548,287	4.15%	20.0	7/1/2009	1,089,572
Avon Lake	9,903,661	3.68%	30.0	7/1/2012	12,329,055
Avon Lake	19,167,873	4.08%	30.0	7/1/2012	25,054,830
Avon Lake	3,018,029	3.27%	30.0	7/1/2011	3,410,869
Avon Lake	4,925,787	2.84%	30.0	7/1/2014	6,003,699
Avon Lake	4,824,439	2.94%	30.0	1/1/2015	6,078,309
Avon Lake	284,831	2.21%	10.0	1/1/2017	215,905
Avon Lake	3,144,130	2.21%	20.0	1/1/2017	3,189,307
Avon Lake	2,600,000	2.25%	20.0	7/1/2021	3,243,083
Ayersville Water & Sewer District	117,012	6.24%	25.0	7/1/1995	4,682
Ayersville Water & Sewer District	388,853	2.82%	15.0	7/1/2015	335,700
Bainbridge	65,078	6.32%	25.0	7/1/1997	13,117
Barberton	7,857,157	2.90%	20.0	7/1/2021	10,410,042
Beach City	76,276	0.59%	10.0	7/1/2018	66,862
Bellaire	990,992	0.81%	30.0	1/1/2020	1,118,264
Bellevue	959,670	1.75%	5.0	7/1/2020	1,006,458
Bellville	322,183	4.49%	20.0	1/1/2007	172,054
Bellville	858,056	3.18%	30.0	7/1/2015	1,137,108
Beloit	84,532	0.80%	24.0	7/1/2016	79,502
Bentleyville	707,560	5.77%	25.0	7/1/1996	81,219
Berea	699,998	6.11%	25.0	1/1/1998	165,997
Berea	1,200,048	4.66%	30.0	1/1/2005	1,120,066
Berea	713,940	3.75%	30.0	1/1/2007	677,339
Berea	909,733	4.42%	20.0	7/1/2007	517,393
Berea	1,109,436	4.17%	30.0	7/1/2008	1,205,327
Berea	1,064,946	4.78%	30.0	1/1/2009	1,276,656
Berea	281,205	4.28%	15.0	7/1/2010	140,787
Berea	841,655	3.49%	30.0	1/1/2013	1,046,095
Berea	123,902	3.49%	10.0	7/1/2012	36,961
Berea	275,963	2.91%	20.0	1/1/2016	292,770
Berea	1,386,327	2.46%	20.0	7/1/2017	1,543,112
Berea	610,196	2.52%	20.0	1/1/2018	702,526
Bethel	2,671,188	1.50%	20.0	7/1/2015	2,403,895
Bluffton	1,824,876	5.77%	25.0	1/1/2002	971,373
Bluffton	646,091	4.64%	30.0	1/1/2004	561,520
Bowerston	105,508	4.32%	20.0	1/1/2008	63,456
Bowling Green	4,256,121	5.77%	25.0	7/1/1995	162,851
Bradford	536,615	4.84%	20.0	1/1/2004	168,718

**LOCAL GOVERNMENTAL AGENCIES PARTICIPATION IN THE FRESH WATER PROGRAM
PURSUANT TO THE EXISTING COOPERATIVE AGREEMENTS
As of August 31, 2019**

Governmental Agency	Total Estimated Project Costs(1)	Interest Rate	Term	First Payment Date	Projected Remaining Fresh Water Series Repayments
Bradford	255,726	2.41%	30.0	7/1/2017	330,630
Bradford	581,163	1.14%	30.0	1/1/2019	664,907
Bremen	20,674	2.25%	10.0	7/1/2018	19,722
Bremen	238,380	3.01%	30.0	1/1/2020	363,665
Brookville	1,027,685	3.20%	20.0	1/1/2020	1,399,313
Bryan	731,977	2.86%	10.0	1/1/2013	254,045
Bryan	2,533,945	3.08%	10.0	1/1/2019	2,667,134
Bryan	255,149	2.89%	5.0	1/1/2019	220,690
Bryan	399,780	2.84%	10.0	1/1/2020	462,045
Buckeye Water District	963,262	1.92%	30.0	1/1/2022	1,271,659
Butler	743,401	3.86%	30.0	7/1/2011	904,084
Byesville	3,389,246	3.85%	30.0	7/1/2005	2,967,917
Byesville	6,949,742	2.58%	30.0	1/1/2021	10,025,404
Cambridge	1,187,512	3.77%	30.0	1/1/2012	1,461,581
Cambridge	1,527,847	3.04%	10.0	7/1/2017	1,337,492
Cambridge	1,006,815	2.58%	20.0	1/1/2019	1,230,395
Cambridge	1,650,320	2.90%	10.0	1/1/2019	1,721,718
Camden	182,579	4.29%	30.0	1/1/2007	184,907
Camden	706,264	4.12%	30.0	1/1/2008	742,104
Camden	1,381,152	4.47%	30.0	7/1/2008	1,554,942
Campbell	2,251,208	5.54%	25.0	1/1/2000	842,409
Canton	1,653,459	4.74%	20.0	1/1/2003	386,602
Canton	1,980,974	4.64%	20.0	7/1/2003	535,788
Canton	1,406,551	3.62%	20.0	1/1/2008	795,515
Canton	5,234,265	3.39%	20.0	7/1/2012	4,531,415
Cardington	2,107,422	6.49%	25.0	7/1/1997	431,524
Carrollton	100,400	2.82%	10.0	1/1/2013	34,777
Carrollton	298,964	2.75%	20.0	1/1/2016	312,542
Carrollton	136,684	2.33%	10.0	1/1/2017	107,811
Cecil	60,034	1.50%	20.0	1/1/2015	52,284
Chickasaw	978,158	0.94%	30.0	7/1/2020	1,124,834
Clarksburg	483,460	1.10%	30.0	1/1/2019	549,962
Clayton	3,496,827	4.00%	30.0	7/1/2006	3,319,687
Clermont County	5,058,639	3.52%	30.0	1/1/2013	6,310,964
Cleveland Heights	425,071	4.12%	15.0	1/1/2008	114,818
Cleveland Heights	280,299	3.84%	20.0	1/1/2011	222,273
Cleves	362,590	3.62%	30.0	1/1/2015	497,835
Cleves	49,866	2.76%	20.0	1/1/2016	52,179
Cleves	292,967	2.78%	20.0	1/1/2016	307,121
Cleves	300,100	2.90%	30.0	7/1/2018	428,808
Cleves	223,980	2.75%	30.0	7/1/2019	324,881
Clinton Water & Sewer District	944,000	5.77%	25.0	7/1/2001	466,595
Clinton Water & Sewer District	2,696,940	6.18%	25.0	7/1/1999	965,676
Clinton Water & Sewer District	908,480	5.66%	25.0	7/1/2000	378,333
Clinton Water & Sewer District	1,327,549	6.39%	25.0	1/1/2002	749,313
Columbus	806,199	3.67%	20.0	7/1/2008	486,626
Columbus	4,161,679	3.67%	20.0	7/1/2009	2,807,545
Columbus	1,561,558	3.67%	20.0	7/1/2008	942,566
Columbus	623,795	3.67%	20.0	7/1/2008	376,527
Columbus	769,464	3.67%	20.0	7/1/2008	464,453
Columbus	1,332,279	3.97%	20.0	1/1/2009	874,340
Columbus	2,610,839	3.97%	20.0	1/1/2009	1,713,425
Columbus	906,220	3.97%	20.0	1/1/2009	594,728
Columbus	1,775,579	3.97%	20.0	1/1/2009	1,165,266
Columbus	18,031,471	4.40%	20.0	1/1/2010	13,646,308
Columbus	26,467,684	4.15%	20.0	1/1/2011	21,566,987
Columbus	624,710	3.68%	20.0	1/1/2011	488,418
Columbus	390,058	3.76%	20.0	1/1/2011	307,131
Columbus	526,437	3.42%	20.0	1/1/2011	402,140

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Governmental Agency	Total Estimated Project Costs(1)	Interest Rate	Term	First Payment Date	Projected Remaining Fresh Water Series Repayments
Columbus	1,121,726	3.42%	20.0	1/1/2011	856,876
Columbus	2,445,277	3.42%	20.0	7/1/2010	1,783,017
Columbus	2,797,729	3.20%	20.0	7/1/2011	2,190,425
Columbus	1,745,803	3.20%	20.0	1/1/2011	1,307,412
Columbus	1,147,845	3.70%	20.0	1/1/2011	899,016
Columbus	2,041,772	3.70%	20.0	7/1/2011	1,671,848
Columbus	3,967,884	3.20%	20.0	1/1/2012	3,241,642
Columbus	1,985,846	3.70%	20.0	7/1/2011	1,626,054
Columbus	838,982	3.34%	20.0	7/1/2011	665,220
Columbus	1,646,406	3.36%	20.0	7/1/2011	1,307,770
Columbus	1,759,394	3.39%	20.0	1/1/2012	1,462,219
Columbus	6,936,707	3.17%	20.0	1/1/2013	6,122,674
Columbus	415,247	3.67%	20.0	7/1/2011	339,109
Columbus	25,967,213	2.01%	20.0	7/1/2019	30,872,323
Columbus	81,380,579	2.51%	20.0	7/1/2019	101,407,885
Columbus	64,418,805	2.51%	20.0	1/1/2020	82,330,167
Conneaut	240,548	3.32%	20.0	7/1/2013	223,495
Conneaut	1,623,375	3.24%	20.0	1/1/2015	1,663,821
Conneaut	301,050	1.92%	30.0	1/1/2020	397,434
Corning	466,726	1.14%	30.0	7/1/2019	543,186
Cridersville	647,158	6.41%	25.0	7/1/2001	339,818
Cridersville	1,856,094	3.27%	30.0	7/1/2011	2,097,691
Cuyahoga County	351,239	2.08%	20.0	1/1/2018	388,031
Cuyahoga County	1,505,375	3.03%	20.0	7/1/2018	1,866,953
Cuyahoga County	752,647	3.10%	20.0	7/1/2020	1,015,561
Dalton	285,779	4.72%	15.0	7/1/2012	201,004
Darbyville	80,469	1.02%	30.0	7/1/2019	92,051
Darbyville	50,400	1.27%	30.0	7/1/2019	59,755
Defiance	7,539,063	4.09%	30.0	1/1/2008	7,893,107
Defiance	344,190	3.40%	20.0	1/1/2015	357,889
Defiance	772,870	1.83%	20.0	7/1/2017	810,604
DeGraff	276,310	4.71%	30.0	1/1/2010	345,861
Delaware	2,225,061	3.67%	25.0	7/1/2011	2,256,372
Delaware	1,037,942	3.55%	25.0	1/1/2013	1,133,560
Delaware	15,361,084	2.86%	25.0	1/1/2015	17,285,303
Delaware	10,022,744	3.36%	25.0	1/1/2015	11,915,236
Delaware	6,007,096	3.86%	25.0	1/1/2015	7,534,516
Delphos	815,970	4.32%	30.0	7/1/2008	902,500
Delta	1,278,465	5.54%	25.0	1/1/2000	478,406
Delta	6,621,428	4.10%	30.0	7/1/2008	7,133,525
Delta	580,931	1.50%	30.0	7/1/2015	615,018
Deshler	336,895	3.45%	30.0	1/1/2013	416,639
Deshler	1,204,890	0.78%	30.0	1/1/2017	1,218,323
Doylestown	3,324,918	3.45%	30.0	1/1/2014	4,290,720
Doylestown	227,542	2.08%	20.0	7/1/2018	369,218
Doylestown	37,403	2.84%	10.0	7/1/2020	43,229
Doylestown	251,705	2.93%	10.0	7/1/2020	292,204
Dresden	918,296	2.44%	30.0	7/1/2018	1,235,364
East Canton	122,645	4.78%	25.0	7/1/2004	80,364
East Liverpool	841,932	2.90%	20.0	7/1/2019	1,087,598
East Palestine	89,228	3.95%	30.0	1/1/2009	96,953
East Palestine	59,327	3.95%	30.0	1/1/2009	64,464
East Palestine	276,625	4.14%	20.0	7/1/2012	255,920
East Sparta	1,477,929	2.00%	30.0	1/1/2016	1,709,537
Eastern Ohio Regional Wastewater Authority	2,749,058	1.70%	30.0	1/1/2018	3,286,095
Eastern Ohio Regional Wastewater Authority	5,462,522	2.75%	30.0	1/1/2020	8,057,609
Eldorado	239,334	4.85%	30.0	1/1/2005	228,344
Elida	602,355	3.03%	30.0	1/1/2021	921,294
Elmore	305,094	6.35%	25.0	1/1/1997	49,332

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Elyria	2,550,000	4.18%	30.0	1/1/2010	2,998,621
Elyria	3,000,000	4.18%	30.0	1/1/2010	3,527,789
Elyria	3,400,007	3.20%	30.0	7/1/2010	3,631,479
Elyria	10,262,297	2.87%	30.0	1/1/2012	11,275,442
Elyria	3,041,635	2.87%	30.0	1/1/2012	3,341,920
Elyria	5,153,932	2.86%	30.0	7/1/2013	6,041,018
Elyria	3,613,149	3.82%	30.0	1/1/2015	5,084,519
Erie County	5,575,695	4.74%	30.0	1/1/2004	4,902,432
Erie County	5,317,996	4.65%	30.0	7/1/2004	4,792,525
Erie County	749,868	4.70%	30.0	7/1/2004	679,712
Erie County	949,566	4.34%	30.0	1/1/2004	796,683
Erie County	3,883,647	4.34%	30.0	1/1/2005	3,491,106
Erie County	3,514,926	4.28%	30.0	7/1/2006	3,450,931
Erie County	3,219,566	4.28%	30.0	1/1/2004	2,682,017
Erie County	1,481,971	4.16%	30.0	1/1/2006	1,390,818
Erie County	3,142,343	4.56%	30.0	1/1/2007	3,285,411
Erie County	1,134,297	4.10%	30.0	1/1/2007	1,122,940
Erie County	287,392	4.00%	15.0	1/1/2007	51,328
Erie County	377,587	3.99%	30.0	1/1/2007	368,875
Erie County	3,666,129	4.00%	30.0	7/1/2007	3,691,347
Erie County	451,975	3.99%	20.0	1/1/2007	231,109
Erie County	341,893	3.75%	15.0	1/1/2007	60,017
Erie County	1,367,458	3.79%	25.0	1/1/2007	1,021,486
Erie County	6,583,250	3.99%	30.0	1/1/2008	6,809,671
Erie County	1,327,972	4.09%	30.0	1/1/2008	1,390,335
Erie County	9,096,016	3.62%	30.0	7/1/2007	8,742,165
Erie County	1,907,793	4.11%	30.0	7/1/2010	2,280,281
Erie County	2,465,814	4.28%	30.0	1/1/2011	3,081,171
Erie County	7,130,556	4.27%	30.0	1/1/2012	9,323,205
Erie County	170,641	4.79%	30.0	1/1/2010	215,580
Euclid	908,840	3.36%	25.0	7/1/2013	999,414
Farmersville	115,031	4.12%	20.0	1/1/2008	67,991
Fayette	68,711	5.14%	30.0	1/1/2004	63,241
Fayette	178,887	0.58%	20.0	1/1/2019	180,236
Fayetteville-Perry Twp Reg Sewer District	115,427	0.79%	30.0	7/1/2019	127,707
Flushing	112,875	0.75%	15.0	1/1/2016	87,673
Forest	91,417	2.13%	30.0	1/1/2017	111,766
Franklin	2,947,907	6.91%	25.0	1/1/1996	250,914
Franklin	1,273,592	4.17%	20.0	1/1/2009	850,571
Franklin County	1,150,332	3.98%	20.0	1/1/2006	503,730
Franklin County	1,923,801	3.77%	20.0	7/1/2013	1,860,715
Franklin County	260,842	3.42%	20.0	1/1/2015	271,711
Franklin County	839,382	2.26%	20.0	1/1/2016	838,383
Frazesburg	252,293	2.58%	20.0	1/1/2019	308,318
Fremont	6,808,864	3.44%	30.0	1/1/2015	9,141,324
Fremont	26,362,575	3.99%	30.0	1/1/2017	40,903,910
Fremont	33,000,164	4.49%	30.0	1/1/2017	54,350,337
Galena	553,085	3.77%	30.0	1/1/2012	680,733
Galena	5,547,075	2.67%	30.0	7/1/2020	8,097,183
Galena	100,796	2.79%	30.0	7/1/2020	149,459
Galion	983,863	3.98%	20.0	7/1/2005	394,931
Galion	1,725,253	3.98%	30.0	7/1/2006	1,633,893
Galion	1,232,112	3.98%	30.0	7/1/2006	1,166,866
Galion	2,218,464	3.98%	30.0	7/1/2006	2,100,987
Galion	679,864	4.61%	20.0	7/1/2009	497,826
Gallia County	1,547,693	3.15%	30.0	1/1/2018	2,243,523
Geauga County	362,977	5.09%	20.0	1/1/2007	203,972
Geauga County	574,098	3.62%	20.0	1/1/2008	324,697
Geauga County	1,712,327	2.33%	20.0	1/1/2018	1,936,757

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Geauga County	681,193	2.33%	20.0	1/1/2018	770,476
Geauga County	397,999	2.13%	20.0	1/1/2019	466,314
Geneva	6,775,040	4.56%	25.0	7/1/2005	4,798,224
Geneva	253,000	2.01%	15.0	1/1/2017	235,451
Geneva-on-the-Lake	256,665	4.49%	20.0	7/1/2006	127,275
Genoa	550,234	6.32%	25.0	1/1/1997	88,721
Genoa	10,963	6.32%	24.0	1/1/1998	1,799
Gibsonburg	921,520	7.38%	25.0	1/1/1997	163,604
Gibsonburg	344,291	4.32%	20.0	1/1/2008	207,066
Gibsonburg	235,647	4.97%	25.0	1/1/2010	248,507
Gibsonburg	639,949	3.55%	30.0	7/1/2013	818,784
Gibsonburg	698,225	3.15%	30.0	1/1/2015	903,697
Glendale	283,320	3.74%	20.0	1/1/2015	303,669
Glendale	149,196	3.09%	30.0	1/1/2021	229,954
Gnadenhutten	92,279	6.13%	25.0	1/1/2001	43,570
Grafton	3,081,451	6.41%	25.0	7/1/2001	1,618,046
Grafton	3,134,068	3.62%	25.0	7/1/2015	3,927,568
Grafton	236,003	2.78%	10.0	7/1/2016	176,768
Grafton	342,788	2.78%	10.0	1/1/2016	237,001
Grafton	410,338	2.46%	10.0	7/1/2017	349,037
Grafton	411,806	2.87%	10.0	1/1/2020	476,651
Grafton	551,949	2.92%	10.0	1/1/2021	640,442
Grafton	335,506	2.87%	10.0	7/1/2020	388,336
Gratis	610,552	4.42%	30.0	7/1/2007	646,402
Gratis	65,000	3.14%	20.0	1/1/2020	88,025
Green Camp	740,703	0.00%	30.0	1/1/2017	666,632
Green Springs	245,575	4.78%	30.0	1/1/2004	216,923
Green Springs	48,966	4.66%	30.0	7/1/2004	44,179
Greenfield	598,606	3.62%	30.0	1/1/2008	591,757
Greenfield	2,114,797	3.95%	30.0	7/1/2009	2,358,357
Greenfield Township Water & Sewer District	213,453	6.58%	25.0	7/1/1996	26,443
Greenfield Township Water & Sewer District	1,023,235	6.72%	25.0	1/1/1997	171,202
Greenfield Township Water & Sewer District	1,518,995	6.72%	25.0	1/1/1997	254,150
Greenfield Township Water & Sewer District	75,000	6.32%	24.0	1/1/1998	12,308
Greenfield Township Water & Sewer District	1,169,935	6.13%	25.0	1/1/2002	644,460
Greenfield Township Water & Sewer District	169,003	3.98%	25.0	7/1/2006	123,439
Greenfield Township Water & Sewer District	469,141	3.98%	25.0	7/1/2006	342,658
Greenfield Township Water & Sewer District	573,396	4.49%	30.0	7/1/2007	612,090
Grove City	2,392,952	3.89%	20.0	1/1/2011	1,905,961
Grove City	671,338	3.37%	20.0	1/1/2012	556,942
Guernsey County	93,794	3.27%	20.0	7/1/2011	73,901
Guernsey County	1,289,035	0.56%	20.0	7/1/2016	1,125,605
Hamilton	3,934,581	2.13%	30.0	7/1/2019	5,255,798
Hamler	1,434,202	1.02%	30.0	7/1/2020	1,668,434
Haskins	353,126	3.99%	30.0	7/1/2007	355,125
Heath	1,327,313	2.22%	20.0	7/1/2018	1,527,124
Henry County Regional Water and Sewer District	255,847	3.34%	20.0	7/1/2012	220,498
Hicksville	1,073,071	0.20%	30.0	1/1/2018	1,032,380
Hicksville	1,406,227	0.98%	20.0	1/1/2019	1,474,370
Highland County	776,761	3.98%	30.0	1/1/2007	757,920
Highland County	2,087,678	3.92%	30.0	1/1/2009	2,260,164
Highland County	476,243	3.34%	20.0	7/1/2016	541,785
Holmesville	14,050	0.78%	20.0	1/1/2016	12,161
Hopedale	1,351,396	3.17%	30.0	7/1/2019	2,069,179
Hubbard	2,636,218	6.58%	25.0	1/1/1996	217,723
Huber Heights	2,953,871	3.02%	25.0	1/1/2020	4,229,184
Huber Heights	12,231,902	3.00%	30.0	1/1/2021	18,636,595
Huron	730,925	2.64%	20.0	1/1/2019	898,220
Jackson	176,203	3.41%	30.0	1/1/2016	245,103

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Jackson Center	493,539	2.53%	20.0	7/1/2017	552,947
Jackson Center	298,052	3.08%	20.0	7/1/2018	371,328
Jamestown	580,074	3.17%	30.0	1/1/2012	662,368
Jefferson	263,102	3.97%	20.0	1/1/2009	172,667
Jefferson	46,510	3.92%	10.0	7/1/2010	2,833
Jefferson	49,432	2.22%	10.0	7/1/2017	41,546
Jefferson Water & Sewer District	240,224	6.51%	25.0	1/1/1998	59,136
Jefferson Water & Sewer District	59,495	6.18%	25.0	1/1/1998	14,202
Jefferson Water & Sewer District	253,039	5.88%	25.0	7/1/1998	68,493
Jefferson Water & Sewer District	425,762	5.66%	25.0	7/1/2000	177,307
Jefferson Water & Sewer District	602,290	5.56%	25.0	7/1/2000	246,839
Jefferson Water & Sewer District	238,474	5.77%	25.0	7/1/2000	99,738
Jefferson Water & Sewer District	202,212	5.85%	25.0	7/1/1996	23,390
Jefferson Water & Sewer District	609,101	6.72%	25.0	7/1/1996	76,434
Jefferson Water & Sewer District	474,980	6.16%	25.0	7/1/1995	18,861
Jefferson Water & Sewer District	115,555	6.41%	25.0	7/1/2002	70,012
Jefferson Water & Sewer District	320,722	6.39%	25.0	7/1/2002	193,956
Jefferson Water & Sewer District	83,915	6.39%	25.0	1/1/2003	54,131
Jefferson Water & Sewer District	319,398	6.39%	25.0	7/1/2002	193,156
Jefferson Water & Sewer District	1,664,709	6.03%	25.0	7/1/2002	973,262
Jefferson Water & Sewer District	396,499	6.03%	25.0	7/1/2002	231,810
Jefferson Water & Sewer District	258,728	6.03%	25.0	7/1/2002	151,263
Jefferson Water & Sewer District	436,514	6.03%	25.0	7/1/2002	255,206
Jefferson Water & Sewer District	90,247	5.15%	25.0	1/1/2004	58,137
Jefferson Water & Sewer District	1,718,103	4.40%	25.0	1/1/2004	1,025,987
Jefferson Water & Sewer District	956,039	4.66%	25.0	1/1/2005	651,450
Jefferson Water & Sewer District	455,832	3.77%	10.0	1/1/2012	110,275
Jefferson Water & Sewer District	684,765	2.01%	15.0	7/1/2018	716,925
Jefferson Water & Sewer District	1,790,524	2.70%	15.0	7/1/2019	2,116,428
Jeffersonville	680,184	1.04%	30.0	1/1/2020	793,554
Johnstown	370,000	4.64%	30.0	1/1/2003	298,599
Junction City	83,408	4.10%	30.0	7/1/2005	75,287
Junction City	100,618	1.30%	30.0	7/1/2016	107,620
Kelleys Island	371,500	0.90%	10.0	7/1/2019	369,838
Knox County	79,325	5.56%	25.0	7/1/2000	32,510
Knox County	930,362	2.44%	30.0	7/1/2013	1,032,018
La Rue	90,622	0.56%	20.0	1/1/2019	91,123
La Rue	31,923	0.92%	15.0	1/1/2020	34,249
Lafayette	100,626	5.06%	20.0	1/1/2005	40,289
Lafayette	50,688	0.78%	30.0	1/1/2016	49,355
Lafayette	32,190	1.30%	30.0	1/1/2016	33,780
LaGrange	3,774,003	2.51%	30.0	1/1/2020	5,394,130
Lake County	14,813,736	2.74%	25.0	1/1/2015	16,447,688
Lakeview	316,440	5.39%	20.0	1/1/2002	52,093
Laura	173,049	3.42%	30.0	7/1/2010	190,033
Leading Creek Conservancy District	349,522	6.36%	25.0	7/1/1996	42,426
Leading Creek Conservancy District	228,656	6.13%	25.0	1/1/2001	107,962
Leesburg	143,015	0.91%	30.0	7/1/2016	144,643
Leetonia	294,010	1.02%	30.0	1/1/2020	342,028
Leipsic	7,600,050	5.29%	30.0	7/1/2010	10,416,939
Leipsic	230,476	0.95%	10.0	7/1/2016	157,393
Lewisburg	100,417	0.06%	20.0	1/1/2018	90,932
Lewisburg	55,888	2.59%	5.0	7/1/2019	53,951
Lexington	4,531,860	4.65%	30.0	7/1/2010	5,774,027
Lima	30,639,757	4.32%	30.0	7/1/2012	41,216,316
Lima	16,744,408	3.83%	30.0	7/1/2013	22,176,497
Lima	2,731,333	4.64%	30.0	7/1/2013	3,984,606
Lima	2,133,335	3.49%	15.0	1/1/2013	1,471,136
Lima	711,650	3.17%	15.0	1/1/2013	479,853

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Lima	2,560,450	3.09%	30.0	7/1/2014	3,222,881
Lima	1,001,507	2.20%	30.0	1/1/2017	1,236,061
Lima	15,005,987	2.54%	30.0	1/1/2017	19,379,768
Lima	2,946,968	2.69%	30.0	1/1/2017	3,881,732
Lima	10,059,949	2.58%	20.0	1/1/2020	12,940,980
Lithopolis	3,022,639	4.35%	30.0	1/1/2005	2,720,348
Lockbourne	229,786	6.87%	25.0	1/1/1997	38,975
Lockbourne	152,857	5.90%	25.0	7/1/1996	17,766
Lodi	228,720	2.00%	30.0	7/1/2015	259,475
Logan	9,348,873	2.87%	30.0	1/1/2013	10,738,742
Logan	1,263,083	2.29%	30.0	7/1/2019	1,723,965
Lorain	2,211,916	5.50%	20.0	7/1/2000	92,546
Lorain	449,287	6.13%	20.0	7/1/2001	58,926
Lorain	3,585,574	4.90%	30.0	1/1/2005	3,440,626
Lorain	3,400,652	4.59%	20.0	1/1/2008	2,093,346
Lorain	770,575	4.47%	20.0	7/1/2008	498,827
Lorain	1,700,936	3.84%	20.0	7/1/2011	1,410,128
Lorain	1,749,427	4.45%	20.0	7/1/2012	1,662,547
Lorain	3,920,088	3.09%	20.0	7/1/2014	3,831,365
Lorain	4,724,713	3.15%	20.0	7/1/2014	4,643,016
Lorain	7,924,151	3.44%	20.0	1/1/2015	8,269,161
Lorain	3,733,655	3.29%	20.0	7/1/2015	3,972,130
Lorain	4,581,899	4.24%	20.0	1/1/2015	5,131,192
Lorain	1,719,793	4.12%	20.0	1/1/2015	1,905,953
Lorain	4,256,286	3.95%	20.0	7/1/2016	5,112,042
Lorain	150,000	2.75%	20.0	7/1/2015	151,912
Lorain	469,678	3.31%	20.0	7/1/2015	500,579
Lorain	1,447,864	2.56%	20.0	1/1/2016	1,487,246
Lorain	5,878,090	2.91%	20.0	1/1/2017	6,625,827
Lorain	3,979,190	3.04%	20.0	7/1/2017	4,672,461
Lorain	767,699	2.54%	20.0	1/1/2017	836,312
Lorain	5,407,349	2.90%	20.0	1/1/2020	7,164,262
Lorain County	174,802	2.28%	30.0	1/1/2019	234,228
LORCO Rural WW District	243,534	2.95%	20.0	1/1/2017	275,520
Loudonville	892,310	4.56%	20.0	1/1/2006	410,903
Loudonville	659,322	2.70%	20.0	1/1/2020	857,618
Louisville	56,392	3.98%	20.0	1/1/2006	24,694
Lowellville	330,000	2.57%	20.0	7/1/2015	328,688
Lowellville	987,019	3.34%	20.0	7/1/2015	1,054,805
Lowellville	194,017	2.92%	20.0	7/1/2016	212,460
Lucas	110,066	3.84%	15.0	7/1/2011	63,187
Lucas County	501,749	6.35%	25.0	7/1/1996	60,847
Lucas County	1,268,385	5.39%	20.0	7/1/2001	156,603
Lucas County	15,170,142	3.85%	25.0	1/1/2005	9,503,654
Lucas County	789,485	4.36%	20.0	7/1/2010	625,359
Lucas County	1,097,053	4.36%	20.0	7/1/2010	868,987
Lucas County	909,742	3.55%	20.0	7/1/2012	798,952
Lucas County	417,175	3.55%	20.0	7/1/2012	366,371
Lucas County	492,852	2.45%	20.0	7/1/2016	516,761
Lucas County	1,505,267	2.45%	20.0	7/1/2016	1,578,288
Lucas County	589,639	2.64%	20.0	7/1/2018	705,528
Lucas County	490,000	2.64%	20.0	7/1/2018	586,306
Lucas County	12,029,941	2.64%	20.0	1/1/2019	14,783,383
Lucas County	3,024,818	2.93%	20.0	1/1/2020	4,018,643
Madison	778,315	4.29%	20.0	1/1/2007	408,525
Madison	763,055	4.29%	20.0	1/1/2007	400,515
Madison	868,582	2.84%	30.0	1/1/2014	1,037,049
Madison County	90,082	6.41%	25.0	1/1/2003	58,217
Madison County	7,475,545	4.40%	25.0	7/1/2006	5,704,152

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Mahoning Valley Sanitary District	302,790	4.47%	20.0	7/1/2008	196,009
Mahoning Valley Sanitary District	14,327,587	3.99%	20.0	7/1/2013	14,129,005
Mahoning Valley Sanitary District	611,719	2.94%	20.0	7/1/2016	671,094
Mahoning Valley Sanitary District	3,202,817	4.32%	20.0	7/1/2016	3,972,921
Malta	96,547	4.48%	30.0	7/1/2005	91,177
Malvern	379,786	2.00%	30.0	7/1/2015	430,855
Marietta	1,033,032	2.27%	30.0	1/1/2018	1,334,694
Marietta	1,224,499	2.05%	30.0	1/1/2018	1,535,761
Marietta	296,062	2.88%	20.0	1/1/2019	371,961
Marietta	867,210	2.98%	20.0	1/1/2019	1,099,546
Marietta	1,800,489	3.10%	30.0	1/1/2018	2,593,377
Marietta	634,781	2.98%	15.0	1/1/2018	686,252
Marietta	730,230	3.10%	30.0	1/1/2018	1,051,804
Marietta	337,372	2.98%	15.0	1/1/2018	364,728
Marietta	1,872,844	2.98%	20.0	7/1/2018	2,312,112
Marietta	728,802	2.58%	30.0	1/1/2021	1,051,339
Martins Ferry	198,051	2.22%	20.0	1/1/2017	209,389
McArthur	99,744	4.12%	20.0	1/1/2008	58,955
McArthur	110,326	2.46%	20.0	1/1/2017	119,294
McArthur	343,912	2.06%	20.0	1/1/2018	379,217
McArthur	28,827	2.30%	20.0	1/1/2018	32,513
McArthur	204,528	3.03%	20.0	1/1/2018	246,799
McComb	611,004	5.50%	20.0	1/1/2001	50,752
McComb	89,843	4.50%	20.0	1/1/2006	41,160
Mechanicsburg	316,661	5.01%	25.0	7/1/2006	257,048
Mechanicsburg	763,616	1.50%	20.0	1/1/2015	665,037
Mechanicsburg	983,741	1.03%	20.0	7/1/2018	1,009,235
Medina County	2,129,497	5.73%	20.0	7/1/2000	90,805
Medina County	942,260	5.56%	20.0	7/1/2001	117,982
Medina County	2,731,477	5.85%	25.0	7/1/1996	315,958
Medina County	1,167,264	6.41%	20.0	7/1/2002	260,928
Medina County	6,709,453	4.87%	20.0	7/1/2003	1,850,533
Medina County	2,791,274	4.65%	20.0	7/1/2003	755,593
Medina County	738,112	4.65%	20.0	1/1/2003	171,262
Medina County	3,917,015	4.65%	20.0	7/1/2004	1,363,280
Medina County	2,391,717	4.64%	20.0	1/1/2005	924,115
Medina County	2,776,850	4.40%	20.0	7/1/2005	1,156,143
Medina County	1,227,448	4.40%	20.0	7/1/2005	511,048
Medina County	841,874	3.85%	20.0	1/1/2006	364,464
Medina County	1,718,880	4.51%	20.0	1/1/2006	788,145
Medina County	1,975,863	4.56%	20.0	1/1/2007	1,061,518
Medina County	1,407,799	4.10%	20.0	1/1/2007	726,817
Medina County	3,105,659	4.00%	20.0	7/1/2007	1,702,945
Medina County	2,917,679	4.00%	20.0	7/1/2007	1,599,869
Medina County	2,670,185	3.75%	20.0	1/1/2008	1,527,736
Medina County	3,561,688	3.79%	20.0	1/1/2008	2,045,032
Medina County	686,987	4.09%	20.0	1/1/2009	455,615
Medina County	1,167,359	4.09%	20.0	1/1/2009	774,201
Medina County	1,389,196	3.82%	20.0	1/1/2009	899,729
Medina County	809,146	3.62%	20.0	7/1/2008	486,238
Medina County	1,600,700	4.11%	20.0	1/1/2010	1,181,613
Medina County	3,768,455	4.21%	25.0	1/1/2011	3,922,770
Medina County	1,445,847	2.91%	20.0	1/1/2013	1,246,294
Medina County	2,570,749	3.27%	20.0	7/1/2013	2,377,755
Medina County	2,290,715	2.94%	20.0	7/1/2015	2,360,753
Medina County	100,936	3.31%	20.0	7/1/2015	107,577
Medina County	233,015	2.28%	20.0	7/1/2016	240,462
Medina County	2,134,807	2.57%	20.0	1/1/2017	2,332,093
Medina County	1,312,368	2.46%	20.0	7/1/2018	1,544,262

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Medina County	503,104	2.06%	5.0	7/1/2017	266,021
Medina County	25,753,294	2.85%	20.0	7/1/2019	33,115,605
Medina County	13,000,762	3.35%	20.0	7/1/2019	17,494,809
Medina County	340,091	3.58%	5.0	7/1/2018	262,125
Medina County	594,245	3.09%	5.0	7/1/2018	452,131
Mercer County	1,107,151	0.91%	30.0	1/1/2017	1,140,881
Mercer County	399,865	0.87%	20.0	7/1/2020	436,528
Miami Conservancy District	5,124,704	4.55%	20.0	1/1/2003	1,178,936
Miamisburg	503,748	2.06%	20.0	7/1/2019	601,751
Middlefield	126,334	2.75%	20.0	1/1/2019	156,835
Middlefield	321,501	3.02%	30.0	7/1/2020	491,101
Milford Center	153,112	5.94%	25.0	7/1/1997	29,773
Milford Center	69,012	6.58%	25.0	7/1/1995	2,850
Milford Center	234,134	4.84%	25.0	1/1/2004	146,226
Millersport	217,566	6.04%	25.0	1/1/1997	34,168
Millersport	20,500	5.66%	23.0	1/1/1999	3,231
Millersport	1,113,420	3.82%	30.0	7/1/2009	1,222,131
Mingo Junction	7,691,890	5.77%	30.0	7/1/1996	3,543,310
Monroe Township Water and Sewer District	78,926	2.67%	30.0	1/1/2019	111,370
Monroe Township Water and Sewer District	2,936,573	3.00%	30.0	1/1/2019	4,325,040
Monroe Water Systems	3,012,672	1.50%	30.0	7/1/2015	3,189,444
Monroe Water Systems	1,014,062	3.40%	30.0	7/1/2015	1,381,725
Monroeville	125,310	5.66%	25.0	7/1/1999	42,697
Monroeville	141,203	5.66%	25.0	7/1/1999	48,112
Monroeville	348,401	5.77%	25.0	7/1/2000	145,713
Monroeville	133,477	6.36%	25.0	1/1/1996	10,801
Monroeville	1,186,558	3.19%	30.0	7/1/2016	1,636,187
Montgomery County	1,303,009	5.56%	25.0	7/1/2000	534,018
Montgomery County	2,802,539	5.66%	25.0	7/1/2000	1,167,107
Montgomery County	2,445,538	3.92%	20.0	1/1/2008	1,420,360
Montgomery County	2,886,272	4.24%	20.0	1/1/2016	3,447,773
Montgomery County	638,777	2.91%	20.0	1/1/2017	720,035
Montgomery County	1,903,343	2.91%	20.0	1/1/2017	2,145,463
Montgomery County	832,890	2.91%	20.0	1/1/2017	938,840
Montgomery County	496,520	2.92%	20.0	1/1/2017	560,194
Montgomery County	146,574	2.46%	20.0	1/1/2017	158,490
Montgomery County	1,829,758	2.53%	20.0	1/1/2018	2,200,333
Montgomery County	740,113	2.01%	20.0	1/1/2018	1,003,098
Montgomery County	133,608	2.01%	20.0	1/1/2018	147,918
Montgomery County	61,443	2.30%	20.0	1/1/2018	69,293
Montgomery County	204,362	2.06%	20.0	7/1/2017	323,740
Montgomery County	405,468	3.03%	20.0	1/1/2018	496,067
Montgomery County	373,301	2.88%	20.0	1/1/2019	453,363
Montgomery County	911,835	3.03%	20.0	1/1/2019	1,119,585
Montgomery County	886,783	3.08%	20.0	1/1/2019	1,134,659
Montgomery County	146,510	3.03%	20.0	7/1/2018	181,701
Montgomery County	142,576	2.75%	20.0	7/1/2018	172,341
Montgomery County	117,153	2.90%	20.0	7/1/2019	151,336
Montgomery County	1,221,661	2.90%	20.0	1/1/2020	1,618,594
Montgomery County	3,714,115	2.93%	20.0	7/1/2020	4,934,414
Montgomery County	1,620,742	2.92%	20.0	7/1/2020	2,151,278
Montgomery County	507,627	2.92%	20.0	7/1/2020	673,794
Montgomery County	4,490,687	2.25%	20.0	1/1/2021	5,601,412
Montgomery County	153,338	2.10%	20.0	7/1/2021	188,578
Montpelier	1,628,662	6.41%	20.0	7/1/2001	218,441
Morgan-Meigsville Rural Water District	180,193	6.91%	25.0	7/1/1995	7,669
Morgan-Meigsville Rural Water District	1,554,698	1.50%	30.0	7/1/2015	1,645,921
Morgan-Meigsville Rural Water District	932,932	0.78%	30.0	7/1/2015	890,926
Morgan-Meigsville Rural Water District	155,349	0.98%	30.0	7/1/2020	179,681

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Mount Orab	3,004,059	0.75%	30.0	7/1/2017	3,080,260
Mount Orab	96,934	2.75%	30.0	7/1/2017	131,068
Mount Orab	602,448	3.04%	30.0	7/1/2020	922,619
Mount Pleasant	823,459	1.02%	30.0	7/1/2020	957,946
Mount Sterling	338,761	1.09%	30.0	1/1/2017	358,268
Mount Sterling	260,190	1.15%	30.0	7/1/2016	272,410
Mount Sterling	3,014,511	0.96%	30.0	1/1/2018	3,244,815
Mount Sterling	6,647,372	2.96%	30.0	1/1/2018	9,404,241
Mount Victory	382,502	3.92%	25.0	1/1/2008	313,828
Muskingum County	172,043	4.21%	30.0	7/1/2010	208,114
Muskingum County	6,095,736	4.21%	30.0	7/1/2010	7,373,779
Muskingum County	127,996	3.39%	30.0	7/1/2011	146,861
Muskingum County	168,280	3.79%	30.0	7/1/2012	212,346
Muskingum County	388,386	2.54%	20.0	7/1/2016	410,653
Muskingum County	1,788,924	2.13%	20.0	1/1/2019	2,095,990
Muskingum County	1,271,520	2.40%	20.0	7/1/2019	1,568,263
Muskingum Watershed Conservancy District	550,697	5.56%	25.0	1/1/2000	205,177
Napoleon	299,593	4.49%	20.0	1/1/2006	137,134
Napoleon	1,415,401	4.49%	20.0	1/1/2006	647,878
Nelsonville	112,028	0.75%	30.0	7/1/2017	114,870
New Albany	1,933,380	5.77%	20.0	1/1/2001	164,190
New Albany	701,331	6.13%	20.0	1/1/2001	61,322
New Bloomington	198,501	5.76%	25.0	1/1/1999	60,703
New Concord	1,199,988	5.85%	25.0	7/1/1996	138,806
New Concord	71,045	3.45%	10.0	1/1/2013	25,383
New Concord	245,928	1.14%	30.0	1/1/2019	281,366
New Holland	129,757	0.63%	20.0	7/1/2019	134,850
New Holland	191,561	1.03%	30.0	1/1/2021	223,168
New Lexington	2,358,132	0.75%	30.0	1/1/2020	2,637,762
New London	268,351	2.53%	20.0	7/1/2017	300,653
New Miami	228,001	3.79%	30.0	7/1/2007	223,770
New Miami	90,549	3.79%	20.0	7/1/2007	48,742
New Miami	61,486	4.45%	12.0	1/1/2011	20,006
New Paris	195,197	0.83%	20.0	7/1/2019	206,945
New Philadelphia	211,630	4.25%	25.0	1/1/2006	152,084
New Philadelphia	634,766	3.29%	20.0	7/1/2014	631,741
New Richmond	421,617	5.06%	30.0	1/1/2006	439,492
New Richmond	1,932,522	2.75%	30.0	1/1/2018	2,660,567
New Vienna	200,582	5.74%	30.0	1/1/2003	183,221
New Vienna	196,365	5.14%	30.0	7/1/2004	187,189
New Vienna	354,167	3.92%	30.0	7/1/2007	353,158
New Waterford	30,418	0.56%	5.0	7/1/2018	21,622
New Weston	11,002	1.14%	10.0	1/1/2020	11,672
Newark	2,112,793	3.77%	20.0	7/1/2013	2,043,510
Newport Water & Sewer District	276,742	3.95%	15.0	7/1/2009	110,827
Newport Water & Sewer District	583,297	2.33%	20.0	1/1/2018	659,749
Ney	250,009	5.65%	30.0	1/1/2003	226,138
North Baltimore	175,010	6.39%	20.0	1/1/2001	15,624
North Hampton	878,160	4.34%	30.0	7/1/2005	815,713
North Royalton	4,537,472	2.06%	20.0	7/1/2018	5,142,257
Northern Area Water Authority	24,000,000	3.99%	30.0	1/1/2008	24,825,442
Northern Area Water Authority	563,838	3.34%	20.0	7/1/2015	602,561
Northern Ohio Rural Water	554,866	5.85%	25.0	7/1/1995	21,394
Northern Ohio Rural Water	1,573,363	6.18%	25.0	7/1/1998	438,172
Northern Ohio Rural Water	1,082,634	5.88%	25.0	7/1/1998	281,718
Northern Ohio Rural Water	7,841,842	6.39%	25.0	1/1/2002	4,426,195
Northern Ohio Rural Water	1,731,444	5.39%	25.0	7/1/2002	951,733
Northern Ohio Rural Water	678,693	3.98%	25.0	7/1/2005	452,609
Northern Ohio Rural Water	4,308,823	3.62%	30.0	1/1/2008	4,259,522

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Northern Ohio Rural Water	1,614,017	4.28%	30.0	7/1/2009	1,872,746
Northern Ohio Rural Water	983,186	4.18%	30.0	1/1/2010	1,156,157
Northern Ohio Rural Water	333,500	4.45%	30.0	7/1/2010	415,077
Northern Ohio Rural Water	1,076,433	2.99%	30.0	7/1/2013	1,283,062
Northwest Regional Water District	478,939	6.39%	25.0	7/1/2001	251,020
Northwestern Water & Sewer District	3,503,917	5.56%	20.0	1/1/2001	292,488
Northwestern Water & Sewer District	168,813	4.56%	20.0	1/1/2005	64,781
Northwestern Water & Sewer District	338,000	4.56%	20.0	1/1/2005	129,706
Northwestern Water & Sewer District	90,500	4.10%	20.0	7/1/2005	36,711
Northwestern Water & Sewer District	798,004	3.41%	20.0	7/1/2011	636,724
Northwestern Water & Sewer District	1,886,811	4.45%	20.0	1/1/2012	1,721,385
Northwestern Water & Sewer District	188,101	3.36%	30.0	1/1/2013	230,013
Northwestern Water & Sewer District	609,189	3.19%	30.0	1/1/2014	760,784
Northwestern Water & Sewer District	767,692	2.94%	30.0	7/1/2014	947,871
Northwestern Water & Sewer District	3,232,074	2.94%	30.0	7/1/2014	3,990,648
Northwestern Water & Sewer District	381,694	3.09%	30.0	7/1/2013	460,834
Northwestern Water & Sewer District	694,644	3.09%	30.0	7/1/2014	874,361
Northwestern Water & Sewer District	336,686	3.44%	30.0	7/1/2014	442,981
Northwestern Water & Sewer District	130,911	3.90%	30.0	7/1/2015	189,750
Northwestern Water & Sewer District	716,578	3.03%	30.0	7/1/2016	968,130
Northwestern Water & Sewer District	200,672	2.74%	30.0	7/1/2016	261,131
Northwestern Water & Sewer District	860,359	2.01%	20.0	1/1/2017	891,739
Northwestern Water & Sewer District	383,185	2.85%	20.0	7/1/2018	467,461
Northwestern Water & Sewer District	753,914	2.85%	20.0	7/1/2018	919,726
Northwestern Water & Sewer District	144,475	2.70%	20.0	7/1/2018	173,832
Northwestern Water & Sewer District	324,382	2.70%	20.0	7/1/2019	411,394
Northwestern Water & Sewer District	429,973	2.70%	20.0	7/1/2019	545,308
Northwestern Water & Sewer District	469,679	2.90%	20.0	1/1/2020	622,283
Northwestern Water & Sewer District	413,820	2.93%	20.0	7/1/2019	536,039
Northwestern Water & Sewer District	821,029	3.10%	20.0	7/1/2020	1,107,830
Northwestern Water & Sewer District	536,361	2.10%	20.0	7/1/2020	659,628
Northwestern Water & Sewer District	931,927	2.10%	20.0	1/1/2021	1,146,104
Northwood	830,175	5.88%	25.0	1/1/1999	256,813
Northwood	360,006	5.66%	25.0	1/1/1999	109,035
Norwalk	616,386	3.67%	20.0	1/1/2008	350,169
Norwalk	329,555	4.78%	20.0	1/1/2009	231,952
Norwalk	890,839	2.82%	20.0	1/1/2013	761,572
Norwalk	654,955	3.79%	20.0	1/1/2015	705,110
Norwalk	485,059	2.95%	20.0	1/1/2016	516,487
Oak Harbor	1,003,563	5.56%	20.0	7/1/2001	125,658
Oak Harbor	363,123	3.36%	10.0	7/1/2013	150,693
Oak Harbor	613,201	3.77%	10.0	7/1/2013	259,605
Oak Hill	17,000	3.35%	29.5	1/1/2013	20,511
Oak Hill	582,437	3.79%	30.0	7/1/2012	734,953
Oakwood	46,148	5.77%	20.0	7/1/2000	1,960
Ohio City	151,045	5.65%	30.0	1/1/2003	136,623
Olmsted Falls	84,424	5.70%	20.0	7/1/2005	39,208
Orange Village	1,072,180	6.41%	20.0	7/1/2005	527,281
Orange Village	641,016	6.41%	20.0	7/1/2005	315,242
Ottawa County	127,826	6.13%	20.0	7/1/2000	5,588
Ottawa County	17,146	5.74%	20.0	7/1/2002	3,631
Ottawa County	3,286,744	4.51%	30.0	1/1/2005	3,014,391
Ottawa County	69,018	4.56%	20.0	7/1/2005	29,134
Ottawa County	245,936	3.82%	20.0	7/1/2007	132,736
Ottawa County	223,761	4.79%	20.0	7/1/2009	166,381
Ottawa County	420,319	4.79%	20.0	7/1/2009	312,534
Ottawa County	232,989	2.92%	20.0	7/1/2017	270,599
Pataskala	348,037	3.17%	25.0	7/1/2012	354,611
Paulding	2,751,241	0.78%	30.0	7/1/2017	2,833,431

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Paulding	2,329,705	2.28%	30.0	7/1/2017	2,960,234
Peebles	211,008	2.00%	30.0	1/1/2015	234,688
Pemberville	735,319	2.46%	15.0	1/1/2017	707,018
Perry County	116,024	6.41%	25.0	7/1/2000	51,550
Perry County	33,032	6.03%	25.0	7/1/2001	16,737
Perry County	61,314	6.03%	25.0	7/1/2001	31,067
Perry County	4,603,188	3.62%	30.0	7/1/2010	5,182,535
Perrysville	245,575	0.57%	20.0	7/1/2016	214,655
Phillipsburg	65,411	2.30%	20.0	7/1/2018	75,826
Phillipsburg	70,390	2.10%	10.0	7/1/2020	78,407
Philo	106,146	2.08%	30.0	1/1/2021	143,219
Philo	117,804	2.42%	30.0	7/1/2021	166,378
Pike County	85,845	1.50%	30.0	7/1/2014	87,318
Pioneer	2,121,832	5.45%	30.0	7/1/2010	2,960,551
Pioneer	1,971,918	3.02%	25.0	1/1/2020	2,823,280
Piqua	15,678,193	2.54%	30.0	1/1/2018	20,997,825
Piqua	10,329,376	3.04%	30.0	1/1/2018	14,764,328
Piqua	18,872,276	3.54%	30.0	1/1/2018	28,734,139
Piqua	3,854,485	2.53%	30.0	1/1/2018	5,155,501
Pleasant City	60,000	5.76%	24.5	7/1/1998	13,890
Pleasant Valley Regional Sewer District	227,398	4.15%	30.0	7/1/2010	273,106
Plymouth	100,504	2.82%	20.0	7/1/2014	95,834
Plymouth	387,443	0.75%	20.0	1/1/2019	397,054
Polk	899,384	1.50%	30.0	7/1/2016	989,496
Port Clinton	427,601	3.39%	20.0	1/1/2011	325,761
Port Clinton	325,905	3.99%	10.0	1/1/2012	79,687
Port Clinton	575,888	3.44%	30.0	7/1/2014	757,702
Port Clinton	329,807	4.15%	30.0	7/1/2014	473,386
Port Clinton	833,553	2.74%	30.0	7/1/2016	1,084,686
Port Clinton	332,642	1.70%	30.0	1/1/2018	397,624
Port Clinton	455,449	2.59%	30.0	1/1/2021	657,878
Port Jefferson	39,534	6.39%	20.0	1/1/2002	7,059
Portsmouth	501,078	4.11%	30.0	1/1/2009	555,088
Portsmouth	676,978	2.74%	30.0	7/1/2014	814,452
Portsmouth	3,738,695	3.30%	30.0	1/1/2016	5,129,122
Portsmouth	1,152,663	2.90%	20.0	1/1/2020	1,527,177
Put-in-Bay	286,051	6.87%	25.0	1/1/1996	24,259
Put-in-Bay	210,608	6.12%	25.0	7/1/1998	58,322
Put-in-Bay	159,053	6.87%	25.0	1/1/1996	13,489
Put-in-Bay	56,006	5.88%	22.5	7/1/1998	4,552
Put-in-Bay	143,196	4.00%	20.0	1/1/2006	62,816
Rawson	149,977	3.24%	20.0	7/1/2013	138,342
Rawson	50,002	3.95%	18.5	1/1/2015	51,773
Rayland	63,395	3.82%	20.0	7/1/2007	34,215
Rayland	132,798	2.74%	30.0	7/1/2016	172,808
Richfield	559,745	3.75%	20.0	7/1/2006	260,208
Richfield	400,573	4.12%	20.0	1/1/2008	236,764
Richland County	324,168	5.89%	10.0	7/1/2010	21,679
Richwood	267,664	6.39%	25.0	7/1/2002	161,870
Rio Grande	399,740	1.04%	20.0	7/1/2016	366,125
Ripley	191,413	3.97%	30.0	1/1/2009	208,490
Ripley	65,487	0.56%	5.0	7/1/2019	59,850
Riverlea	1,685,109	2.79%	26.0	7/1/2018	2,243,426
Roaming Shores	276,728	4.51%	20.0	7/1/2004	95,165
Rocky River	11,582,102	5.50%	25.0	1/1/2001	5,148,141
Roseville	1,035,951	6.56%	25.0	1/1/1997	170,802
Roseville	160,059	2.41%	20.0	7/1/2020	202,665
Rural Lorain County Water Authority	8,873,780	3.86%	20.0	7/1/2011	7,369,627
Rural Lorain County Water Authority	1,683,733	2.87%	20.0	7/1/2012	1,390,419

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Sabina	327,818	2.99%	30.0	1/1/2014	399,059
Saint Clairsville	1,880,566	2.71%	20.0	1/1/2017	1,977,521
Saint Paris	3,068,844	2.78%	30.0	7/1/2018	4,317,274
Salineville	386,224	0.56%	20.0	7/1/2017	357,696
Salineville	178,153	0.33%	20.0	1/1/2018	165,819
Sandusky	2,110,930	5.56%	25.0	7/1/2001	1,022,429
Sandusky	350,878	6.13%	25.0	1/1/2001	155,670
Sandusky	655,276	6.39%	25.0	7/1/2001	343,441
Sandusky	306,536	6.39%	25.0	1/1/2002	173,019
Sandusky	1,220,752	6.03%	25.0	7/1/2001	618,544
Sandusky	4,476,432	5.05%	20.0	7/1/2002	895,379
Sandusky	295,352	5.05%	20.0	7/1/2002	59,076
Sandusky	15,340,554	4.65%	20.0	7/1/2004	5,339,133
Sandusky	9,582,223	5.20%	20.0	7/1/2004	3,493,585
Sandusky	8,162,198	4.60%	20.0	7/1/2006	4,085,837
Sandusky	13,554,252	4.27%	30.0	7/1/2011	17,319,412
Sandusky	6,111,940	4.45%	30.0	1/1/2013	8,534,644
Sandusky	5,142,582	2.65%	30.0	1/1/2018	6,987,933
Sandusky	1,793,805	2.21%	20.0	1/1/2018	2,006,171
Sandusky County	602,598	2.86%	20.0	1/1/2013	517,053
Sandusky County	252,852	3.62%	20.0	1/1/2015	268,140
Sandusky County	1,194,471	3.31%	20.0	7/1/2015	1,273,058
Sandusky County	1,702,934	2.54%	20.0	7/1/2016	1,800,569
Sandusky County	918,346	3.01%	30.0	1/1/2019	1,354,296
Sandusky County	1,130,661	2.56%	20.0	1/1/2020	1,451,768
Sandusky County	78,147	2.83%	20.0	1/1/2020	102,874
Sandusky Township Sewer District	1,680,003	6.41%	25.0	7/1/2002	1,017,873
Sandusky Township Sewer District	829,604	3.75%	25.0	7/1/2007	642,793
Sandusky Township Sewer District	113,311	0.71%	20.0	7/1/2016	100,441
Sardinia	184,881	2.00%	30.0	1/1/2015	205,629
Sardinia	75,458	0.75%	20.0	7/1/2016	67,155
Sardinia	180,650	0.62%	15.0	7/1/2020	189,460
Scio	60,000	6.32%	25.0	7/1/1997	12,093
Sebring	678,328	4.84%	20.0	1/1/2005	266,593
Sebring	205,363	2.57%	20.0	1/1/2017	224,342
Seven Mile	136,930	6.24%	25.0	7/1/1995	5,479
Shadyside	302,717	4.79%	30.0	1/1/2010	382,438
Shadyside	712,221	2.89%	20.0	1/1/2020	942,765
Shawnee	23,006	1.03%	20.0	7/1/2018	23,602
Sheffield	332,209	2.87%	20.0	1/1/2020	438,939
Sheffield Lake	688,574	3.53%	20.0	1/1/2018	869,240
Sheffield Lake	250,875	2.41%	20.0	1/1/2020	317,654
Shelby	358,226	2.41%	10.0	1/1/2021	405,268
Shelby County	1,562,925	3.75%	20.0	7/1/2007	838,332
Shelby County	190,112	0.71%	20.0	1/1/2017	173,626
Sherwood	95,695	5.15%	20.0	7/1/2002	19,302
Shiloh	288,285	0.90%	30.0	1/1/2016	285,651
Shiloh	19,321	1.15%	30.0	1/1/2016	19,846
Shiloh	604,882	0.41%	30.0	7/1/2017	589,842
Shreve	89,444	2.92%	10.0	1/1/2021	103,784
Sidney	22,417,448	3.30%	30.0	7/1/2017	32,528,833
Sidney	5,366,872	2.20%	30.0	1/1/2019	7,114,454
Silver Lake	181,163	3.28%	30.0	7/1/2018	271,748
Somerset	103,504	2.96%	30.0	1/1/2017	141,201
South Amherst	212,978	4.59%	20.0	1/1/2007	114,715
South Amherst	251,558	2.84%	15.0	1/1/2014	186,413
South Amherst	191,698	2.83%	15.0	7/1/2019	228,702
South Bloomfield	2,263,946	3.99%	30.0	7/1/2007	2,276,761
South Charleston	63,069	2.80%	30.0	1/1/2018	87,397

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South Point	810,880	2.63%	20.0	1/1/2019	995,554
Southern Perry County Water District	20,022	0.52%	5.0	7/1/2017	10,155
Southern Perry County Water District	215,781	0.59%	20.0	7/1/2018	211,899
Southwest Licking Community W & S District	1,535,982	5.90%	25.0	7/1/1996	178,523
Southwest Licking Community W & S District	4,495,281	6.87%	25.0	7/1/1997	953,089
Southwest Licking Community W & S District	4,677,629	6.87%	25.0	7/1/1997	991,751
Southwest Licking Community W & S District	1,488,264	6.36%	25.0	1/1/1998	361,302
Southwest Licking Community W & S District	744,818	6.36%	25.0	1/1/1998	180,818
Southwest Licking Community W & S District	746,065	6.32%	25.0	7/1/1999	270,669
Southwest Licking Community W & S District	1,633,510	6.11%	25.0	7/1/1999	581,053
Southwest Licking Community W & S District	1,190,334	6.11%	25.0	7/1/1999	423,411
Southwest Licking Community W & S District	812,550	5.77%	25.0	1/1/2002	432,517
Southwest Licking Community W & S District	842,003	5.90%	25.0	7/1/1996	97,864
Southwest Licking Community W & S District	186,501	6.64%	25.0	1/1/1997	30,976
Southwest Licking Community W & S District	612,143	6.64%	25.0	1/1/1997	101,672
Southwest Licking Community W & S District	1,118,134	6.72%	25.0	1/1/1997	187,080
Southwest Licking Community W & S District	4,347,301	6.72%	25.0	1/1/1997	727,367
Southwest Licking Community W & S District	409,363	6.36%	25.0	1/1/1997	66,253
Southwest Licking Community W & S District	3,504,589	6.75%	25.0	7/1/1995	146,995
Southwest Licking Community W & S District	1,418,897	6.51%	25.0	7/1/1995	58,215
Southwest Licking Community W & S District	246,390	5.77%	25.0	7/1/1996	28,283
Southwest Licking Community W & S District	1,937,114	6.51%	25.0	7/1/1995	79,477
Southwest Licking Community W & S District	2,952,407	6.24%	25.0	7/1/1995	118,125
Southwest Licking Community W & S District	74,221	6.24%	25.0	7/1/1995	2,970
Southwest Licking Community W & S District	123,908	6.16%	25.0	7/1/1995	4,920
Southwest Licking Community W & S District	414,652	6.16%	25.0	7/1/1995	16,466
Southwest Licking Community W & S District	1,239,294	6.16%	25.0	7/1/1995	49,212
Southwest Licking Community W & S District	991,233	6.16%	25.0	1/1/1996	78,724
Southwest Licking Community W & S District	181,653	6.16%	25.0	1/1/1996	14,427
Southwest Licking Community W & S District	2,501,136	6.02%	25.0	1/1/1996	196,028
Southwest Licking Community W & S District	1,215,918	6.02%	25.0	1/1/1996	95,298
Southwest Licking Community W & S District	414,897	5.77%	25.0	1/1/1996	31,750
Southwest Licking Community W & S District	298,400	5.77%	25.0	1/1/1996	22,835
Southwest Licking Community W & S District	4,701,383	6.41%	25.0	1/1/2002	2,658,557
Southwest Licking Community W & S District	2,785,368	5.20%	25.0	7/1/2004	1,903,398
Southwest Licking Community W & S District	821,831	5.20%	25.0	7/1/2004	561,603
Southwest Licking Community W & S District	2,185,240	4.28%	25.0	1/1/2005	1,432,072
Southwest Licking Community W & S District	448,895	4.35%	25.0	1/1/2005	296,316
Southwest Licking Community W & S District	1,939,560	3.99%	25.0	7/1/2006	1,418,138
Southwest Licking Community W & S District	1,503,365	3.99%	25.0	1/1/2007	1,146,999
Southwest Licking Community W & S District	759,352	3.99%	20.0	1/1/2007	388,281
Southwest Licking Community W & S District	325,197	3.99%	25.0	7/1/2006	237,773
Southwest Licking Community W & S District	1,552,769	4.79%	25.0	7/1/2010	1,661,748
Southwest Licking Community W & S District	1,412,430	4.79%	25.0	7/1/2010	1,511,559
Southwest Licking Community W & S District	19,290,913	3.14%	25.0	7/1/2019	27,427,036
Spencer	465,127	3.30%	30.0	1/1/2017	662,652
Spencer	202,270	2.56%	20.0	1/1/2019	246,729
Stark County	4,691,450	5.27%	25.0	7/1/2000	1,868,937
Steubenville	11,075,528	4.11%	30.0	7/1/2009	12,592,220
Steubenville	4,203,255	4.95%	30.0	1/1/2010	5,408,643
Steubenville	4,223,696	3.45%	25.0	1/1/2014	4,816,868
Stockport	365,276	0.81%	30.0	1/1/2020	412,188
Streetsboro	548,609	5.01%	30.0	7/1/2005	550,857
Strongsville	948,523	4.70%	20.0	1/1/2003	221,024
Strongsville	2,259,707	4.40%	20.0	1/1/2004	684,240
Strongsville	544,038	3.39%	20.0	1/1/2011	414,467
Strongsville	655,678	2.87%	20.0	1/1/2013	563,115
Struthers	937,663	4.78%	20.0	7/1/2009	696,622
Struthers	200,907	5.45%	20.0	1/1/2010	166,192

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Sugar Grove	246,840	4.45%	30.0	1/1/2009	284,740
Sugar Grove	478,183	2.78%	30.0	1/1/2019	684,513
Summit County	2,831,020	6.72%	25.0	1/1/1997	473,671
Summit County	5,139,714	6.72%	25.0	1/1/1997	859,949
Summit County	462,540	6.49%	25.0	1/1/1997	75,769
Summit County	454,073	5.25%	20.0	7/1/2009	350,957
Summit County	885,552	4.75%	20.0	7/1/2009	656,231
Summit County	567,805	4.97%	20.0	1/1/2010	451,242
Summit County	475,391	3.84%	20.0	7/1/2011	394,114
Summit County	337,330	3.84%	20.0	7/1/2011	279,657
Summit County	401,401	3.84%	20.0	7/1/2011	332,774
Summit County	252,657	3.77%	20.0	7/1/2012	226,270
Summit County	316,113	3.31%	20.0	7/1/2015	336,910
Summit County	484,821	2.78%	20.0	1/1/2016	508,244
Sunbury	7,458,457	4.16%	30.0	7/1/2007	7,655,925
Swanecreek Water District	147,993	6.39%	25.0	1/1/2003	95,465
Swanecreek Water District	380,135	6.39%	25.0	1/1/2003	245,212
Swanecreek Water District	434,253	1.01%	30.0	7/1/2019	496,040
Switzerland of Ohio Water District	93,333	0.63%	20.0	7/1/2019	96,996
Sycamore	199,486	4.66%	20.0	7/1/2004	69,488
Syracuse	51,481	2.51%	20.0	7/1/2017	57,570
Tallmadge	1,404,937	4.65%	20.0	1/1/2010	1,086,611
Tallmadge	500,618	2.76%	10.0	1/1/2016	345,781
Thornville	2,378,560	6.39%	25.0	7/1/2002	1,438,434
Thurston	3,000,000	1.50%	30.0	7/1/2015	3,176,029
Thurston	278,703	3.49%	30.0	7/1/2015	384,053
Toledo	963,116	3.79%	20.0	7/1/2013	933,183
Toledo	13,891,607	2.79%	20.0	7/1/2016	15,031,641
Toledo	9,772,578	3.62%	20.0	7/1/2015	10,708,876
Toledo	1,406,154	3.45%	20.0	1/1/2015	1,468,693
Toledo	3,258,379	3.34%	20.0	7/1/2016	3,706,810
Toledo	317,778	2.25%	20.0	1/1/2017	336,921
Toledo	2,013,405	2.54%	20.0	7/1/2017	2,257,862
Toledo	810,496	2.71%	20.0	1/1/2017	896,948
Toledo	892,251	2.25%	5.0	1/1/2019	758,708
Toledo	15,000,490	2.53%	30.0	1/1/2022	21,496,769
Toledo	7,901,970	3.03%	30.0	1/1/2022	12,085,960
Toronto	1,710,136	3.03%	30.0	1/1/2020	2,615,631
Tri-Cities North Regional Wastewater Authority	5,602,115	2.84%	20.0	1/1/2015	5,536,175
Tri-Cities North Regional Wastewater Authority	2,408,010	2.38%	10.0	1/1/2019	2,448,137
Tri-County Rural W & S District	85,332	6.12%	25.0	1/1/1998	20,255
Tri-County Rural W & S District	30,183	6.11%	25.0	7/1/1998	8,351
Tri-County Rural W & S District	11,186	5.73%	25.0	1/1/1999	3,411
Tri-County Rural W & S District	224,637	5.56%	25.0	1/1/2000	83,694
Tri-County Rural W & S District	4,967,383	6.72%	25.0	1/1/1997	831,116
Tri-County Rural W & S District	269,999	6.51%	25.0	1/1/1997	44,311
Trimble	6,288	0.75%	30.0	7/1/2016	6,213
Trimble	189,864	0.78%	30.0	7/1/2016	188,426
Troy	3,098,742	3.03%	20.0	1/1/2018	3,739,169
Trumbull County	357,088	4.26%	20.0	7/1/2010	280,414
Trumbull County	95,992	3.76%	20.0	7/1/2010	72,148
Trumbull County	591,439	3.76%	20.0	7/1/2010	444,529
Trumbull County	559,286	3.76%	20.0	7/1/2010	420,363
Trumbull County	1,576,415	3.76%	20.0	7/1/2010	1,184,844
Trumbull County	1,498,165	3.76%	20.0	7/1/2010	1,126,031
Trumbull County	485,945	3.76%	20.0	7/1/2010	365,240
Trumbull County	646,556	4.26%	20.0	7/1/2010	507,728
Trumbull County	178,191	3.34%	20.0	1/1/2011	135,143
Trumbull County	456,860	3.34%	20.0	1/1/2011	346,490

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Trumbull County	98,417	4.14%	20.0	1/1/2012	87,408
Trumbull County	334,435	4.14%	20.0	1/1/2012	297,026
Trumbull County	416,875	4.14%	20.0	1/1/2012	370,245
Trumbull County	198,051	3.52%	20.0	1/1/2012	166,527
Trumbull County	284,101	2.99%	20.0	7/1/2012	237,200
Trumbull County	114,554	2.84%	20.0	7/1/2013	101,885
Trumbull County	361,987	4.15%	15.0	1/1/2015	326,597
Trumbull County	378,470	2.25%	20.0	7/1/2015	365,862
Tuscarawas County	75,248	2.94%	20.0	1/1/2014	70,044
Tuscarawas County	87,511	3.34%	20.0	1/1/2014	84,471
Tuscarawas County	290,000	3.42%	20.0	1/1/2014	253,334
Twin-Keystone Water District	1,213,741	3.98%	20.0	7/1/2005	487,206
Uhrichsville	78,051	2.06%	20.0	7/1/2017	83,673
Uhrichsville	195,380	2.46%	20.0	7/1/2017	217,476
Upper Sandusky	6,234,116	4.65%	20.0	1/1/2004	1,928,644
Upper Sandusky	15,209,357	3.31%	30.0	1/1/2012	17,677,927
Upper Sandusky	533,351	2.69%	30.0	7/1/2013	611,459
Urbana	561,383	2.90%	10.0	1/1/2020	650,744
Urbana	699,169	2.92%	10.0	1/1/2020	811,264
Van Buren	102,012	3.99%	30.0	7/1/2006	96,727
Wakeman	520,147	6.72%	25.0	1/1/1996	43,514
Wakeman	321,023	4.84%	30.0	7/1/2004	295,733
Walnut Creek Sewer District	33,930	5.16%	30.0	1/1/2005	33,536
Wapakoneta	7,282,354	5.25%	30.0	1/1/2011	10,179,220
Wapakoneta	1,479,259	3.70%	30.0	1/1/2011	1,723,005
Wapakoneta	7,280,043	2.84%	30.0	1/1/2015	9,054,221
Wapakoneta	4,322,727	3.62%	30.0	7/1/2015	6,053,795
Wapakoneta	2,456,688	3.27%	30.0	1/1/2021	3,874,131
Warren	677,164	3.84%	20.0	1/1/2015	732,248
Washington County	215,832	2.92%	20.0	1/1/2020	286,483
Washingtonville	66,265	0.59%	10.0	7/1/2019	64,920
Wauseon	3,008,266	3.34%	20.0	1/1/2012	2,488,928
Waynesburg	1,156,475	2.98%	30.0	1/1/2020	1,757,485
Waynesville	466,117	6.41%	25.0	1/1/2001	225,927
Waynesville	198,869	5.01%	25.0	7/1/2004	133,356
Wellington	976,457	6.87%	25.0	7/1/1996	124,217
Wellington	1,396,255	6.32%	25.0	7/1/1999	506,554
Wellington	999,998	5.86%	25.0	1/1/2000	385,945
Wellington	2,218,110	4.66%	20.0	7/1/2005	944,352
Wellington	1,990,310	4.59%	30.0	7/1/2007	2,149,657
Wellston	75,769	2.79%	15.0	7/1/2014	59,056
West Carrollton	1,179,572	3.36%	20.0	7/1/2013	1,099,904
West Jefferson	5,424,451	2.78%	30.0	1/1/2020	8,032,800
West Jefferson	70,184	3.27%	30.0	1/1/2020	110,678
West Lafayette	1,151,603	5.77%	20.0	7/1/2000	49,268
West Lafayette	334,457	4.16%	30.0	7/1/2005	304,076
West Liberty	1,463,473	3.15%	30.0	7/1/2017	2,083,556
West Manchester	39,238	3.92%	30.0	7/1/2007	39,126
West Mansfield	225,326	0.57%	20.0	7/1/2016	196,956
West Mansfield	75,605	0.50%	20.0	1/1/2018	71,588
West Milton	302,102	0.64%	10.0	1/1/2019	281,120
West Milton	296,351	0.70%	10.0	1/1/2019	276,626
West Salem	381,701	3.85%	20.0	7/1/2004	123,935
West Salem	2,486,351	1.50%	30.0	7/1/2015	2,632,241
West Salem	123,330	0.92%	20.0	7/1/2016	111,628
West Union	941,376	5.86%	25.0	1/1/1999	290,656
West Union	81,218	1.04%	30.0	7/1/2018	90,018
West Union	102,371	1.14%	30.0	7/1/2018	115,103
West Union	1,706,066	1.50%	30.0	7/1/2018	2,018,662

**LOCAL GOVERNMENTAL AGENCIES PARTICIPATION IN THE FRESH WATER PROGRAM
PURSUANT TO THE EXISTING COOPERATIVE AGREEMENTS
As of August 31, 2019**

Governmental Agency	Total Estimated Project Costs(1)	Interest Rate	Term	First Payment Date	Projected Remaining Fresh Water Series Repayments
West Unity	853,699	4.21%	10.0	1/1/2011	105,480
Whitewater Twp Regional Sewer District	1,358,971	5.15%	20.0	7/1/2003	383,756
Williams County	1,139,564	6.13%	25.0	7/1/2002	672,568
Williams County	2,637,562	6.13%	20.0	7/1/2002	576,546
Williamsport	1,326,210	6.11%	25.0	1/1/1999	419,328
Williamsport	107,088	5.66%	25.0	1/1/2000	40,542
Willoughby	88,505	4.78%	20.0	1/1/2004	27,686
Willoughby	559,572	4.45%	20.0	7/1/2012	531,783
Willoughby	1,006,120	3.35%	20.0	1/1/2014	972,039
Willoughby	1,133,548	2.75%	20.0	7/1/2016	1,222,064
Willoughby	681,234	2.90%	20.0	7/1/2019	880,011
Willoughby Hills	140,985	4.17%	20.0	1/1/2008	83,695
Wilmington	1,253,221	4.15%	20.0	1/1/2011	1,021,178
Windham	554,223	0.98%	20.0	7/1/2019	596,371
Woodsfield	394,752	4.50%	20.0	7/1/2006	195,918
Woodville	79,813	2.75%	5.0	1/1/2016	17,194
Wyoming	859,795	2.75%	30.0	7/1/2019	1,247,121
Yellow Springs	405,000	2.91%	20.0	1/1/2016	429,665
Yellow Springs	486,662	3.15%	30.0	7/1/2016	667,669
Yellow Springs	6,221,700	2.75%	30.0	1/1/2018	8,565,621
York Township Water Authority	191,088	0.75%	30.0	1/1/2019	206,623
Yorkville	541,409	4.47%	20.0	7/1/2008	350,478
Yorkville	90,651	0.84%	20.0	1/1/2020	98,669
Youngstown	181,562	4.48%	20.0	1/1/2005	69,196
Youngstown	1,909,215	4.48%	20.0	1/1/2007	1,018,691
Youngstown	204,784	3.99%	20.0	1/1/2008	119,672
Youngstown	1,440,686	3.79%	20.0	7/1/2006	672,105
Youngstown	1,700,087	3.83%	20.0	7/1/2011	1,408,181
Youngstown	550,291	4.14%	20.0	7/1/2012	509,102
Youngstown	1,200,000	3.30%	20.0	7/1/2012	1,030,483
Youngstown	2,156,112	4.29%	20.0	1/1/2013	2,101,744
Youngstown	1,297,609	3.49%	20.0	1/1/2013	1,178,827
Youngstown	5,725,365	3.45%	20.0	7/1/2013	5,382,002
Youngstown	4,982,856	2.86%	20.0	1/1/2014	4,604,371
Zanesville	11,547,803	4.47%	20.0	1/1/2010	8,794,581
Zanesville	7,354,323	3.65%	30.0	7/1/2012	9,121,521
Zanesville	718,584	3.20%	20.0	7/1/2012	611,522
Zanesville	342,569	3.17%	15.0	1/1/2013	230,988
Zanesville	2,681,396	3.15%	20.0	7/1/2014	2,635,031
Zanesville	393,986	3.92%	10.0	7/1/2014	216,018
Zanesville	738,063	3.07%	5.0	7/1/2016	240,539
Zanesville	401,408	2.06%	20.0	7/1/2017	430,321
Zanesville	241,752	2.87%	20.0	7/1/2020	319,421
	<u>2,046,534,245</u>				<u>2,081,351,851</u>

Notes :

- (1) These amounts include capitalized interest charges. Some of the loans listed above have already been fully funded at the estimated principal amount; the final loan amounts on those loans that have not yet been fully funded may be less than anticipated depending on actual project construction costs.

APPENDIX C

INDEPENDENT ACCOUNTANTS' REPORT AND RELATED AUDITED FINANCIAL STATEMENTS FOR THE AUTHORITY

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**OHIO WATER
DEVELOPMENT AUTHORITY**

Financial Statements

December 31, 2018

(With Independent Auditors' Report Thereon)

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OHIO WATER DEVELOPMENT AUTHORITY

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INDEPENDENT AUDITORS' REPORT

Ohio Water Development Authority
 408 South High Street
 Columbus, Ohio 43215

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and each major fund of the Ohio Water Development Authority (the Authority) as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and each major fund of the Ohio Water Development Authority, as of December 31, 2018, and the respective changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

During the year ended December 31, 2018, the Authority adopted GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefit Plans Other than Pensions. As a result of the implementation of GASB Statement No. 75, the Authority restated net position at January 1, 2018 for the change in accounting principle (See Note 4). Our auditors' opinion was not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (pages 3 through 7), schedule of proportionate share of the net pension liability (page 61), schedule of pension contributions (page 62), schedule of proportionate share of net OPEB liability (page 63), and schedule of OPEB contributions (page 64) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated March 25, 2019, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

Clark, Schaefer, Hackett & Co.

Springfield, Ohio
March 25, 2019

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

For the Year Ended December 31, 2018

As management of the Ohio Water Development Authority (the Authority), a related organization of the State of Ohio, we offer readers of the Authority's financial statements this unaudited narrative overview and analysis of the financial activities of the Authority for the year ended December 31, 2018. We encourage readers to consider the information presented here in conjunction with the Authority's audited financial statements, which begin on page 8 of this report.

Financial Highlights

- The Authority's cash, cash equivalents and investments decreased by \$519,471,267 or 28.14%.
- The Authority's loan receivables increased by \$511,347,134 or 7.91%.
- The Authority's bonds and notes payable decreased by \$177,972,902 or 4.40%.
- The Authority's investment income increased by \$14,775,283 or 118.47%.
- The Authority's interest on bonds and notes increased by \$5,654,647 or 4.80%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. The Authority's basic financial statements comprise two components: 1) combining financial statements and 2) notes to financial statements.

Combining financial statements. The Authority follows proprietary fund accounting, which means these statements are presented in a manner similar to a private-sector business. The *combining financial statements* are designed to provide readers with a broad overview of the Authority's finances by fund and in total. A *fund* is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The Authority, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. These statements offer short and long-term financial information about its activities.

The *combining statement of net position* presents information on all of the Authority's assets, deferred outflows of resources, liabilities and deferred inflows of resources, including information about the nature and amounts of investments in resources (assets and deferred outflows of resources), the obligations (liabilities and deferred inflows of resources) of the Authority and the Authority's net position as of December 31, 2018. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

The *combining statement of revenues, expenses and changes in net position* presents information showing how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g., depreciation and earned but unused vacation leave).

The *combining statement of cash flows* provides information about the Authority's cash receipts and cash payments during the reporting period. This statement summarizes the net changes in cash resulting from operating, investing and noncapital financing activities.

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

Each of the combining financial statements highlight programs of the Authority that are principally supported by loan and investment income, programs that are intended to recover all or a significant portion of their costs through program fees or investment earnings on contributed capital (*business-type activities*). The combining financial statements can be found on pages 8-13 of this report.

Notes to financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the combining financial statements. The notes to financial statements can be found on pages 14-60 of this report.

Financial Analysis of the Authority's Financial Position and Results of Operations

The tables below provide a summary of the Authority's financial position and operations for 2018 and 2017, respectively.

The following table summarizes changes in net position of the Authority between December 31, 2018 and December 31, 2017, as restated:

Condensed Statement of Net Position, as restated (all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Current assets	\$70,968	\$35,447	\$35,521	100.21%
Noncurrent restricted assets	8,000,499	8,044,749	(44,250)	(0.55%)
Noncurrent unrestricted assets	228,307	227,858	449	0.20%
Capital assets	1,090	1,173	(83)	(7.08%)
Total assets	8,300,864	8,309,227	(8,363)	(0.10%)
Loss on refunding	36,578	47,251	(10,673)	(22.59%)
Advance of loan interest	72,219	73,888	(1,669)	(2.26%)
Pension and OPEB	448	755	(307)	(40.66%)
Total deferred outflows of resources	109,245	121,894	(12,649)	(10.38%)
Total assets and deferred outflows of resources	\$8,410,109	\$8,431,121	\$(21,012)	(0.25%)
Current liabilities	393,147	\$338,451	54,696	16.16%
Noncurrent revenue bonds and notes payable	3,648,456	3,841,644	(193,188)	(5.03%)
Other noncurrent liabilities	2,564	2,980	(416)	(13.96%)
Total liabilities	4,044,167	4,183,075	(138,908)	(3.32%)
Deferred inflows of resources:				
Pension and OPEB	424	83	341	410.84%
Net position:				
Net investment in capital assets	1,090	1,173	(83)	(7.08%)
Restricted	4,082,725	3,996,961	85,764	2.15%
Unrestricted	281,703	249,829	31,874	12.76%
Total net position	4,365,518	4,247,963	117,555	2.77%
Total liabilities, deferred inflows of resources and net position	\$8,410,109	\$8,431,121	\$(21,012)	(0.25%)

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

As noted earlier, net position may serve as a useful indicator of a government's financial position. In the case of the Authority, assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$4,365,518,302 as of December 31, 2018, \$4,082,725,041 of which is restricted for debt and grant covenants.

By far, the largest portion of the Authority's net position is reflected in its loan receivables, cash, cash equivalents and investments less any related debt still outstanding used to fund these loans to local government agencies.

The following table summarizes the changes in revenues and expenses for the Authority between 2018 and 2017:

**Condensed Statement of Revenues,
Expenses and Changes in Net Position**
(all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Operating revenues:				
Loan income	\$164,396	\$164,026	\$370	0.23%
Investment income	27,248	12,472	14,776	118.47%
Administrative fees from projects	5,884	4,736	1,148	24.24%
Total operating revenues	197,528	181,234	16,294	8.99%
Operating expenses:				
Payroll and benefits	2,202	2,325	(123)	(5.29%)
Interest on bonds and notes	123,347	117,692	5,655	4.80%
Bond and note issuance expense	6,129	8,954	(2,825)	(31.55%)
Loan principal forgiveness and grant expense	55,309	37,080	18,229	49.16%
State revolving fund administration	10,825	10,663	162	1.52%
Professional services	3,639	3,672	(33)	(0.90%)
Loan interest rate buy-down	12,096	13,709	(1,613)	(11.77%)
Other	375	425	(50)	(11.76%)
Total operating expenses	213,922	194,520	19,402	9.97%
Operating loss	(16,394)	(13,286)	(3,108)	(23.39%)
Nonoperating other revenues	12	5	7	140.00%
Contribution from U.S. EPA	123,570	99,427	24,143	24.28%
Federal subsidy income	10,367	10,331	36	0.35%
Change in net position	\$117,555	\$96,477	\$21,078	21.85%

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

The two primary sources of operating revenue for the Authority are loan income and investment income, while the significant operating expense is interest on bonds and notes. For the year ending December 31, 2018, the Authority had an operating loss of \$16,393,946 compared to an operating loss of \$13,285,595 in 2017. This increase of \$3,108,351 in operating loss was primarily attributed to a \$5,654,647 increase in interest on bonds and notes and an \$18,229,083 increase in loan principal forgiveness and grant expense, offset by a \$14,775,283 increase in investment income.

During 2018, the Authority's net position increased by \$117,554,966 or 2.77%. The majority of this increase was due to the following:

- \$16,393,946 in operating loss as noted earlier.
- \$123,569,735 in contribution from U.S. EPA which was used to make loans to local governments.
- \$10,367,381 in Build America Bonds (BABs) subsidies (i.e., federal subsidy income) used to offset interest expense on bonds.

Financial Analysis of Net Position by Fund, as restated (all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Operating	\$ 2,668	\$ 2,482	\$ 186	7.49%
Other Projects	278,719	246,505	32,214	13.07%
In Lieu Fee	1,408	952	456	47.90%
Community Assistance	125,244	126,611	(1,367)	(1.08%)
Fresh Water	627,112	640,296	(13,184)	(2.06%)
Water Pollution Control Loan	2,757,571	2,668,083	89,488	3.35%
Drinking Water Assistance	572,796	563,034	9,762	1.73%
Total Net Position	\$ 4,365,518	\$4,247,963	\$117,555	2.77%

During 2018, net position by fund experienced the following significant changes:

- Operating Fund net position increased \$186,637 or 7.49%. This increase was due primarily to administrative fees from projects due to high loan volume.
- Other Projects Fund net position increased \$32,213,582 or 13.07%. This increase was caused by transfers into the Other Projects Fund from the Community Assistance and Fresh Water Funds in 2018.
- In-Lieu Fee Fund net position increased by \$455,782 or 47.90%. This increase was primarily caused by the increase in investment income and administrative fees from projects due to higher activity.
- Water Pollution Control Loan Fund net position increased \$89,487,881 or 3.35%. This increase was caused by the Contribution from U.S. EPA in 2018.

Debt Administration

As of December 31, 2018, the Authority had revenue bonds and notes principal outstanding of \$3,868,624,124. The Authority's debt represents bonds and notes secured solely by loan repayments of pledged loans. The table below summarizes the amount of debt outstanding for 2018 and 2017.

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

Outstanding Debt at December 31, 2018 and December 31, 2017 (net of premiums)

(all amounts expressed in thousands of dollars)

	2018	2017
Revenue Bonds	\$ 3,526,724	3,579,697
Revenue Notes	341,900	466,900
Total	\$ 3,868,624	4,046,597

During 2018, the Authority issued the following bonds and notes for the purpose of providing loan funding to local governments under its various loan programs:

- Fresh Water Revenue Bonds—Fresh Water Series 2018
- Drinking Water Assistance Fund Revenue Notes—DWAF State Match Series 2018

The Authority continues to maintain strong ratings from Moody's and Standard & Poor's. Although the Drinking Water Assistance Fund Note was a private placement note and therefore not rated, we included the Drinking Water Assistance Fund long-term program ratings in the table below. The table below summarizes the ratings from Moody's and Standard & Poor's for the 2018 bond and note issuances of the Authority.

Bond or Note Series	Moody's	Standard & Poor's
FW 2018 Bonds	Aaa	AAA
DWAF 2018 Notes	Aaa	AAA

Additional information on the Authority's long-term debt can be found in the Notes to Financial Statements, pages 30-43 of this report.

Contacting the Authority's Financial Management

This financial report is designed to provide a general overview of the Authority's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Chief Financial Officer, Ohio Water Development Authority, 480 S. High Street, Columbus, Ohio 43215, or call (614) 466-5822 or toll-free (877) OWDA-123, or visit the Authority's website at www.owda.org.

OHIO WATER DEVELOPMENT AUTHORITY

Combining Statement of Net Position
December 31, 2018

	Custodied Funds			Trusted Funds
	Operating	Other	In Lieu	Community
	Fund	Projects	Fee	Assistance
		Fund	Fund	Fund
				(Note 5)
<u>Assets</u>				
Current assets:				
Cash and cash equivalents -- Note 2	\$ 300,677	5,052,466	6,131,300	-
Investments -- Note 2	1,452,033	47,561,269	3,997,150	-
Receivables:				
Loan and fee receivables	491,282	5,959,345	-	-
Other	21,557	-	-	-
Total current assets	2,265,549	58,573,080	10,128,450	-
Noncurrent assets:				
Restricted grant, bond and note covenant assets:				
Cash and cash equivalents -- Note 2	-	-	-	2,192,110
Investments -- Note 2	-	-	-	24,912,206
Loan and fee receivables	-	-	-	152,874,150
Total noncurrent restricted assets	-	-	-	179,978,466
Investments -- Note 2	1,802,684	123,373,735	2,983,558	-
Loan receivables	-	98,937,305	-	-
Other receivables	-	-	-	46,222
Due from other funds -- Note 3	325,894	15,000	-	-
Capital assets, at depreciated cost	1,090,370	-	-	-
Total noncurrent unrestricted assets	3,218,948	222,326,040	2,983,558	46,222
Total assets	5,484,497	280,899,120	13,112,008	180,024,688
<u>Deferred Outflows of Resources</u>				
Loss on refunding	-	-	-	1,435,704
Advance of loan interest	-	-	-	-
Pension and other postemployment benefits (OPEB)	448,135	-	-	-
Total deferred outflows of resources	448,135	-	-	1,435,704
Total assets and deferred outflows of resources	\$ 5,932,632	280,899,120	13,112,008	181,460,392
<u>Liabilities</u>				
Current liabilities:				
Accounts payable	\$ 261,060	2,179,960	11,703,932	-
Current liabilities payable from restricted assets:				
Due to other funds -- Note 3	15,000	-	-	-
Accounts payable	-	-	-	13,208
Accrued interest	-	-	-	226,563
Revenue bonds payable, net of premiums	-	-	-	4,214,003
Total current liabilities payable from restricted assets	15,000	-	-	4,453,774
Noncurrent liabilities:				
Compensated absences	228,218	-	-	-
Net pension and OPEB liability	2,336,170	-	-	-
Revenue bonds and notes payable, net of premiums	-	-	-	51,762,804
Total noncurrent liabilities	2,564,388	-	-	51,762,804
Total liabilities	2,840,448	2,179,960	11,703,932	56,216,578
<u>Deferred Inflows of Resources</u>				
Pension and OPEB	423,733	-	-	-
<u>Net Position</u>				
Net investment in capital assets	1,090,370	-	-	-
Restricted for debt and grant covenants	-	-	1,408,076	125,243,814
Unrestricted	1,578,081	278,719,160	-	-
Total net position	2,668,451	278,719,160	1,408,076	125,243,814
Total liabilities, deferred inflows of resources and net position	\$ 5,932,632	280,899,120	13,112,008	181,460,392
See accompanying notes to financial statements.				

Trusteed Funds			
Fresh Water Fund (Note 6)	Water Pollution Control Loan Fund (Notes 7 & 8)	Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
-	-	-	11,484,443
-	-	-	53,010,452
-	-	-	6,450,627
-	-	-	21,557
-	-	-	70,967,079
21,300,373	116,588,985	28,093,722	168,175,190
161,858,910	658,262,579	120,774,690	965,808,385
1,470,895,499	4,510,896,441	731,849,723	6,866,515,813
1,654,054,782	5,285,748,005	880,718,135	8,000,499,388
-	-	-	128,159,977
-	-	-	98,937,305
190,936	564,116	67,566	868,840
-	-	-	340,894
-	-	-	1,090,370
190,936	564,116	67,566	229,397,386
1,654,245,718	5,286,312,121	880,785,701	8,300,863,853
9,434,718	20,223,845	5,484,112	36,578,379
-	72,218,639	-	72,218,639
-	-	-	448,135
9,434,718	92,442,484	5,484,112	109,245,153
1,663,680,436	5,378,754,605	886,269,813	8,410,109,006
-	-	-	14,144,952
1,097	-	324,797	340,894
17,086,226	111,445,629	15,885,267	144,430,330
3,769,830	8,981,473	1,084,417	14,062,283
42,710,000	148,129,343	25,115,000	220,168,346
63,567,153	268,556,445	42,409,481	379,001,853
-	-	-	228,218
-	-	-	2,336,170
973,001,608	2,352,627,577	271,063,789	3,648,455,778
973,001,608	2,352,627,577	271,063,789	3,651,020,166
1,036,568,761	2,621,184,022	313,473,270	4,044,166,971
-	-	-	423,733
-	-	-	1,090,370
625,706,025	2,757,570,583	572,796,543	4,082,725,041
1,405,650	-	-	281,702,891
627,111,675	2,757,570,583	572,796,543	4,365,518,302
1,663,680,436	5,378,754,605	886,269,813	8,410,109,006

OHIO WATER DEVELOPMENT AUTHORITY
Combining Statement of Revenues, Expenses and Changes in Net Position
Year ended December 31, 2018

	Custodied Funds			Trusted Funds
	Operating Fund	Other Projects Fund	In Lieu Fee Fund	Community Assistance Fund (Note 5)
Operating revenues:				
Loan income	\$ -	2,112,005	-	2,516,467
Investment income	64,414	3,130,603	215,403	436,730
Administrative fees from projects	3,256,796	-	490,746	-
Total operating revenues	3,321,210	5,242,608	706,149	2,953,197
Operating expenses:				
Payroll and benefits	2,202,434	-	-	-
Interest on bonds and notes	-	-	-	2,655,917
Bond and note issuance expense	-	-	-	2,514
Loan principal forgiveness and grant expense	-	5,757,133	-	-
State revolving fund administration	-	-	-	-
Professional services	556,810	911,980	250,367	-
Loan interest rate buy-down	-	-	-	-
Other	375,329	-	-	-
Total operating expenses	3,134,573	6,669,113	250,367	2,658,431
Operating income (loss)	186,637	(1,426,505)	455,782	294,766
Nonoperating other revenues	-	11,796	-	-
Income (loss) before contributions, federal subsidy income and transfers	186,637	(1,414,709)	455,782	294,766
Contribution from U.S. EPA	-	-	-	-
Federal subsidy income	-	-	-	556,361
Transfers in (out), net -- Note 16	-	33,628,291	-	(2,217,921)
Change in net position	186,637	32,213,582	455,782	(1,366,794)
Net position at beginning of year, as restated -- Note 4	2,481,814	246,505,578	952,294	126,610,608
Net position at end of year	\$ 2,668,451	278,719,160	1,408,076	125,243,814

See accompanying notes to financial statements.

Trusteed Funds			
Fresh Water Fund (Note 6)	Water Pollution Control Loan Fund (Notes 7 & 8)	Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
49,880,489	95,133,825	14,753,778	164,396,564
3,439,744	17,054,764	2,905,867	27,247,525
-	-	2,136,055	5,883,597
53,320,233	112,188,589	19,795,700	197,527,686
-	-	-	2,202,434
32,059,169	78,533,093	10,098,565	123,346,744
1,808,451	3,749,345	568,181	6,128,491
3,250	26,268,073	23,280,481	55,308,937
-	7,027,483	3,797,328	10,824,811
356,361	842,699	720,845	3,639,062
3,154,501	7,852,314	1,089,009	12,095,824
-	-	-	375,329
37,381,732	124,273,007	39,554,409	213,921,632
15,938,501	(12,084,418)	(19,758,709)	(16,393,946)
-	-	-	11,796
15,938,501	(12,084,418)	(19,758,709)	(16,382,150)
-	94,857,795	28,711,940	123,569,735
2,287,162	6,714,504	809,354	10,367,381
(31,410,370)	-	-	-
(13,184,707)	89,487,881	9,762,585	117,554,966
640,296,382	2,668,082,702	563,033,958	4,247,963,336
627,111,675	2,757,570,583	572,796,543	4,365,518,302

OHIO WATER DEVELOPMENT AUTHORITY

Combining Statement of Cash Flows

Year ended December 31, 2018

	Custodied Funds			Trusted Funds
	Operating Fund	Other Projects Fund	In Lieu Fee Fund	Community Assistance Fund (Note 5)
Operating activities:				
Administrative fees from projects	\$ 2,148,432	-	490,746	-
Payroll and benefits	(2,043,857)	-	-	-
Grant expense	-	(1,985,889)	-	-
State revolving fund administration	-	-	-	-
Professional services	(496,602)	(902,092)	(447,000)	-
Other	(241,875)	-	-	-
Net cash provided (used) by operating activities	(633,902)	(2,887,981)	43,746	-
Investing activities:				
Proceeds from maturity or sale of investments	2,700,000	80,967,136	4,000,000	20,308,486
Purchase of investments	(3,231,740)	(98,423,813)	(6,931,392)	(25,488,301)
Interest received on investments, net of purchased interest	39,086	2,921,491	138,513	360,197
Interest received on projects	-	1,983,271	-	2,533,740
Principal collected on projects	-	7,191,849	-	10,415,754
Payment for construction of projects	-	(28,936,352)	-	-
Net cash provided (used) by investing activities	(492,654)	(34,296,418)	(2,792,879)	8,129,876
Noncapital financing activities:				
Interest paid on bonds and notes, net of purchased interest	-	-	-	(2,861,903)
Proceeds of bonds and notes	-	-	-	-
Bond and note issuance expense	-	-	-	(25,000)
Redemption of bonds and notes	-	-	-	(4,175,000)
Contribution from U.S. EPA	-	-	-	-
Other	800,539	(3,204)	2,020,202	556,473
Transfers (to) from other funds	-	33,628,291	-	(2,217,921)
Net cash provided (used) by noncapital financing activities	800,539	33,625,087	2,020,202	(8,723,351)
Net increase (decrease) in cash and cash equivalents	(326,017)	(3,559,312)	(728,931)	(593,475)
Cash and cash equivalents at beginning of year	626,694	8,595,509	6,834,738	2,779,551
Cash and cash equivalents at end of year -- Note 2	\$ 300,677	5,036,197	6,105,807	2,186,076
Reconciliation of operating income (loss) to net cash provided (used) by operating activities:				
Operating income (loss)	\$ 186,637	(1,426,505)	455,782	294,766
Adjustments:				
Investment income	(64,414)	(3,130,603)	(215,403)	(436,730)
Principal forgiveness and other	324,038	3,771,244	-	-
Interest on bonds and notes	-	-	-	2,655,917
Loan and loan fee income	(1,108,364)	(2,112,005)	-	(2,516,467)
Bond and note issuance expense	-	-	-	2,514
Net change in other assets and other liabilities	28,201	9,888	(196,633)	-
Net cash provided (used) by operating activities	\$ (633,902)	(2,887,981)	43,746	-

See accompanying notes to financial statements.

Trusteed Funds			
Fresh Water Fund (Note 6)	Water Pollution Control Loan Fund (Notes 7 & 8)	Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
-	-	2,197,542	4,836,720
-	-	-	(2,043,857)
(3,250)	-	(255,652)	(2,244,791)
-	(7,027,483)	(3,797,328)	(10,824,811)
(362,698)	(926,683)	(729,913)	(3,864,988)
-	-	-	(241,875)
(365,948)	(7,954,166)	(2,585,351)	(14,383,602)
433,153,371	1,388,967,728	225,979,371	2,156,076,092
(384,972,888)	(898,166,808)	(190,063,369)	(1,607,278,311)
2,824,930	11,878,169	2,034,696	20,197,082
41,590,682	79,378,391	13,749,160	139,235,244
69,251,816	272,083,285	50,975,500	409,918,204
(132,062,819)	(672,136,906)	(89,507,766)	(922,643,843)
29,785,092	182,003,859	13,167,592	195,504,468
(41,581,963)	(102,320,372)	(13,923,965)	(160,688,203)
200,118,386	-	5,000,000	205,118,386
(1,655,683)	(3,921,969)	(455,806)	(6,058,458)
(155,180,000)	(145,700,000)	(29,600,000)	(334,655,000)
-	94,857,795	28,711,941	123,569,736
2,288,102	7,218,668	987,750	13,868,530
(31,410,370)	-	-	-
(27,421,528)	(149,865,878)	(9,280,080)	(158,845,009)
1,997,616	24,183,815	1,302,161	22,275,857
19,271,702	92,298,972	26,762,496	157,169,662
21,269,318	116,482,787	28,064,657	179,445,519
15,938,501	(12,084,418)	(19,758,709)	(16,393,946)
(3,439,744)	(17,054,764)	(2,905,867)	(27,247,525)
3,154,501	34,120,387	24,113,838	65,484,008
32,059,169	78,533,093	10,098,565	123,346,744
(49,880,489)	(95,133,825)	(14,753,778)	(165,504,928)
1,808,451	3,749,345	568,181	6,128,491
(6,337)	(83,984)	52,419	(196,446)
(365,948)	(7,954,166)	(2,585,351)	(14,383,602)

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

For the Year Ended December 31, 2018

(1) AUTHORIZING LEGISLATION, REPORTING ENTITY, PROGRAM DESCRIPTIONS, FUND ACCOUNTING AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Authorizing Legislation

The Ohio Water Development Authority (Authority) is a body corporate and politic in the State of Ohio created by an Act of the General Assembly of the State of Ohio effective March 7, 1968. It is authorized and empowered to acquire, construct, maintain, repair and operate water development projects and solid waste projects, to issue water development and solid waste revenue bonds and notes and to collect rentals and other charges to pay such bonds and notes and the interest thereon. The Authority was given jurisdiction over financing solid waste control by an Act of the General Assembly of the State of Ohio during 1970. Under provisions of the Act, such revenue bonds and notes shall not be deemed to constitute a debt or a pledge of faith and credit of the State nor any political subdivision thereof.

Reporting Entity

The accompanying financial statements comply with the provisions of Governmental Accounting Standards Board (GASB) Statement No. 14, *The Financial Reporting Entity*, as amended by GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units* and GASB Statement No. 61, *The Financial Reporting Entity: Omnibus*, which defines financial accountability. The criteria for determining financial accountability include the following circumstances:

- Appointment of a voting majority of an organization's governing authority and the ability of the primary government to either impose its will on that organization or the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government, or
- An organization is fiscally dependent on the primary government and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.

Officials of the State's primary government appoint a voting majority of the Authority's governing board. However, the primary government's accountability for the Authority does not extend beyond making those appointments. As such, the Authority is deemed a related organization of the State of Ohio. The Authority does not have any component units or related organizations of its own.

Programs

The Authority has established the following programs:

Local Communities

The Authority has established financing programs to provide loans to local communities in the State of Ohio for the construction of sewage and related water treatment facilities. These programs are accounted for in various funds, which are described in the following paragraphs.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

These loans provide for the financing of project construction costs. Revenue from the underlying project is pledged toward repayment of the loan.

The Authority's initial funding of the program came from a \$100,000,000 appropriation, all of which has been designated for use, from the State of Ohio. Subsequent funding of its programs has come from the issuance by the Authority of bonds and notes as well as federal capitalization grants.

Industrial

The Authority has established financing programs to assist private industry and certain municipalities participating in a manner similar to private industry, all located in the State of Ohio, in controlling water pollution and solid waste by constructing appropriate facilities. These programs are accounted for in various funds, which are described in Note 12. The Authority issues revenue bonds and notes to finance these programs. The Authority and the industrial companies and municipalities enter into agreements whereby the industrial companies and municipalities are required to make payments, as they become due, sufficient to pay the interest and principal on the bonds and notes issued to finance the projects.

These bonds and notes are principally secured by either revenues from the services, lease purchase agreements, mortgages, letters of credit or a combination thereof and are not secured by assets of the Authority.

Basis of Presentation—Fund Accounting

The accounts of the Authority are organized on the basis of funds, each of which is considered to be an independent fiscal and accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, deferred outflows of resources, liabilities, deferred inflows of resources, net position, revenues and expenses; and are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with laws, regulations or other restrictions. The following is a description of the funds adopted by the Authority.

(a) Operating Fund

The Operating Fund was established to account for the administrative activities and transactions of the Authority, which are required to carry out the provisions of the aforementioned authorizing legislation.

Revenues for Authority operations are principally provided by an administrative fee charged as a percentage of the total cost of each project which the Authority assists by providing financing. Fee income is recognized at the time that the financing agreements are finalized since substantially all of the costs associated with the agreements have been incurred by that time. Operating expenses, which are primarily salaries, employee fringe benefits and legal and professional fees include administrative expenses of the Authority and other expenses incurred in connection with the financing of projects.

(b) Other Projects Fund

The Other Projects Fund was established to account for its programs and commitments that are funded with funds other than proceeds of bonds or notes or other funds required by law or contract to be held in a fund separate and segregated from other funds of the Authority. The Other Projects Fund consists of the following programs and commitments:

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

- ***Other Projects Fund – Endowment Grant***

The purpose of this program is to provide grants to local government agencies (LGAs) in Ohio to develop innovative projects in the areas of drinking water, wastewater and solid waste management.

- ***Other Projects Fund – Solid Waste***

The purpose of this program is to provide financing to local governments in Ohio for the construction of solid waste facilities including recycling projects, composting, waste-to-energy projects and landfills. The balance of the construction costs are to be repaid by the solid waste facilities under terms of installment contracts over periods of 10 to 20 years with interest rates of 3.43% to 5.65%.

- ***Other Projects Fund – Local Economic Development***

The purpose of this program is to provide financing to local governments in Ohio to construct projects which will provide economic development benefits. The interest rate for each loan is negotiated by the local government and the Ohio Development Services Agency. The loans are to be repaid under terms of installment contracts over periods of 10 to 30 years with interest rates of 0.98% to 3.00%.

- ***Other Projects Fund – Brownfield***

The purpose of this program is to provide financing for the clean-up of contaminated brownfield sites under the state's voluntary action program. The loans are to be repaid under terms of installment contracts over periods of 5 to 15 years with interest rates of 2.00% to 3.00%.

- ***Other Projects Fund – Village Capital Improvements***

The purpose of this program is to provide interest-free planning and design loans to qualifying villages in Ohio for water and wastewater facilities. These loans are to be repaid at a term not to exceed 10 years.

- ***Other Projects Fund – Emergency Relief***

The purpose of this program is to provide financial assistance to Ohio communities or households that have sustained damage to their water or wastewater facilities as the result of a natural disaster or a mine subsidence event. To be eligible, communities or households must have an outstanding loan from the Authority and be in a federal or state designated disaster area, or be in an area of mine subsidence as declared by the state. The program can provide a community with up to two semi-annual loan payments to the Authority in an amount equivalent to the damage sustained by the water or wastewater systems during the disaster, or up to \$25,000 per household for mine subsidence relocation costs.

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Notes to Financial Statements

- ***Other Projects Fund – Dam Safety***

The purpose of this program is to help eligible Ohio dam owners receive below market interest rate loans to finance dam repairs and improvements that have been so ordered by the Ohio Department of Natural Resources. These loans are available through the Dam Safety Linked Deposit Program. In the program, Dam Safety funds are invested in local participating banks at below-market rates. The banks, in return, issue low interest rate loans to qualified participants. The amount invested in this program as of December 31, 2018 was \$701,963.

- ***Other Projects Fund – Lake Erie Soil Erosion***

The purpose of this program is to provide financing to the eight counties with Lake Erie shorelines containing coastal erosion areas. Any county receiving financing from the program will then provide financial assistance to property owners for the construction of erosion control structures in areas defined by statute as coastal erosion areas.

The loans to the counties are to be repaid under terms of installment contracts over 15 years with interest rates of 4.67%.

- ***Other Projects Fund – Security Assistance***

The purpose of this program is to provide financing to local governments in Ohio to protect the communities' water and wastewater systems. Eligible items under the program include lighting, fencing, cameras, motion detectors, gating and security systems and terrorism preparedness plans.

The loans to the local government agencies are to be repaid under terms of installment contracts over periods of 20 to 30 years with interest rates of 2.00%.

- ***Other Projects Fund – Interest Rate Buy-Down***

The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's Fresh Water, Refunding and Safe Water Refunding (which were consolidated into the Fresh Water Fund in 2007), and Pure Water Refunding (which was also consolidated into the Fresh Water Fund in 2010) Programs whose loan interest rates exceed 4.00%.

- ***Other Projects Fund – Unsewered Area Planning Loan Program***

The purpose of this program is to provide interest-free planning loans to unsewered areas where the LGA is considering the construction of a system of sewer facilities. These loans are to be repaid at a term not to exceed 10 years.

- ***Other Projects Fund – Unsewered Area Assistance Program***

The purpose of this program is to provide principal forgiveness construction loans to unsewered areas for the purpose of construction of a system of sewer facilities.

- ***Other Projects Fund – Alternative Stormwater Infrastructure Loan Program***

The purpose of this program is to provide loans to reduce stormwater run-off and mitigate flooding. The loans to the LGAs are to be repaid under terms of installment contracts over periods of 10 to 20 years with interest rates of 1.00% to 2.55%.

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Notes to Financial Statements

- ***Other Projects Fund – Rural Utilities Program***

The purpose of this program is to provide interim loans to local governments in Ohio to finance water development projects pending their receipt of loan or grant money from the United States of America, acting through Rural Utility Services. The loans to the LGAs are to be repaid under terms of cooperative agreements over 3 years with interest rates of 2.45% to 2.50%.

- ***Other Projects Fund – Unallocated Reserve***

This reserve was established for potential collectability or cash flow problems that may arise in the future on any Authority project. The target balance of the reserve is 1% of the outstanding loan balance of the Other Projects, Community Assistance and Fresh Water loan programs.

(c) ***In-Lieu Fee Fund***

The In-Lieu Fee (ILF) Mitigation Fund was established during 2014 by a resolution of the Authority. OWDA is responsible for fund management in support of the Nature Conservancy's administration of the program.

The purpose of the ILF Mitigation Fund is to provide an option for public and private entities that are impacting Ohio's wetlands or streams where direct mitigation of those impacts is not feasible. These entities pay into the ILF Mitigation Fund providing a source of funds that is then used to implement comparable projects elsewhere in the state that compensate for the originally impacted wetlands by public and private entities or carry out comparable projects to negate any negative impact on wetlands or streams.

(d) ***Community Assistance Fund***

The Community Assistance Fund (formerly known as the Hardship Fund) was established during 1983 by a resolution of the Authority and is administered by a Trustee. The purpose of the fund is to provide a financing program for local governments in Ohio that are unable to meet debt service requirements at normal market interest rates without undue hardship to users.

The balance of the construction costs is paid by the LGA under terms of installment contracts over periods of 10 to 30 years with interest rates of 1.00% to 3.11%. LGA payments of construction costs may be used for providing additional funding for qualifying projects.

Initial funding for the Community Assistance Fund was provided by a \$15,000,000 transfer from the Pure Water Refunding Fund. Additional funding has been provided by monetary transfers from the Fresh Water Fund, Refunding Fund, Safe Water Refunding Fund, Pure Water Refunding Fund and the issuance of the Water Development Revenue Bonds—Community Assistance Series 1997, Series 2003, Series 2007, Series 2010A and Series 2010B. The Water Development Revenue Refunding Bonds—Community Assistance Series 2005 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 1997 Bonds. The Water Development Revenue Refunding Bond Anticipation Notes, Series 2008A and Series 2008B, were issued to refund the Community Assistance Series 2007 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2009 Bonds were issued to refund the Community Assistance Series 2008B Bond Anticipation Notes. The Water

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

Development Revenue Refunding Bonds—Community Assistance Series 2011 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 2003 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2013 Bonds were issued to refund the Community Assistance Series 2005 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2017 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 2009 Bonds. All loan repayments for this fund are pledged on a parity basis against all debt outstanding within this fund.

(e) Fresh Water Fund

The Fresh Water Fund, which consists of various accounts, was established in 1992 by a resolution providing for the issuance of the Water Development Revenue Refunding Bonds—Pure Water Refunding and Improvement Series, and is administered by a Trustee. Initial funding was provided by a portion of the proceeds from these bonds and a transfer from the Pure Water Refunding Fund. The Water Development Revenue Bonds—Fresh Water Series 1995, Series 1998, Series 2001A, Series 2002, Series 2004, Series 2010A-1, Series 2010A-2, Series 2013, Series 2016A, Series 2016B, Series 2018 and Water Development Revenue Notes—Fresh Water Commercial Paper Series 2007A, Series 2008D, Series 2008E, Series 2010A, Series 2010B, Series 2014 Notes, Series 2015 Notes, Series 2016 Notes, Series 2017A Notes and Series 2017B Notes were later issued to provide additional funds necessary for making loans to LGAs as part of the Authority's Fresh Water Program. The Water Development Refunding Revenue—Fresh Water Series 2001B, Series 2005, Series 2006A, Series 2009A and Series 2009B Bonds were issued for the purpose of refunding portions of Fresh Water Series 1995, Series 1998, Series 2001A, Series 2002 and Series 2004 Bonds. A portion of the Fresh Water Series 2009A Bonds were used to retire outstanding commercial paper issued in 2007 and 2008. A portion of the Fresh Water Series 2010A-1 and Series 2010A-2 Bonds were used to retire outstanding commercial paper issued in 2010. A portion of the Fresh Water Series 2016A, Series 2016B and Series 2018 Bonds were issued to retire outstanding notes issued in 2014, 2015 and 2017. All Fresh Water loan repayments for this fund are pledged on a parity basis against all debt outstanding within this fund.

The purpose of these funds is to provide moneys necessary to finance the LGA portion of costs for planning, designing, acquiring or constructing wastewater treatment, sewage collection, and water supply and distribution facilities in Ohio, and to finance other projects approved by the Authority.

The balance of Fresh Water construction costs is repaid by LGAs under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 7.38%.

On December 1, 2010, the Pure Water Refunding Fund was closed and the outstanding loan receivables balances were transferred to the Fresh Water Fund. The loan repayments from this fund are deposited into the Cross-Collateralization account in the Fresh Water Fund and are not pledged toward outstanding Fresh Water debt. The balance of these loans is repaid by LGAs under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 7.21%.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

(f) *Water Pollution Control Loan Fund*

The Water Pollution Control Loan Fund (WPCLF) consists of various accounts, which were established by an Act of the General Assembly of the State of Ohio in 1989 and are administered by a Trustee. The purpose of this fund is to provide financial assistance for the construction of publicly owned wastewater treatment works in Ohio.

Construction costs are paid by LGAs under terms of installment contracts over periods of 4.5 to 45 years with interest rates of 0.00% to 4.66%. LGA repayments of project costs are restricted for the purpose of providing additional moneys for projects or for debt service.

In 2015, the Authority created the WPCLF Interest Rate Buy-Down Program. The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's WPCLF Program whose loan interest rates exceed 3.00%.

The WPCLF was initially funded in 1989 by a U.S. Environmental Protection Agency capitalization grant, which required a 20% matching contribution from the Ohio Environmental Protection Agency (Ohio EPA). Grant funding has been awarded as detailed in the following table:

Year Awarded	Capitalization Grant	State Match
1989-1993	\$ 455,345,287	91,069,057
1994-1998	388,415,860	77,683,172
1999-2003	380,759,602	76,155,487
2004-2008	245,871,555	49,174,311
2009-2013*	649,794,893	85,834,359
2014	78,932,000	15,786,400
2015	78,528,000	15,705,600
2016	75,217,000	15,043,400
2017	74,638,000	14,927,600
2018	90,357,000	18,071,400
Total	\$ 2,517,859,197	459,450,786

* The 2009 capitalization grant funding award included \$220,623,100 in moneys from The American Recovery and Reinvestment Act (ARRA) with no state match required, and \$76,616,793 in capitalization grant moneys requiring a 20% state match.

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Notes to Financial Statements

The WPCLF received additional funding from the proceeds of Water Pollution Control Loan Fund Revenue Bonds and Notes—State Match Series 1991, Series 1993, Series 1995, Series 2000, Series 2008, Series 2010, Series 2013 and Series 2015; Water Quality Series 1995, Series 1997, Series 2001, Series 2002, Series 2004, Series 2005B, Series 2010A, Series 2010B-1 and Series 2010B-2; Floating Rate Notes Series 2012A and Series 2013A; WPCLF Bonds Series 2014, Series 2015A, Series 2016, Series 2017A, Series 2017B, Series 2017-2020B Notes and Series 2017-2020C Notes. The Water Pollution Control Loan Fund Revenue Refunding Bonds—State Match Series 2001 and Series 2005 and Water Quality Series 2003, Series 2004, Series 2005, Series 2009, Series 2010C, Series 2011A, Series 2011B-1, Series 2011B-2, Series 2012A and WPCLF Bonds Series 2014B and Series 2015B were issued to refund portions of the State Match and Water Quality Series Bonds. The WPCLF Water Quality, State Match and WPCLF Bonds and Notes were established by resolutions providing for the issuance of these bonds and notes and are administered by Trustees.

The WPCLF Bonds and Notes are special obligations of the Authority, issued to fund the State Match, Water Quality and WPCLF Bond accounts for use in making loans to LGAs provided by the Ohio EPA and the Authority. All interest earned on moneys and/or investments in the WPCLF remain within the fund. All loan repayments of principal and interest on loans made prior to May 1, 2014 are primarily pledged on a parity basis to all WPCLF Water Quality Bonds outstanding and subordinatedly pledged on a parity basis to all WPCLF Bonds outstanding. All loan repayments of interest for loans made after May 1, 2014 are pledged first to all WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds and third to WPCLF Bonds. As of December 31, 2018, all WPCLF State Match Bonds are retired. Any future WPCLF State Match issuances will be governed by the WPCLF Bonds Trust Indenture.

In 1994, the Authority established the Linked Deposit Program. This program is aimed at helping Ohio farmers receive low-interest loans to reduce non-point source pollution from agricultural run-off. In the program, WPCLF funds are invested in local participating banks at below-market rates. The banks, in return, issue low-interest rate loans to qualified participants. The amount invested in this program as of December 31, 2018 was \$1,030,335.

(g) *Drinking Water Assistance Fund*

The Drinking Water Assistance Fund (DWAF) was established by legislation enacted by the General Assembly of the State of Ohio in 1997 and is administered by a Trustee. The purpose of this fund is to assist public water systems to finance the costs of infrastructure needed to achieve or maintain compliance with the Safe Drinking Water Act requirements and to protect public health.

Construction costs are paid under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 4.66%. Repayments of project costs are restricted for the purpose of providing additional moneys for projects.

In 2015, the Authority created the DWAF Interest Rate Buy-Down Program. The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's DWAF Program whose loan interest rates exceed 3.00%.

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The DWAF was initially funded in 1998 by a U.S. Environmental Protection Agency capitalization grant, with a required 20% state match contribution from the Ohio EPA. Grant funding has been awarded as detailed in the following table:

Year Awarded	Capitalization Grant	State Match
1998-2002	\$ 164,117,000	32,823,400
2003-2007	124,311,400	24,862,280
2008-2012*	211,030,000	30,514,000
2013	27,058,000	5,411,600
2014	24,586,000	4,917,200
2015	24,425,000	4,885,000
2016	23,107,000	4,621,400
2017	22,909,000	4,581,800
2018	27,935,000	5,587,000
Total	\$ 649,478,400	118,203,680

* The 2009 capitalization grant funding award included \$58,460,000 in moneys from ARRA with no state match required, and \$24,421,000 in capitalization grant moneys requiring a 20% state match.

The DWAF received additional funding from the proceeds of the Drinking Water Assistance Fund Revenue Bond Anticipation Notes—State Match Series 2001 and the Drinking Water Assistance Fund Revenue Bonds and Notes—State Match Series 2002, Series 2004, Series 2010A and Series 2014; Leverage Series 2002, Series 2004, Series 2005B, Series 2006, Series 2010A and Series 2010B and DWAF Bonds Series 2016. Drinking Water Assistance Fund Refunding Revenue Bonds—Leverage Series 2005 were issued to refund a portion of the Leverage Series 2002 Bonds; Leverage Series 2008 were issued to refund the Leverage Series 2006 Notes; State Match Series 2010B were issued to refund a portion of State Match Series 2002 and Series 2004 Bonds; Leverage Series 2010C were issued to refund a portion of the Leverage Series 2002, Series 2004, Series 2005B and Series 2008 Bonds; and Leverage Series 2014 were issued to refund a portion of the Series 2005B and Series 2008 Bonds.

The DWAF Bonds and Notes are special obligations of the Authority, issued to fund the State Match, Leverage and DWAF Bond accounts for use in making loans to LGAs provided by the Ohio EPA and the Authority. All interest earned on moneys and/or investments in the DWAF remain within the fund. All loan repayments of principal and interest on loans made prior to August 3, 2016 are primarily pledged on a parity basis to all DWAF Leverage Bonds outstanding and subordinatedly pledged on a parity basis to all DWAF Bonds outstanding. All loan repayments of interest for loans made after August 3, 2016 are pledged first to all DWAF State Match Bonds outstanding, second to DWAF Leverage Bonds and third to DWAF Bonds. As of December 31, 2018, all DWAF State Match Bonds are retired. Any future DWAF State Match issuances will be governed by the DWAF Bonds Trust Indenture.

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Notes to Financial Statements

Summary of Significant Accounting Policies

(a) Basis of Accounting

The basis of accounting determines when transactions and economic events are reflected in financial statements. The Authority has prepared the financial statements on the full accrual basis of accounting. Accordingly, revenues are recognized as earned and expenses are recognized as incurred, including interest expense on bonds and notes outstanding.

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities and deferred inflows of resources at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

(b) Cash and Cash Equivalents

Cash and cash equivalents include amounts on deposit with Trustees and petty cash, as defined in GASB Statement No. 9 for the purpose of the statement of cash flows, in addition to money market investments and holdings in the State Treasury Asset Reserve of Ohio (STAR Ohio) investment pool. STAR Ohio is an investment pool managed by the State Treasurer's Office, which allows governments within the State to pool their funds for investment purposes. STAR Ohio is not registered with the Securities and Exchange Commission as an investment company, but has adopted GASB Statement No. 79 for the purpose of measuring the value of shares in STAR Ohio. The Authority measures their investment in STAR Ohio at the net asset value (NAV) per share provided by STAR Ohio. The NAV per share is calculated on an amortized cost basis that provides a NAV per share that approximates fair value.

For 2018, there were no limitations or restrictions on any participant withdrawals. However, notice must be given 24 hours in advance for all deposits or withdrawals exceeding \$25 million. STAR Ohio reserves the right to limit the transaction to \$100 million, requiring the excess amount to be transacted the following business day(s), but only to the \$100 million limit. All accounts of the participants will be combined for these purposes.

For the purpose of the statement of cash flows, the Authority considers cash deposits with a maturity of three months or less when purchased to be cash equivalents. Additionally, the Authority does not consider its loans to be program loans, and as a result, reports its loan cash flows within the investing activities section of the statement of cash flows.

(c) Investments

With the exception of nonnegotiable certificates of deposit, investments are carried at fair value, which includes accrued interest receivable. Accordingly, the Authority reports participating nonnegotiable certificates of deposit at amortized cost plus accrued interest receivable.

(d) Due to and Due from Other Funds

Interfund receivables and payables, otherwise referred to as due to and due from other funds, arise from interfund transactions and are recorded by all funds affected in the period in which transactions are executed. All interfund balances at December 31, 2018 resulted from the time lag between the dates that transactions are recorded in the accounting system and the dates that

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payments between funds are made. The Authority expects that all interfund balances will be repaid within one year.

(e) *Loan Income as Defined by the Contracts*

Loan income consists primarily of interest charged to LGAs, as defined by the contracts with LGAs, on the amounts estimated to be paid under the loan agreements. Interest charged during the construction period is capitalized by the Authority and is reflected as part of loan receivables.

(f) *Amortization of Premium and Discount of Bonds and Notes*

Premium and discount are amortized over the life of the bonds and notes, following the effective interest method.

(g) *Interfund Transfers/Net Position*

The Authority reports interfund transactions when incurred, as follows:

- Transfers in (out), net: Transfers to a receiving fund from a disbursing fund required to meet routine operating requirements, such as debt service repayments and loan disbursements, in addition to transfers between funds for initial and/or additional funding needs.

Interfund transfers have not been eliminated in the combining column of the financial statements.

Net position in excess of those amounts required by the various trust agreements may, upon Board authorization, be used for any lawful purpose.

(h) *Capital Assets and Facilities*

Capital assets of the Authority include an office building with attached garage, two parking lots, office furniture and equipment. Capital assets are defined by the Authority as assets with an initial, individual cost of \$1,000 or more and an estimated useful life in excess of two years. Such assets are recorded at historical cost. Depreciation is computed on the building, capital improvements and other capital assets only, using the straight-line method with no salvage value. Current year depreciation expense is detailed below as 'additions' to accumulated depreciation.

Capital asset activity for the year ended December 31, 2018 was as follows:

	Beginning <u>Balance</u>	<u>Additions</u>	<u>Deletions</u>	Ending <u>Balance</u>
Land (non-depreciable)	\$ 538,676	—	—	538,676
Building (useful life: 20-45 years)	887,524	—	—	887,524
Capital Improvements (useful life: 20 years)	628,314	—	—	628,314
Other (useful life: 3-10 years)	1,488,880	23,161	(12,116)	1,499,925
Total capital assets	\$ 3,543,394	23,161	(12,116)	3,554,439
Less: Accumulated Depreciation-Building	(560,355)	(36,978)	—	(597,333)
Less: Accumulated Depreciation-Cap Impr	(431,616)	(31,416)	—	(463,032)
Less: Accumulated Depreciation-Other	(1,378,215)	(37,605)	12,116	(1,403,704)
Capital Assets, at Depreciated Cost	\$ 1,173,208	(82,838)	—	1,090,370

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Notes to Financial Statements

(i) *Statement of Net Position Classifications*

The Authority is required to classify its statement of net position, detailing current and noncurrent assets, deferred outflows of resources, current and noncurrent liabilities, deferred inflows of resources, and restricted and unrestricted net position, as follows:

- Current: Due within one year from December 31, 2018
- Noncurrent: Due after December 31, 2019
- Restricted: Restricted for usage by bond and note covenants and grant restrictions
- Unrestricted: Not restricted for usage

Within the Fresh Water Fund, there exist both restricted and unrestricted net positions. Restricted net position would be used to cover eligible expenses before unrestricted net position would be used. The unrestricted net position may, upon Board authorization, be used by the Authority for any lawful purpose.

(j) *Revenue and Expense Classifications*

The Authority's policy for revenue and expense classification is as follows:

- Operating revenues consist of loan income, investment income and administrative fees from projects
- Operating expenses consist of payroll and benefits, interest on bonds and notes, bond and note issuance expense, loan principal forgiveness and grant expense, state revolving fund administration, professional services, loan interest rate buy-down and other operating expenses
- Nonoperating other revenues
- Contribution from U.S. EPA
- Federal subsidy income

(k) *Risk Management*

It is the policy of the Authority to eliminate or transfer risk. The Authority does not self-insure any risk resulting from acts of God, injury to employees or breach of contract.

The Authority carries commercial property insurance on property and equipment in the aggregate sum of approximately \$2,250,000. The Authority carries commercial liability insurance coverage in the amount of approximately \$56,385,000. The Authority also carries premium-based medical, dental and vision coverage for all employees.

During 2018, there were no claims by the Authority that exceed the insurance coverage, nor has there been a reduction in insurance coverage in the past three years.

(l) *Pensions/Other Postemployment Benefits (OPEB)*

For purposes of measuring the net pension/OPEB liability, information about the fiduciary net position of the pension/OPEB plans and additions to/deductions from their fiduciary net position have been determined on the same basis as they are reported by the pension/OPEB plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. The pension/OPEB plans report investments at fair value.

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Notes to Financial Statements

(2) CASH AND INVESTMENTS

As of December 31, 2018, the Authority's carrying amount of deposits was \$48,280,454 and bank balance of deposits was \$42,286,144. Of this amount, \$250,004 was covered by federal depository insurance, and \$48,036,140 was collateralized with securities held by the bank's agent but not in the Authority's name. The Authority's carrying amount of long-term nonnegotiable certificates of deposit as of December 31, 2018 was \$1,735,050. These deposits were collateralized with securities held by the Treasurer of State (OPCS) but not in the Authority's name.

The Authority's investment policy and relevant trust indentures, which are in compliance with the Ohio Revised Code, authorizes investments in obligations of the U.S. Treasury, U.S. Agencies, obligations of the State of Ohio or any political subdivision, obligations of any State of the United States, repurchase agreements from financial institutions with a Moody's or Standard & Poor's rating of "A", investment agreements from financial institutions rated in the highest short-term categories or one of the top three long-term categories by Moody's and/or Standard & Poor's, money market mutual funds whose portfolio consists of authorized investments, the State Treasurer's investment pool and any debt or fixed income security, the issuer of which is rated in the highest short-term or in the top three long-term categories. All investments must mature within five years of settlement unless the investment is matched to a specific obligation or debt of the Authority. Securities are purchased with the expectation that they may be held to maturity.

As of December 31, 2018, the Authority had the following investments and maturities:

Fund - Investment Type	Fair Value	Investment Maturity (in Years)		
		Less than 1	1 - 5	6 - 10
Operating:				
U.S. Agencies	\$3,254,717	1,452,033	1,802,684	-
Other Projects:				
U.S. Treasuries	65,028,695	23,049,227	41,979,468	-
U.S. Agencies	93,408,583	19,310,481	74,098,102	-
Municipal Bonds	11,793,793	5,199,591	6,594,202	-
Money Market	4,391,184	4,391,184	-	-
	174,622,255	51,950,483	122,671,772	-
In Lieu Fee:				
U.S. Treasuries	6,980,708	3,997,150	2,983,558	-
STAR Ohio	5,874,093	5,874,093	-	-
Money Market	257,207	257,207	-	-
	13,112,008	10,128,450	2,983,558	-

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Notes to Financial Statements

Fund - Investment Type	Fair Value	Investment Maturity (in Years)		
		Less than 1	1 - 5	6 - 10
Community Assistance:				
U.S. Treasuries	\$19,100,661	13,717,893	5,382,768	-
U.S. Agencies	5,811,545	1,022,561	4,788,984	-
Money Market	882,750	882,750	-	-
	25,794,956	15,623,204	10,171,752	-
Fresh Water:				
U.S. Treasuries	133,447,615	66,965,957	66,177,893	303,765
U.S. Agencies	28,411,295	28,411,295	-	-
STAR Ohio	993,885	993,885	-	-
Money Market	10,429,679	10,429,679	-	-
	173,282,474	106,800,816	66,177,893	303,765
Water Pollution Control Loan:				
U.S. Treasuries	494,071,998	57,950,412	436,121,586	-
U.S. Agencies	148,017,260	56,279,352	91,737,908	-
Municipal Bonds	15,142,205	7,844,522	7,297,683	-
STAR Ohio	27,364,169	27,364,169	-	-
Money Market	57,042,347	57,042,347	-	-
	741,637,979	206,480,802	535,157,177	-
Drinking Water Assistance:				
U.S. Treasuries	94,339,414	37,493,104	56,846,310	-
U.S. Agencies	26,435,276	20,771,012	5,664,264	-
STAR Ohio	10,453,097	10,453,097	-	-
Money Market	13,690,767	13,690,767	-	-
	144,918,554	82,407,980	62,510,574	-

The Authority's U.S. treasuries, U.S. agencies and municipal bonds are uninsured and unregistered investments for which the securities are held by the Authority's agent but not in the Authority's name. As of December 31, 2018, the Authority's investments in U.S. treasuries were backed by the full faith and credit of the U.S. Government. The investments in U.S. agencies were rated AA+ by Standard & Poor's and Aaa by Moody's. The Authority's investments in municipal bonds were rated within the top three long-term categories by Moody's and/or Standard & Poor's. The Authority's investments in STAR Ohio (a statewide external investment pool created pursuant to Ohio statutes and administered by the Treasurer of the State of Ohio) were rated AAAM by Standard & Poor's. The Authority's money market investments were rated AAAM by Standard & Poor's and Aaa-mf by Moody's. As of December 31, 2018, 98.23% of the Authority's rated investments were rated in the highest short-term or long-term rating category by Moody's.

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Notes to Financial Statements

As of December 31, 2018, the Authority had investment balances with the following issuers, which are greater than or equal to 5% of the respective fund's investment balance:

Fund	Issuer	Percent of Fund's Investments
Operating	Federal Home Loan Bank	53.0%
	Federal National Mortgage Association	32.0%
	Federal Farm Credit Bank	15.0%
Other Projects	Federal National Mortgage Association	34.0%
	Federal Home Loan Mortgage Corporation	16.0%
Community Assistance	Federal Home Loan Bank	12.0%
Fresh Water	Federal Home Loan Bank	16.0%
Water Pollution Control Loan	Federal National Mortgage Association	11.0%
	Federal Home Loan Bank	6.0%
Drinking Water Assistance	Federal National Mortgage Association	12.0%
	Federal Home Loan Bank	5.0%

The Authority manages its concentration risk by limiting investments to U.S. treasuries, U.S. agencies or to issuers with the highest short-term ratings from Moody's or Standard & Poor's or one of the three highest long-term ratings from Moody's or Standard & Poor's.

As of December 31, 2018, the Authority categorizes fair value measurements of its negotiable investments within the fair value hierarchy as follows:

Investment Type	Level 1*	Level 2*	Level 3*
U.S. Treasuries	\$811,149,495	644,285	-
U.S. Agencies	-	305,338,676	-
Municipal Bonds	-	26,935,998	-

* Fair value hierarchy is based on valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are significant other observable inputs such as quoted prices for similar assets in active markets. The Authority obtains prices for our Level 1 and Level 2 publicly traded assets from our trustees who use various pricing services. Level 3 inputs are significant unobservable inputs.

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Notes to Financial Statements

As of December 31, 2018, the Authority had cash and cash equivalents balances of \$179,659,633, which includes accrued interest receivables on money market balances. Below is a reconciliation of the statement of net position and the statement of cash flows cash and cash equivalents balances:

Fund	Statement of Net Position Cash and Cash Equivalents Balance	Cash and Cash Equivalents Accrued Interest Receivable	Statement of Cash Flows Cash and Cash Equivalents Balance
Operating	\$ 300,677	-	300,677
Other Projects	5,052,466	(16,269)	5,036,197
In Lieu Fee	6,131,300	(25,493)	6,105,807
Community Assistance	2,192,110	(6,034)	2,186,076
Fresh Water	21,300,373	(31,055)	21,269,318
Water Pollution Control Loan	116,588,985	(106,198)	116,482,787
Drinking Water Assistance	28,093,722	(29,065)	28,064,657
	<u>\$ 179,659,633</u>	<u>(214,114)</u>	<u>179,445,519</u>

(3) INTERFUND RECEIVABLES AND PAYABLES

On December 31, 2018, interfund balances consisted of:

- 1) \$324,797 owed to the Operating Fund by the Drinking Water Assistance Fund caused by the timing of pending loan fee repayment allocations.
- 2) \$1,097 owed to the Operating Fund by the Fresh Water Fund for the reimbursement of a professional service expense.
- 3) \$15,000 owed to the Other Projects Fund by the Operating Fund for the reimbursement of a legal expense.

(4) CHANGE IN ACCOUNTING PRINCIPLES

For 2018, the Authority implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, which became effective for all state and local governmental employers who provide employees other postemployment benefits (OPEB). Statement No. 75 improves accounting and financial reporting of the Authority by establishing standards for measuring liabilities, deferred outflows of resources, deferred inflows of resources and a more comprehensive measure of OPEB expense. The implementation of this Statement had a significant effect on the Operating Fund within the financial statements of the Authority as of January 1, 2018. Beginning net position in 2018 decreased \$842,136 from December 31, 2017 net position for the Operating Fund as well as the total net position of the Authority.

For 2018, the Authority implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 85, *Omnibus 2017*. The objective of Statement No. 85 is to address practice issues that have been identified during implementation and application of certain GASB Statements. Specifically, the topics from this statement that apply to the Authority deal with postemployment benefits from pensions and OPEB. These applicable topics will be implemented in conjunction with Statement No. 75 implementation.

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Notes to Financial Statements

(5) WATER DEVELOPMENT REVENUE AND REFUNDING BONDS—COMMUNITY ASSISTANCE SERIES

As of December 31, 2018, there was \$53,910,000 of Community Assistance Water Development Revenue and Refunding Bonds outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Current</u>	<u>Long-Term</u>	<u>Total</u>
2009	Serial	3.00%	2019	\$ 1,095,000	-	1,095,000
2010B	Serial	4.65% to 4.85%	2019-2020	270,000	305,000	575,000
	Term	5.42% to 6.15%	2021-2038	-	27,380,000	27,380,000
2011	Serial	4.00% to 5.00%	2019-2022	2,840,000	7,355,000	10,195,000
2017	Serial	1.50% to 4.00%	2019-2030	10,000	14,655,000	14,665,000
Community Assistance Series Totals				4,215,000	49,695,000	53,910,000
Add: unamortized premiums (net)				(997)	2,067,804	2,066,807
				<u>\$ 4,214,003</u>	<u>51,762,804</u>	<u>55,976,807</u>

The Community Assistance Series debt service requirements to maturity are as follows:

	<u>Principal</u>	<u>Interest *</u>	<u>Total</u>
2019 \$	4,215,000	2,671,070	6,886,070
2020	4,285,000	2,502,927	6,787,927
2021	4,380,000	2,342,051	6,722,051
2022	3,120,000	2,163,900	5,283,900
2023	1,660,000	2,056,795	3,716,795
2024-2028	9,105,000	9,117,735	18,222,735
2029-2033	14,410,000	6,554,016	20,964,016
2034-2038	12,735,000	1,809,023	14,544,023
\$	<u>53,910,000</u>	<u>29,217,517</u>	<u>83,127,517</u>

* In 2010, OWDA sold Federally Taxable Build America Bonds (BABs), which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83 % of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy, over the remaining life of the bonds will be \$20,946,525.

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Notes to Financial Statements

The Community Assistance Series bonds are subject to mandatory and optional redemption, by series, as follows:

- a) Community Assistance Refunding Series 2009 – The Series 2009 Bonds are not subject to redemption prior to their stated maturity.
- b) Community Assistance BABs Series 2010B – 1) The BABs are subject to mandatory redemption beginning June 1, 2021. 2) Both the serial and term bonds maturing on or after December 1, 2020 are callable for redemption prior to maturity at the option of the Authority, either in whole or in part, on or after June 1, 2020, at par plus accrued interest. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority's 35% cash subsidy payment from the United States Treasury is reduced or eliminated. 4) Due to The Tax Increase Prevention and Reconciliation Act of 2005 (TIPRA), the BABs are subject to extraordinary mandatory redemption at any time during the ninety-day period following July 13, 2013, in whole or in part, at a redemption price equal to 102% of the principal amount of each maturity selected, plus accrued and unpaid interest to the redemption.
- c) Community Assistance Series 2011 – The Series 2011 Bonds maturing on or after December 1, 2021 are subject to optional redemption, in whole or in part, on or after June 1, 2021, at par plus accrued interest.
- d) Community Assistance Refunding Series 2017 – The Series 2017 Bonds are not subject to redemption prior to their stated maturity.

LGA reimbursements of Community Assistance project costs, including interest, are pledged as security for the bonds. In the event that LGA reimbursements of Community Assistance project costs are insufficient to cover Community Assistance debt service requirements, unencumbered assets of the Community Assistance Fund Debt Service Reserve, Surplus and Construction accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of Community Assistance project costs was \$12,949,494, compared to the required bond debt service payments of \$7,036,903.

The bond resolution provides for six separate accounts designated as the Community Assistance Fund Construction account, Revenue account, Debt Service account, Debt Service Reserve account, Surplus account and Rebate account. As of December 1, 2018, there is no accrued rebate liability for these bonds.

Amounts received from the LGAs as reimbursements of project or construction costs, including capitalized interest, are deposited in the Revenue account. The trustee then allocates or pays out moneys in the Revenue account as follows:

- a) To the trustee for the payment of its fees on the first day of each May and November.
- b) To the Debt Service account on the first day of each May and November, commencing on the first May or November preceding the first bond maturity date (1) a sum which, when added to any available balance then on deposit in the Debt Service account, will be equal to the interest due on that day on all bonds outstanding; (2) a sum which will be equal to the next ensuing mandatory redemption for term bonds; and (3) a sum which will be equal to the next ensuing principal maturity on all outstanding bonds.

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- c) To the Debt Service Reserve account on the first day of each May and November, a sum as necessary to maintain in the Debt Service Reserve account investments or cash having an aggregate value at least equal to the maximum annual bond service charges required to be paid in that year or any succeeding year.
- d) To the Surplus account, on the first day of June and December of each year, remaining moneys (after making up any deficiencies) in the Revenue account (excluding amounts received for the next ensuing LGA repayment date).

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the first day of November of each year, prior to making allocations or payments of moneys on hand in the Revenue account.

Any deficiency in the amounts required to be deposited in the Debt Service account or the Debt Service Reserve account is to be made up by moneys available in the Surplus account.

(6) WATER DEVELOPMENT REVENUE AND REFUNDING BONDS AND NOTES—FRESH WATER SERIES

As of December 31, 2018, there was \$902,735,000 of Fresh Water Development Revenue and Refunding Bonds and Notes outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>		<u>Current</u>	<u>Long-Term</u>	<u>Total</u>
2001B	Serial	4.75% to 5.50%	2019-2021	\$	5,330,000	6,085,000	11,415,000
2005	Serial	5.50%	2019-2025		10,800,000	36,480,000	47,280,000
2006	Term	5.25%	2022-2034		-	51,100,000	51,100,000
2009B	Serial	3.00% to 5.00%	2019-2022		5,705,000	3,515,000	9,220,000
	Term	3.125% to 5.250%	2020-2027		-	27,010,000	27,010,000
2010A-2	Term	3.593% to 4.917%	2020-2042		-	149,290,000	149,290,000
2013	Serial	5.00%	2019-2023		20,875,000	79,190,000	100,065,000
2016A	Serial	4.00% to 5.00%	2028-2036		-	49,050,000	49,050,000
	Term	5.00%	2030-2035		-	120,000,000	120,000,000
2016B	Serial	5.00%	2023-2037		-	105,500,000	105,500,000
	Term	5.00%	2030-2036		-	44,500,000	44,500,000
2017A	Notes	Variable	2020		-	21,900,000	21,900,000
2018	Serial	5.00%	2021-2028		-	166,405,000	166,405,000
Fresh Water Series Totals					42,710,000	860,025,000	902,735,000
Add: unamortized premiums					-	112,976,608	112,976,608
					<u>\$ 42,710,000</u>	<u>973,001,608</u>	<u>1,015,711,608</u>

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The Fresh Water Series debt service requirements to maturity are as follows:

		Principal	Interest*	Total
2019	\$	42,710,000	44,019,714	86,729,714
2020		66,275,000	41,428,152	107,703,152
2021		47,915,000	38,788,937	86,703,937
2022		47,195,000	36,390,608	83,585,608
2023		46,220,000	34,038,210	80,258,210
2024-2028		347,080,000	134,408,926	481,488,926
2029-2033		188,380,000	53,811,548	242,191,548
2034-2038		105,045,000	12,742,902	117,787,902
2039-2042		11,915,000	966,313	12,881,313
	\$	<u>902,735,000</u>	<u>396,595,310</u>	<u>1,299,330,310</u>

The Fresh Water Series 2017A Notes are taxable and have an adjustable rate that is reset monthly at a rate of 1-month LIBOR plus 0.75%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 3.12%.

* In 2010, OWDA sold Federally Taxable BABs, which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy, over the remaining life of the bonds will be \$367,702,665.

The Fresh Water Series Bonds and Notes are subject to mandatory and optional redemption, by series, as follows:

- a) Fresh Water Series 2001B – The Series 2001B Bonds are not subject to redemption prior to maturity.
- b) Fresh Water Refunding Series 2005 – The Series 2005 Bonds are not subject to redemption prior to maturity.
- c) Fresh Water Refunding Series 2006 – 1) The Series 2006 Bonds are not subject to optional redemption prior to their stated maturity. 2) The term bonds are subject to mandatory redemption beginning December 1, 2022.
- d) Fresh Water Refunding Series 2009B – The Series 2009B Bonds are not subject to optional redemption prior to their stated maturity. The term bonds are subject to mandatory redemption beginning December 1, 2020.
- e) Fresh Water BABs Series 2010A-2 – 1) The BABs are subject to mandatory redemption beginning June 1, 2020. 2) The BABs shall be subject to an optional redemption prior to maturity, at the option of the Authority, in whole or in part, on any business day, at the make-whole redemption price. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority's 35% cash subsidy payment from the United States Treasury is reduced or eliminated.
- f) Fresh Water Series 2013 – The Series 2013 Bonds are not subject to redemption prior to maturity.
- g) Fresh Water Series 2016A – The Series 2016A Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after June 1, 2026, at par plus accrued interest.

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- h) Fresh Water Series 2016B – The Series 2016B Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after December 1, 2026, at par plus accrued interest.
- i) Fresh Water 2017A Notes – These notes are subject to optional redemption, in whole or in part, 30 days after the date of issuance, at par plus accrued interest.
- j) Fresh Water Series 2018 – The Series 2018 Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after March 1, 2028, at par plus accrued interest to the redemption date.

LGA reimbursements of Fresh Water project costs, including interest, are pledged as security for the bonds and notes. In the event that LGA reimbursements of Fresh Water project costs are insufficient to cover Fresh Water debt service payments, unencumbered assets of the Fresh Water Fund Debt Service Reserve, Surplus and Construction accounts are also pledged as security for the bonds and notes. For 2018, the amount received from reimbursements of Fresh Water project costs was \$110,842,498 compared to the required bond and note debt service payments of \$71,761,963.

The bond and note resolutions provide for six separate accounts designated as the Fresh Water Construction account, Revenue account, Debt Service account, Debt Service Reserve account, Surplus account and Rebate account. As of December 1, 2018, there is no accrued rebate liability for these bonds and notes.

Amounts received from the LGAs as reimbursements of project or construction costs, including capitalized interest, are deposited in the Revenue account. The trustee then allocates or pays out moneys in the Revenue account as follows:

- a) To the trustee for the payment of its fees on the first day of each May and November.
- b) To the Debt Service account on the first day of each May and November (1) a sum which, when added to any available balance then on deposit in the Debt Service account, will be equal to the interest due on that day on all bonds and notes outstanding; (2) a sum which will be equal to the next ensuing mandatory redemption for term bonds; and (3) a sum which will be equal to the next ensuing principal maturity on all outstanding bonds and notes.
- c) To the Debt Service Reserve account, a semiannual sum as necessary to maintain in the Debt Service Reserve account investments or cash having an aggregate value at least equal to 50% of the maximum annual bond and note service charges required to be paid in that year or any succeeding year.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the first day of November of each year, prior to making allocations or payments of moneys on hand in the Revenue account.

On the first day of June and December of each year, all remaining moneys (after making up any deficiencies) in the Revenue account (excluding amounts received for the next ensuing LGA repayment date) are allocated to the Surplus account.

Any deficiency in the amounts required to be deposited in the Debt Service account or the Debt Service Reserve account is to be made up by moneys available in the Surplus account.

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(7) WATER POLLUTION CONTROL LOAN FUND REVENUE AND REFUNDING BONDS—WATER QUALITY SERIES

As of December 31, 2018, there was \$626,015,000 of Water Pollution Control Loan Fund (WPCLF) Revenue and Refunding Bonds—Water Quality Series outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>		<u>Current</u>	<u>Long-Term</u>	<u>Total</u>
2005	Serial	5.25% to 5.50%	2019-2023	\$	27,945,000	63,950,000	91,895,000
2009	Serial	3.00% to 5.00%	2019		19,885,000	-	19,885,000
2010A	Serial	3.25% to 5.00%	2019		12,000,000	-	12,000,000
2010B-2	Serial	4.192%	2024		-	11,390,000	11,390,000
	Term	3.492% to 4.879%	2019-2034		7,715,000	410,020,000	417,735,000
2010C	Serial	3.00% to 5.00%	2019-2022		22,965,000	39,055,000	62,020,000
2011A	Serial	5.00%	2019		11,090,000	-	11,090,000
WPCLF Water Quality Series Totals					101,600,000	524,415,000	626,015,000
Add: unamortized premiums					619,343	4,602,604	5,221,947
					<u>\$ 102,219,343</u>	<u>529,017,604</u>	<u>631,236,947</u>

The WPCLF – Water Quality Series debt service requirements to maturity are as follows:

		<u>Principal</u>	<u>Interest *</u>	<u>Total</u>
2019	\$	101,600,000	29,342,303	130,942,303
2020		56,765,000	24,888,972	81,653,972
2021		42,635,000	22,149,833	64,784,833
2022		18,165,000	20,467,128	38,632,128
2023		8,985,000	19,653,145	28,638,145
2024-2028		266,135,000	65,931,420	332,066,420
2029-2033		118,635,000	17,689,668	136,324,668
2034		13,095,000	482,411	13,577,411
	\$	<u>626,015,000</u>	<u>200,604,880</u>	<u>826,619,880</u>

* In 2010, OWDA sold Federally Taxable BABs which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy over the remaining life of the bonds, will be \$138,722,104.

Prior redemption of WPCLF—Water Quality Series Bonds, by series, is as follows:

- Water Quality Refunding Series 2005 – These bonds are not subject to redemption prior to stated maturity.
- Water Quality Refunding Series 2009 – These bonds are not subject to redemption prior to stated maturity.
- Water Quality Series 2010A – These bonds are not subject to redemption prior to stated maturity.
- Water Quality Series 2010B-2 – 1) The BABs are subject to mandatory redemption beginning June 1, 2019. 2) The BABs shall be subject to an optional redemption prior to maturity, at the option of the Authority, in whole or in part, on any business day, at the make-whole redemption price. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to

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which the Authority's 35% cash subsidy payment from the United States Treasury is reduced or eliminated. 4) Due to TIPRA, the BABs are subject to extraordinary mandatory redemption at any time during the ninety-day period following August 24, 2013, in whole or in part, at a redemption price equal to 102% of the principal amount of each maturity selected, plus accrued and unpaid interest to the redemption date.

- e) Water Quality Refunding Series 2010C – These bonds are not subject to redemption prior to their stated maturity.
- f) Water Quality Refunding Series 2011A – These bonds are not subject to redemption prior to their stated maturity.

LGA reimbursements of WPCLF project costs of principal and interest (from loans made prior to May 1, 2014), pursuant to the WPCLF loan agreements, are primarily pledged as security for the WPCLF Water Quality Bonds, next to the WPCLF Water Quality Debt Service Reserve (DSR) for any shortages from the required DSR balance, and subordinatedly pledged as security for the WPCLF Bonds. LGA reimbursements of WPCLF project costs of interest from loans made after May 1, 2014, pursuant to WPCLF loan agreements are pledged first to any WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds, and third to WPCLF Bonds outstanding. In the event that LGA reimbursements of WPCLF principal and interest project costs are insufficient to cover WPCLF Water Quality debt service payments, unencumbered assets of the WPCLF Water Quality Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of WPCLF principal and interest project costs were \$351,461,676, compared to the required bond debt service payments of \$152,598,928.

The bond resolution provides for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds.

Amounts received as principal and the interest (from loans made prior to May 1, 2014) from the LGAs as reimbursement of project or construction costs are deposited in the Repayment account. The trustee then allocates or pays out moneys in the Repayment account as follows:

- a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding WPCLF Water Quality Bonds due on the next interest payment date, (b) the principal of all outstanding WPCLF Water Quality Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding WPCLF Water Quality Bonds due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase WPCLF Water Quality Bonds received by the trustee pursuant to any invitation to the holders to tender such WPCLF Water Quality Bonds in accordance with the provisions of the applicable Series resolution.
- b) To the trustee for the payment of its fees on the last day of each May and November.
- c) To the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the lesser of 50% of the maximum annual bond service charges required to be paid on all Water Quality Bonds outstanding.

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- d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.
- e) To the WPCLF Bonds to cover principal and interest due on the next payment date.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(8) WATER POLLUTION CONTROL LOAN FUND REVENUE AND REFUNDING BONDS AND NOTES SERIES

As of December 31, 2018, there was \$1,707,975,000 of Water Pollution Control Loan Fund Revenue and Refunding Bonds and Notes Series outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Current</u>	<u>Long-Term</u>	<u>Total</u>
2014	Serial	2.00% to 5.00%	2019-2024	\$ 27,955,000	294,965,000	322,920,000
2014B	Serial	2.00% to 5.00%	2019-2022	17,955,000	102,230,000	120,185,000
2015A	Serial	5.00%	2020-2026	-	240,000,000	240,000,000
2015B	Serial	5.00%	2025-2030	-	92,300,000	92,300,000
	Term	5.00%	2029	-	12,570,000	12,570,000
2016	Serial	Variable	2031-2036	-	200,000,000	200,000,000
2017A	Serial	5.00%	2026-2030	-	330,000,000	330,000,000
	Term	5.00%	2031	-	70,000,000	70,000,000
2017B	Notes	Variable	2020	-	250,000,000	250,000,000
2017-20B	Notes	Variable	2020	-	20,000,000	20,000,000
2017-20C	Notes	Variable	2020	-	50,000,000	50,000,000
WPCLF Bonds and Notes Series Totals				45,910,000	1,662,065,000	1,707,975,000
Add: unamortized premiums				-	161,544,973	161,544,973
				<u>\$ 45,910,000</u>	<u>1,823,609,973</u>	<u>1,869,519,973</u>

The WPCLF Bonds and Notes Series debt service requirements to maturity are as follows:

		<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2019	\$	45,910,000	67,182,026	113,092,026
2020		412,185,000	63,668,642	475,853,642
2021		105,945,000	53,203,025	159,148,025
2022		134,365,000	47,548,375	181,913,375
2023		129,350,000	40,894,250	170,244,250
2024-2028		421,950,000	132,481,875	554,431,875
2029-2033		363,270,000	30,237,375	393,507,375
2034-2036		95,000,000	1,515,000	96,515,000
	<u>\$</u>	<u>1,707,975,000</u>	<u>436,730,568</u>	<u>2,144,705,568</u>

The WPCLF 2016 Bonds have a variable rate that is reset weekly by a remarketing agent. The bonds interest payments to maturity are based on the weighted average interest rate of 1.01% for these bonds from issuance date of May 4, 2016 to December 31, 2018.

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The WPCLF 2017B Notes have an adjustable rate that is reset weekly at a rate of SIFMA plus 0.22%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 1.93%.

The WPCLF 2017-20B Notes have an adjustable rate that is reset monthly at a rate of 1-month LIBOR multiplied by applicable factor of 0.70 plus 0.48%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 2.58%.

The WPCLF 2017-20C Notes have an adjustable rate that is reset monthly at a rate of 1-month LIBOR multiplied by applicable factor of 0.70 plus 0.675%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 2.82%.

Prior redemption of WPCLF Bonds and Notes, by series, is as follows:

- a) WPCLF Series 2014 – These bonds are not subject to redemption prior to their stated maturity.
- b) WPCLF Refunding Series 2014B – These bonds are not subject to redemption prior to their stated maturity.
- c) WPCLF Series 2015A – These bonds are not subject to redemption prior to their stated maturity.
- d) WPCLF Refunding Series 2015B – The bonds maturing on or after June 1, 2026 are callable for redemption prior to maturity at the option of the Authority, in whole or in part, on or after December 1, 2025, at par plus accrued interest.
- e) WPCLF Series 2016 – These bonds are subject to redemption to maturity on the first business day of any month, at the option and direction of the Authority, in whole or in part, at a redemption price of par plus accrued interest.
- f) WPCLF 2017A – The bonds maturing on or after June 1, 2027 are callable for redemption prior to maturity at the option of the Authority, in whole or in part, on or after June 1, 2027, at par plus accrued interest.
- g) WPCLF 2017B – These notes are subject to redemption prior to maturity at the option of the Authority on or after September 1, 2018, in whole or in part, at par plus accrued interest.
- h) WPCLF 2017-20B – These notes are subject to optional redemption, in whole or in part, 30 days after the date of issuance, at par plus accrued interest.
- i) WPCLF 2017-20C – These notes are subject to optional redemption prior to maturity at the option of the Authority, in whole or in part, at par plus accrued interest, provided at least three business days' prior written notice to the Bank and Trustee.

LGA reimbursements of WPCLF project costs of principal and interest (from loans made prior to May 1, 2014), pursuant to WPCLF loan agreements, are pledged as security for the WPCLF Bonds and Notes on a subordinate basis to the WPCLF Water Quality Bonds. LGA reimbursements of WPCLF project costs of interest from loans made after May 1, 2014, pursuant to WPCLF loan agreements are pledged first to any WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds, and third to WPCLF Bonds and Notes outstanding. WPCLF Bond and Note debt service is funded after all WPCLF Water Quality debt service due on the next debt service payment date is funded and, if necessary, any shortages of the WPCLF Water Quality DSR required balance is funded. In the event that LGA reimbursements of WPCLF project costs of principal and interest are insufficient to cover WPCLF Water Quality and/or WPCLF Bond and Note debt service payments, any unencumbered assets of the WPCLF Water Quality Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds and notes. For 2018, the amount received from reimbursements of WPCLF principal and interest project costs after funding of WPCLF Water Quality Debt Service was \$198,862,748, compared to the required bond and note debt service payments of \$95,421,444.

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The bond and note resolutions provide for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds and notes.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Repayment account. After all WPCLF Water Quality debt service and DSR funding needs are met, the trustee then allocates or pays out moneys in the Repayment account to WPCLF Bonds and Notes as follows:

- a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding WPCLF Bonds and Notes due on the next interest payment date, (b) the principal of all outstanding WPCLF Bonds and Notes due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding WPCLF Bonds and Notes due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase WPCLF Bonds and Notes received by the trustee pursuant to any invitation to the holders to tender such WPCLF Bonds and Notes in accordance with the provisions of the applicable Series resolution.
- b) To the trustee for the payment of its fees on the last day of each May and November.
- c) If applicable, to the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the required reserve fund balance.
- d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(9) DRINKING WATER ASSISTANCE FUND REVENUE AND REFUNDING BONDS—LEVERAGE SERIES

As of December 31, 2018, there was \$131,660,000 of Drinking Water Assistance Fund (DWAFF) Revenue and Refunding Bonds—Leverage Series outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>		<u>Current</u>	<u>Long-Term</u>	<u>Total</u>
2005	Serial	5.25%	2023	\$	-	750,000	750,000
	Term	5.25%	2019-2022		5,775,000	12,085,000	17,860,000
2010B	Term	5.276% to 5.742%	2022-2030		-	44,530,000	44,530,000
2010C	Serial	4.00% to 5.00%	2019-2021		12,050,000	27,045,000	39,095,000
2014	Serial	4.00% to 5.00%	2019-2024		7,290,000	22,135,000	29,425,000
DWAFF Leverage Series Totals					25,115,000	106,545,000	131,660,000
		Add: unamortized premiums			-	3,677,637	3,677,637
				\$	25,115,000	110,222,637	135,337,637

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The DWAF Leverage Series debt service requirements to maturity are as follows:

		Principal	Interest*	Total
2019	\$	25,115,000	6,337,265	31,452,265
2020		27,145,000	5,116,783	32,261,783
2021		22,715,000	3,888,083	26,603,083
2022		14,460,000	2,901,485	17,361,485
2023		6,045,000	2,257,265	8,302,265
2024-2028		26,245,000	6,956,307	33,201,307
2029-2030		9,935,000	666,503	10,601,503
	\$	<u>131,660,000</u>	<u>28,123,691</u>	<u>159,783,691</u>

* In 2010, OWDA sold Federally Taxable BABs which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy over the remaining life of the bonds, will be \$21,545,096.

Prior redemption of DWAF—Leverage Series Bonds, by series, is as follows:

- a) Leverage Refunding Series 2005 – The term bonds are subject to mandatory redemption beginning June 1, 2019, at par plus accrued interest. Neither the term or serial bonds are subject to optional redemption prior to their stated maturity.
- b) Leverage Series 2010B – 1) The BABs are subject to mandatory redemption beginning June 1, 2022. 2) The BABs are subject to optional redemption by and at the sole option of the Authority, in whole multiples of \$5,000, either in whole or part on any date on or after June 1, 2020, at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the redemption date. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority's 35% cash subsidy payments from the United States Treasury is reduced or eliminated.
- c) Leverage Refunding Series 2010C – The refunding bonds maturing on or after June 1, 2021 are subject to prior redemption by and at the sole option of the Authority in whole multiples of \$5,000, either in whole or in part on any date on or after December 1, 2020, at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the redemption date.
- d) Leverage Refunding Series 2014 – These bonds are not subject to redemption prior to their stated maturity.

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LGA reimbursements of DWAF project costs of principal and interest (from loans made prior to August 3, 2016), pursuant to DWAF loan agreements, are primarily pledged as security for the DWAF Leverage bonds, next to the DWAF Leverage DSR for any shortages from the required DSR balance, and subordinatedly as security for DWAF Bonds. LGA reimbursements of DWAF project costs of interest from loans made after August 3, 2016, pursuant to DWAF loan agreements, are pledged first to any DWAF State Match Bonds outstanding, second to DWAF Leverage Bonds, and third to DWAF Bonds outstanding. In the event that LGA reimbursements of DWAF principal project costs are insufficient to cover DWAF Leverage debt service payments, unencumbered assets of the DWAF Leverage Debt Service Reserve and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of DWAF principal and interest project costs were \$64,724,660, compared to the required bond debt service payments of \$32,163,965.

The bond resolution provides for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Principal and Additional Pledged Loan Interest Repayment accounts. The trustee then allocates or pays out moneys in the Principal Repayment account first and Additional Pledged Loan Interest Repayment account (after all moneys of the Principal Repayment account are used for debt service) as follows:

- a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding DWAF Leverage Bonds due on the next interest payment date, (b) the principal of all outstanding DWAF Leverage Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding DWAF Leverage Bonds due on the next interest payment date and (2) on the last day of May, the amount contained in a direction from the Authority to be used to purchase DWAF Leverage Bonds received by the trustee pursuant to any invitation to the holders to tender such DWAF Leverage Bonds in accordance with the provisions of the applicable Series resolution.
- b) To the trustee for the payment of its fees on the last day of each May and November.
- c) To the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the lesser of 50% of the maximum annual bond service charges required to be paid on all DWAF Leverage Bonds issued and outstanding, or 10% of the principal amount of DWAF Leverage Bonds issued and outstanding computed in accordance with the Trust Agreement.
- d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

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(10) DRINKING WATER ASSISTANCE FUND REVENUE BONDS SERIES

As of December 31, 2018, there was \$135,000,000 of Drinking Water Assistance Fund Revenue Bonds outstanding, broken down by series as follows:

<u>Series</u>	<u>Type</u>	<u>Interest Rate</u>	<u>Maturity</u>		<u>Long-Term</u>
2016	Serial	3.00% to 5.00%	2020-2029	\$	87,000,000
2016	Term	4.00% to 5.00%	2030-2037		48,000,000
DWAF Bonds Series Totals					135,000,000
Add: unamortized premiums					25,841,152
					<u>\$ 160,841,152</u>

The DWAF Bonds Series debt service requirements to maturity are as follows:

		<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2019	\$	-	6,360,000	6,360,000
2020		500,000	6,360,000	6,860,000
2021		4,000,000	6,317,500	10,317,500
2022		8,000,000	6,070,000	14,070,000
2023		13,000,000	5,607,500	18,607,500
2024-2028		55,500,000	18,725,000	74,225,000
2029-2033		33,000,000	8,745,000	41,745,000
2034-2037		21,000,000	2,180,000	23,180,000
	\$	<u>135,000,000</u>	<u>60,365,000</u>	<u>195,365,000</u>

Prior redemption of DWAF Series 2016 – The bonds maturing on or after June 1, 2027 are subject to prior redemption by and at the sole option of the Authority in whole multiples of \$5,000, either in whole or in part on any date on or after December 1, 2026, at a redemption price of par plus accrued interest.

LGA reimbursements of DWAF project costs of principal and interest (from loans made prior to August 3, 2016), pursuant to DWAF loan agreements, are pledged as security for the DWAF Bonds on a subordinate basis to the DWAF Leverage Bonds. LGA reimbursements of DWAF project costs of interest from loans made after August 3, 2016, pursuant to DWAF loan agreements are pledged first to any DWAF State Match Bonds outstanding, then to DWAF Leverage Bonds, and third to DWAF Bonds outstanding. DWAF Bond debt service is funded after all DWAF Leverage debt service due on the next debt service payment date is funded and, if necessary, any shortages of the DWAF Leverage DSR required balance is funded. In the event that LGA reimbursements of DWAF project costs of principal and interest are insufficient to cover DWAF Leverage and/or DWAF Bond debt service payments, any unencumbered assets of the DWAF Leverage Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of DWAF principal and interest project costs after funding of DWAF Leverage debt service was \$32,560,695, compared to the required bond debt service payments of \$6,360,000.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Principal and Additional Pledged Loan Interest Repayment accounts. After all DWAF Leverage debt service and DSR funding needs are met, the trustee then allocates or pays out moneys in the Principal Repayment account first and Additional Pledged Loan Interest Repayment account (after all moneys of the Principal Repayment account are used for debt service) as follows:

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- a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding DWAF Bonds due on the next interest payment date, (b) the principal of all outstanding DWAF Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding DWAF Bonds due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase DWAF Bonds received by the trustee pursuant to any invitation to the holders to tender such DWAF Bonds in accordance with the provisions of the applicable Series resolution.
- b) To the trustee for the payment of its fees on the last day of each May and November.
- c) If applicable, to the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the required reserve fund balance.
- d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(11) OUTSTANDING DEFEASED BONDS

For accounting purposes, the assets and liabilities for defeased bonds are not reflected in the Authority's financial statements. Below is a listing of Authority bonds remaining outstanding as of December 31, 2018, which have been defeased:

Series	Year Defeased	Balance Outstanding
Community Assistance 2009	2017	\$ 15,545,000
WPCLF State Match 2005	2014	2,035,000
WPCLF Water Quality 2010A	2014	139,360,000
WPCLF Water Quality 2010A	2015	114,050,000
		<u>\$ 270,990,000</u>

(12) WATER DEVELOPMENT REVENUE BONDS AND NOTES—INDUSTRIAL SERIES

The Authority established the industrial program to assist private industry and certain municipalities in financing the construction of water and solid waste pollution control facilities. Under the financing agreements, industrial companies and municipalities are required to make payments for a period of up to 35 years, sufficient to pay, as they become due, interest and principal on the bonds and notes issued to finance the projects. The Authority has no liability for repayment of these bonds and notes. As of December 31, 2018, outstanding bonds and notes under this program total \$1,803,665,000.

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(13) DEFINED BENEFIT PENSION PLAN

The net pension liability reported on the statement of net position represents a liability to employees for pensions. Pensions are a component of exchange transactions—between an employer and its employees—of salaries and benefits for employee services. Pensions are provided to an employee—on a deferred-payment basis—as part of a total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension liability represents the Authority's proportionate share of the Ohio Public Employees Retirement System (OPERS) Pension Plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of its fiduciary net position. The net pension liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost-of-living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting this estimate annually.

The Ohio Revised Code (ORC) limits the Authority's obligation for this liability to annually required payments. The Authority cannot control benefit terms or the manner in which pensions are financed; however, the Authority does receive the benefit of employees' services in exchange for compensation including pension.

GASB Statement No. 68 assumes the liability is solely the obligation of the employer, because (1) they benefit from the employee services; and (2) State statute requires all funding to come from these employers. All contributions to-date have come solely from these employers (which also includes costs paid in the form of withholdings from employees). State statute requires the OPERS to amortize unfunded liabilities within 30 years. If the amortization period exceeds 30 years, the OPERS Board of Trustees (OPERS Board) must propose corrective action to the State legislature. Any resulting legislation change to benefits or funding could significantly affect the net pension liability. Resulting adjustments to the net pension liability would be effective when the changes are legally enforceable.

Plan Description

Organization – OPERS is a cost-sharing, multiple-employer public employee retirement system comprised of three separate pension plans: The Traditional Pension Plan, a defined benefit plan; the Combined Plan, a combination defined benefit/contribution plan; and the Member-Directed Plan, a defined contribution plan. All state and local governmental employees in Ohio, except those covered by one of the other state or local retirement systems in Ohio, are members of OPERS. New public employees (those who establish membership in OPERS on or after January 1, 2003) have 180 days from the commencement of employment to select membership in one of the three pension plans. Contributions to OPERS are effective with the first day of the member's employment. Contributions made prior to the member's plan selection are maintained in the Traditional Pension Plan and later transferred to the plan elected by the member, as appropriate.

All state and local governmental employees, except those covered by another state retirement system in Ohio or the Cincinnati Retirement System, are required to become contributing members of OPERS when they begin public employment unless they are exempted or excluded as defined by the ORC. For actuarial purposes, employees who have earned sufficient service credit (60 contributing months) are entitled to a future benefit from OPERS. Employer, employee and retiree data as of December 31, 2017 can be found in the OPERS 2017 Comprehensive Annual Financial Report (CAFR).

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Pension Benefits – All benefits of the System, and any benefit increases, are established by the legislature pursuant to ORC Chapter 145.

Age-and-Service Defined Benefits – Effective January 7, 2013, Senate Bill (SB) 343 modified components of the Traditional Pension and Combined Plans. Members were impacted by the changes to varying degrees based on their transition group. Three transition groups (A, B and C) were designed to ease the transition of key components of the pension plan changes. Members who were eligible to retire under law in effect prior to SB 343 or will be eligible to retire no later than five years after January 7, 2013, comprise transition Group A. Members who have 20 years of service credit prior to January 7, 2013, or will be eligible to retire no later than 10 years after January 7, 2013, are included in transition Group B. Group C included those members who are not in either of the other groups and members who were hired on or after January 7, 2013. Please see the Plan Statement in the OPERS 2017 CAFR for additional details.

Benefits in the Traditional Pension Plan for state and local members are calculated on the basis of age, final average salary (FAS) and service credit. State and local members in transition Groups A and B are eligible for retirement benefits at age 60 with 60 contributing months of service credit or at age 55 with 25 or more years of service credit. Group C for state and local members is eligible for retirement at age 57 with 25 years of service or at age 62 with 5 years of service. For Groups A and B, the annual benefit is based on 2.2% of FAS multiplied by the actual years of service for the first 30 years of service credit and 2.5% for years of service in excess of 30 years. For Group C, the annual benefit applies a factor of 2.2% for the first 35 years and a factor of 2.5% for the years of service in excess of 35. FAS represents the average of the three highest years of earnings over a member's career for Groups A and B. Group C is based on the average of the five highest years of earnings over a member's career. Refer to the age-and-service tables located in the OPERS 2017 CAFR Plan Statement for additional information regarding the requirements for reduced and unreduced benefits. Members who retire before meeting the age and years of service credit requirement for unreduced benefit receive a percentage reduction in the benefit amount. The base amount of a member's pension benefit is locked in upon receipt of the initial benefit payment for calculation of annual cost-of-living adjustment.

Prior to 2000, payments to OPERS benefit recipients were limited under Section 415(b) of the Internal Revenue Code (IRC). OPERS entered into a Qualified Excess Benefit Arrangement (QEBA) with the Internal Revenue Service (IRS) for all OPERS benefit recipients to receive their full statutory benefit even when the benefits exceeds IRC 415(b) limitations. Monthly QEBA payments start when the total amount of benefits received by the recipients exceeds the IRC limit each year. The portion of the benefit in excess of the IRC 415(b) limit is paid out of the QEBA and taxed as employee payroll in accordance with IRS regulations.

Benefits in the Combined Plan consist of both an age-and-service formula benefit (defined benefit) and a defined contribution element. The defined benefit element is calculated on the basis of age, FAS and years of service. Eligibility regarding age and years of service in the Combined Plan is the same as the Traditional Pension Plan. The benefit formula for the defined benefit component of the plan for state and local members in transition Groups A and B applies a factor of 1.0% to the member's FAS for the first 30 years of service. A factor of 1.25% is applied to years of service in excess of 30. The benefit formula for transition Group C applies a factor of 1.0% to the member's FAS for the first 35 years of service and a factor of 1.25% is applied to years in excess of 35. Persons retiring before age 65 with

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less than 30 years of service credit receive a percentage reduction in benefit. The defined contribution portion of the benefit is based on accumulated member contributions plus or minus any investment gains or losses on those contributions.

Defined Contribution Benefits – Defined contribution plan benefits are established in the plan documents, which may be amended by the OPERS Board. Member-Directed Plan and Combined Plan members who have met the retirement eligibility requirements may apply for retirement benefits. The amount available for defined contribution benefits in the Combined Plan consists of the member's contributions plus or minus the investment gains or losses resulting from the member's investment selections. Combined Plan members wishing to receive benefits must meet the requirements for both the defined benefit and contribution plans. Member-Directed Plan participants must have attained the age of 55, have money on deposit in the defined contribution plan and have terminated public service to apply for retirement benefits.

The amount available for defined contribution benefits in the Member-Directed Plan consists of the member's contributions, vested employer contributions and investment gains or losses resulting from the member's investment selections. Employer contributions and associated investment earnings vest over a five-year period, at a rate of 20% each year. At retirement, members may select one of several distribution options for payment of the vested balance of their individual OPERS accounts. Options include the purchase of a monthly defined benefit annuity from OPERS (which includes joint and survivor options), partial lump-sum payments (subject to limitations), a rollover of the vested account balance to another financial institution, receipt of the entire account balance, net of taxes withheld, or a combination of these options.

Disability Benefits – OPERS administers two disability plans for participants in either the Traditional Pension Plan or Combined Plan. Members in the plan as of July 29, 1992, could elect, by April 7, 1993, coverage under either the original plan or the revised plan. All members who entered OPERS after July 29, 1992 are automatically covered under the revised plan. Under the original plan, a member who becomes disabled before age 60 and has completed 60 contributing months is eligible for a disability benefit. Benefits are funded by the employee and employer contributions and terminate if the member is able to return to work. The revised plan differs in that a member who becomes disabled at any age with 60 contributing months will be eligible for disability benefits until a determined age. The benefit is funded by reserves accumulated from employer contributions. After the disability benefit ends, the member may apply for a service retirement benefit or a refund of contributions, which are not reduced by the amount of disability benefits received. Members participating in the Member-Directed Plan are not eligible for disability benefits.

Survivor Benefits – Dependents of deceased members who participated in either the Traditional Pension Plan or the Combined Plan may qualify for survivor benefits if the deceased employee had at least one and a half years of service credit with the plan, and at least one quarter year of credit within the two and one-half years prior to the date of death. ORC Chapter 145, recently updated by HB 520, specifies the dependents and the conditions under which they qualify for survivor benefits.

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Other Benefits – Once a benefit recipient retiring under the Traditional Pension Plan has received benefits for 12 months, an annual cost-of-living adjustment is provided on the member's base benefit. Members retiring under the Combined Plan receive a cost-of-living adjustment on the defined benefit portion of their benefit. The cost-of-living increase varies somewhat but is generally defined as Consumer Price Index (CPI) not to exceed 3%. A death benefit of \$500-\$2,500, determined by the number of years of service credit of the retiree, is paid to the beneficiary of a deceased retiree or disability benefit recipient under the Traditional Pension Plan and Combined Plan. Death benefits are not available to beneficiaries of Member-Directed Plan participants.

Money Purchase Annuity – Age-and-service retirees who become re-employed in an OPERS-covered position must contribute the regular contribution rates, which are applied towards a money purchase annuity. The money purchase annuity calculation is based on the accumulated contributions of the retiree for the period of re-employment, and an amount of the employer contributions determined by the OPERS Board. Upon termination of service, members over the age of 65 can elect to receive a lump-sum payout or a monthly annuity. Members under age 65 may leave the funds on deposit with OPERS to receive an annuity benefit at age 65, or may elect to receive a refund of their employee contributions made during the period of re-employment, plus interest.

Refunds – Members who have terminated service in OPERS-covered employment may file an application for refund of their account. The ORC requires a two-month waiting period after service termination before the refund may be paid. The acceptance of a refund payment cancels the individual's rights and benefits in OPERS.

Refunds processed for the Traditional Pension Plan members include the member's accumulated contributions, interest and any qualifying employer funds. A Combined Plan member's refund may consist of member contributions for the purchase of service plus interest, qualifying employer funds, and the value of their account in the defined contribution plan consisting of member contributions adjusted by the gains or losses incurred based on their investment selections. Refunds paid to members in the Member-Directed Plan include member contributions and vested employer contributions adjusted by the gains or losses incurred based on their investment selections.

Contributions – The OPERS funding policy provides for periodic employee and employer contributions to all three plans (Traditional Pension, Combined and Member-Directed) at rates established by the OPERS Board, subject to limits set in statute. The rates established for member and employer contributions were approved based upon the recommendations of the OPERS external actuary. All contribution rates were within the limits authorized by the ORC.

Member and employer contribution rates, as a percent of covered payroll, were the same for each covered group across all three plans for the year ended December 31, 2017. Within the Traditional Pension Plan and Combined Plan, member and employer contributions (employer contributions only for the Combined Plan) and an actuarially determined rate of return are adequate to accumulate sufficient assets to pay defined benefits when due. Employee contributions within the Combined Plan are not used to fund the defined benefit retirement allowance. Employer contribution rates as a level percent of payroll dollars are determined using the entry age actuarial funding method. This formula determines the amount of contributions necessary to fund: (1) the current service cost, representing the estimated amount necessary to pay for defined benefits earned by the employees during the current service year; and (2) the prior service cost for service earned prior to the current year and subsequent

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benefit increases. These contributions represent the amount necessary to fund accrued liabilities for retirement allowances and survivor benefits over a period of time.

The employee and employer contribution rates for the state and local divisions are currently set at the maximums authorized by the ORC of 10% and 14%, respectively. With the assistance of the OPERS actuary, a portion of each employer's contributions to OPERS is set aside for the funding of post-employment health care coverage. The portion of Traditional Pension Plan employer contributions allocated to health care was 1.0% for 2017. The employer contribution as a percent of covered payroll deposited for Retiree Medical Accounts (RMAs) participants in the Member-Directed Plan for 2017 was 4.0%. The amount of contributions to OPERS from the Authority during 2017 and 2018 was \$161,052 and \$150,591, respectively, which represents 100% of the Authority's required contribution. In 2018, the Authority did not make any contributions to the Combined Plan and contributions to the Member-Directed Plan were immaterial.

The ORC Chapter 145 assigns authority to the OPERS Board to amend the funding policy. As of December 31, 2017, the OPERS Board adopted the contribution rates that were recommended by the actuary. The contribution rates were included in a new funding policy adopted by the OPERS Board in October 2013, and are certified biennially by the OPERS Board as required by the ORC.

As of December 31, 2017, the date of the last actuarial study, the funding period for all defined benefits of OPERS was 18 years.

Net Pension Liability

The net pension liability was measured as of December 31, 2017, and the total pension liabilities were determined by an actuarial valuation as of that date. The Authority's proportion of the net pension liability was based on both member and employer contributions to OPERS relative to the projected contributions of all participating entities. Following is information related to the Authority's proportionate share and pension expense:

Proportionate Share of the Net Pension Liability	\$1,372,392
CY Proportionate Share	0.008748%
PY Proportionate Share	0.008506%
Change in Proportionate Share	0.000242%
Pension Expense	\$ 249,100

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Actuarial Methods and Assumptions

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of the occurrence of events far into the future. Examples include assumptions about future employment, mortality and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (i.e., the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. The total pension liability was determined by an actuarial valuation as of December 31, 2017, using the following actuarial assumptions and methods applied to all prior periods included in the measurement in accordance with the requirements of GASB 67. Key methods and assumptions used in the latest actuarial valuation, reflecting experience study results, are presented below:

Actuarial Information	Traditional Pension Plan
Valuation Date	December 31, 2017
Experience Study	5 Year period ending December 31, 2015
Actuarial Cost Method	Individual entry age
Actuarial Assumptions:	
Investment Rate of Return	7.50 percent
Wage Inflation	3.25 percent
Projected Salary Increases	3.25 percent - 10.75 percent (including wage inflation at 3.25 percent)
Cost-of-living Adjustments	Pre 1/7/2013 Retirees: 3.00 percent simple Post 1/7/2013 Retirees: 3.00 percent simple through 2018, then 2.15 percent simple

Pre-retirement mortality rates are from the RP-2014 Healthy Annuitant Mortality table. For males, Healthy Annuitant Mortality tables were used, adjusted for mortality improvement back to the observation period base of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates used in evaluating disability allowances were based on the RP-2014 Disabled Mortality table for males and females, adjusted for mortality improvement back to the observation base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 Mortality Improvement Scale to all of the above described tables.

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The discount rate used to measure the total pension liability was 7.5% for the Traditional Pension Plan, Combined Plan and Member-Directed Plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Traditional Pension Plan, Combined Plan and Member-Directed Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of Net Pension Liability to Changes in the Discount Rate - The following table presents the net pension liability or asset calculated using the discount rate of 7.5%, and expected net pension liability or asset if it were calculated using a discount rate that is 1.0% lower or higher than the current rate.

Employers Net Pension Liability/(Asset)	1% Decrease 6.5%	Current Discount Rate 7.5%	1% Increase 8.5%
Traditional Pension Plan	\$ 2,437,028	1,372,392	484,816

The allocation of investment assets within the Defined Benefit portfolio is approved by the OPERS Board as outlined in the annual investment plan. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The following table displays the OPERS Board-approved asset allocation policy for 2017 and the long-term expected real rates of return.

Asset Class	Target Allocation for 2017	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	23.00%	2.20%
Domestic Equities	19.00	6.37
Real Estate	10.00	5.26
Private Equity	10.00	8.97
International Equities	20.00	7.88
Other Investments	18.00	5.26
Total	100.00%	5.66

The long-term expected rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return 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, adjusted for inflation.

During 2017, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Defined Benefit portfolio contains the investment assets of the Traditional Pension Plan, the defined benefit component of the Combined Plan and the annuitized accounts of the Member-Directed Plan. Within The Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing

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investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Defined Benefit portfolio was 16.82% for 2017.

Average Remaining Service Life

GASB 68 requires that changes arising from differences between expected and actual experience or from changes in actuarial assumptions be recognized in pension expense over the average remaining service life of all employees provided with benefits through the pension plan (active and inactive). This is to consider these differences on a pooled basis, rather than an individual basis, to reflect the expected remaining service life of the entire pool of employees with the understanding that inactive employees have no remaining service period. As of December 31, 2017, the average of the expected remaining service lives of all employees calculated by our external actuaries for the Traditional Pension Plan was 2.9546 years; for the Combined Plan was 9.3216 years; and for the Member-Directed Plan was 10.1908 years.

Deferred Inflows and Deferred Outflows

At December 31, 2018, the Authority reported deferred inflows of resources and deferred outflows of resources related to pensions from the following sources:

Deferred Inflows of Resources:

Differences between expected and actual experience	\$	27,045
Net difference between projected and actual earnings on pension plan investments		294,635
Change in Authority's proportionate share		30,257
Total	\$	<u>351,937</u>

Deferred Outflows of Resources:

Differences between expected and actual experience	\$	1,402
Change in assumptions		164,010
Change in Authority's proportionate share		35,039
Authority's contributions subsequent to the measurement date		150,591
Total	\$	<u>351,042</u>

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The \$150,591 reported as deferred outflows related to pensions resulting from employer contributions subsequent to the measurement date are recognized as a reduction of the net pension liability in the Authority's financial statements. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as disclosed in the table below:

Year Ending December 31	Traditional Pension Plan Net Deferred Outflows / (Inflows) of Resources
2019	\$ 112,773
2020	(13,448)
2021	(129,741)
2022	(121,070)
Total	\$ (151,486)

(14) DEFINED BENEFIT OPEB PLANS

Net OPEB Liability

For 2018, Governmental Accounting Standards Board (GASB) Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" was effective. This GASB pronouncement had a significant effect on beginning net position as reported January 1, 2018 (See Note 4). The net OPEB liability has been disclosed below.

OPEB is a component of exchange transactions—between an employer and its employees—of salaries and benefits for employee services. OPEB are provided to an employee—on a deferred-payment basis—as part of the total compensation package offered by an employer for employee services each financial period.

The net OPEB liability represents the Authority's proportionate share of each OPEB plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of each OPEB plan's fiduciary net position. The net OPEB liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting these estimates annually.

Ohio Revised Code limits the Authority's obligation for this liability to annually required payments. The Authority cannot control benefit terms or the manner in which OPEB are financed; however, the Authority does receive the benefit of employees' services in exchange for compensation including OPEB.

GASB 75 assumes the liability is solely the obligation of the employer, because they benefit from employee services. OPEB contributions come from these employers and health care plan enrollees which pay a portion of the health care costs in the form of a monthly premium. The Ohio revised Code permits, but does not require the retirement systems to provide healthcare to eligible benefit recipients. Any change to benefits or funding could significantly affect the net OPEB liability. Resulting adjustments to the net OPEB liability would be effective when the changes are legally enforceable.

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The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits.

Plan Description

Plan Description - The Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: the traditional pension plan, a cost-sharing, multiple-employer defined benefit pension plan; the member-directed plan, a defined contribution plan; and the combined plan, a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care trust, which funds multiple health care plans including medical coverage, prescription drug coverage and deposits to a Health Reimbursement Arrangement to qualifying benefit recipients of both the traditional pension and the combined plans. This trust is also used to fund health care for member-directed plan participants, in the form of a Retiree Medical Account (RMA). At retirement or refund, member-directed plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

In order to qualify for postemployment health care coverage, age and service retirees under the traditional pension and combined plans must have twenty or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement 75. See OPERS' CAFR referenced below for additional information.

The Ohio Revised Code permits, but does not require OPERS to provide health care to its eligible benefit recipients. Authority to establish and amend health care coverage is provided to the Board in Chapter 145 of the Ohio Revised Code.

Disclosures for the health care plan are presented separately in the OPERS financial report. Interested parties may obtain a copy by visiting <https://www.opers.org/financial/reports.shtml>, by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling (614) 222-5601 or 800-222-7377.

Funding Policy - The Ohio Revised Code provides the statutory authority requiring public employers to fund postemployment health care through their contributions to OPERS. When funding is approved by OPERS' Board of Trustees, a portion of each employer's contribution to OPERS is set aside to fund OPERS health care plans. Beginning in 2018, health care is not being funded.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2018, state and local employers contributed at a rate of 14.0 percent of earnable. This is the maximum employer contribution rates permitted by the Ohio Revised Code. Active member contributions do not fund health care.

Each year, the OPERS Board determines the portion of the employer contribution rate that will be set aside to fund health care plans. The portion of employer contributions allocated to health care for members in the Traditional Pension Plan and Combined Plan was 1.0 percent during calendar year 2017. As recommended by OPERS' actuary, the portion of employer contributions allocated to health care

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

beginning January 1, 2018 decreased to 0 percent for both plans. The OPERS Board is also authorized to establish rules for the retiree or their surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected. The employer contribution as a percentage of covered payroll deposited into the RMA for participants in the Member-Directed Plan for 2017 was 4.0 percent.

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll. The Authority's contractually required contribution was \$11,307 for 2017 and \$0 for 2018.

Net OPEB Liability & OPEB Expense

The net OPEB liability and total OPEB liability for OPERS were determined by an actuarial valuation as of December 31, 2016, rolled forward to the measurement date of December 31, 2017, by incorporating the expected value of health care cost accruals, the actual health care payment, and interest accruals during the year. The Authority's proportion of the net OPEB liability was based on the Authority's share of contributions to the retirement plan relative to the contributions of all participating entities. Following is information related to the proportionate share:

	<u>OPERS</u>
Proportion of the Net OPEB Liability:	
Current Measurement Date	0.0088752%
Prior Measurement Date	<u>0.0085056%</u>
Change in Proportionate Share	<u><u>0.0003696%</u></u>
Proportionate Share of the Net OPEB Liability	\$ 963,778
OPEB Expense	\$ 107,652

Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan and include the types of coverage provided at the time of each valuation and the historical pattern of sharing of costs between OPERS and plan members. The total OPEB liability was determined by an actuarial valuation as of December 31, 2016, rolled forward to the measurement date of December 31, 2017.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

The actuarial valuation used the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB 74:

Wage Inflation	3.25 percent
Projected Salary Increases, including inflation	3.25 to 10.75 percent, including wage inflation
Single Discount Rate:	
Current measurement date	3.85 percent
Prior Measurement date	4.25 percent
Investment Rate of Return	6.50 percent
Municipal Bond Rate	3.31 percent
Health Care Cost Trend Rate	7.5 percent, initial 3.25 percent, ultimate in 2028
Actuarial Cost Method	Individual Entry Age

Pre-retirement mortality rates are based on the RP-2014 Employees Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 Mortality Improvement Scale to all of the above described tables.

The most recent experience study was completed for the five year period ended December 31, 2015.

The long-term expected rate of return on health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2017, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Health Care portfolio includes the assets for health care expenses for the Traditional Pension Plan, Combined Plan and Member-Directed Plan eligible members. Within the Health Care portfolio, contributions into the plans are assumed to be received continuously throughout the year based on the actual payroll payable at the time contributions are made, and health care-related payments are assumed to occur mid-year. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Health Care portfolio is 15.2 percent for 2017.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

The allocation of investment assets with the Health Care portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Assets are managed on a total return basis with a long-term objective of continuing to offer a sustainable health care program for current and future retirees. OPERS' primary goal is to achieve and maintain a fully funded status for the benefits provided through the defined pension plans. Health care is a discretionary benefit. The table below displays the Board-approved asset allocation policy for 2017 and the long-term expected real rates of return:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00%	1.88%
Domestic Equities	21.00	6.37
Real Estate Investment Trust	6.00	5.91
International Equities	22.00	7.88
Other Investments	17.00	5.39
Total	100.00%	4.98%

Discount Rate

A single discount rate of 3.85 percent was used to measure the OPEB liability on the measurement date of December 31, 2017. A single discount rate of 4.23 percent was used to measure the OPEB liability on the measurement date of December 31, 2016. Projected benefit payments are required to be discounted to their actuarial present value using a single discount rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the health care fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate are not met). This single discount rate was based on an expected rate of return on the health care investment portfolio of 6.50 percent and a municipal bond rate of 3.31 percent. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the health care fiduciary net position and future contributions were sufficient to finance health care costs through 2034. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2034, and the municipal bond rate was applied to all health care costs after that date.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate

The following table presents the Authority's proportionate share of the net OPEB liability calculated using the single discount rate of 3.85 percent, as well as what the Authority's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is one-percentage-point lower (2.85 percent) or one-percentage-point higher (4.85 percent) than the current rate:

		1% Decrease (2.85%)	Current Discount Rate (3.85%)	1% Increase (4.85%)
Authority's proportionate share of the net OPEB liability	\$	1,280,452	963,778	707,634

Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate

Changes in the health care cost trend rate may also have a significant impact on the net OPEB liability.

The following table presents the net OPEB liability calculated using the assumed trend rates, and the expected net OPEB liability if it were calculated using a health care cost trend rate that is 1.0 percent lower or 1.0 percent higher than the current rate.

Retiree health care valuations use a health care cost-trend assumption that changes over several years built into the assumption. The near-term rates reflect increases in the current cost of health care; the trend starting in 2018 is 7.50 percent. If this trend continues for future years, the projection indicates that years from now virtually all expenditures will be for health care. A more reasonable alternative is that in the not-too-distant future, the health plan cost trend will decrease to a level at, or near, wage inflation. On this basis, the actuaries project premium rate increases will continue to exceed wage inflation for approximately the next decade, but by less each year, until leveling off at an ultimate rate, assumed to be 3.25 percent in the most recent valuation.

		1% Decrease	Current Health Care Cost Trend Rate Assumption	1% Increase
Authority's proportionate share of the net OPEB liability	\$	922,152	963,778	1,006,824

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

Deferred Inflows and Outflows

At December 31, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

Deferred Inflows of Resources:

Net difference between projected and actual	
Earnings on OPEB plan investments	\$ <u>71,796</u>

Deferred Outflows of Resources:

Differences between expected and actual	
experience	\$ 751
Change in assumptions	70,173
Change in Authority's proportionate share	
And difference in employer contributions	<u>26,169</u>
Total	\$ <u>97,093</u>

Amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending December 31	Traditional Pension Plan Net Deferred Outflows / (Inflows) of Resources
2019	\$ 28,472
2020	28,472
2021	(13,698)
2022	<u>(17,949)</u>
Total	\$ <u>25,297</u>

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

(15) COMMITMENTS

As of December 31, 2018, the Authority has loan commitments to finance LGA construction projects in the following amounts:

<u>Fund</u>	<u>Amount</u>
Other Projects	\$ 61,629,366
In Lieu Fee	102,243
Fresh Water	110,773,589
Water Pollution Control Loan	1,245,182,367
Drinking Water Assistance	246,701,921
	<u>\$ 1,664,389,486</u>

Loan commitments consist of loan awards that have been encumbered by the Authority but not yet disbursed to the LGAs. The Authority intends to meet these LGA commitments with currently available funds and grant commitments from the U.S. EPA.

(16) TRANSFERS

Interfund transfers for the year ended December 31, 2018 consisted of the following:

Transfers to Other Projects from:	
Community Assistance	\$ 1,164,106
Fresh Water	<u>32,464,185</u>
	\$ 33,628,291
Transfers from Community Assistance to:	
Other Projects	(1,164,106)
Fresh Water	<u>(1,053,815)</u>
	\$ (2,217,921)
Transfers, net, to (from) Fresh Water from (to):	
Other Projects	(32,464,185)
Community Assistance	<u>1,053,815</u>
	\$ (31,410,370)
Total Transfers, net	<u>\$ —</u>

Transfers are used to meet the requirements of certain debt covenants or to fund additional program activities as authorized by the Authority's Board. In the year ended December 31, 2018, the Authority made the following non-routine transfers:

- \$32,464,185 transferred from the Fresh Water Fund and \$1,164,106 from the Community Assistance Fund to the Other Projects Fund for additional funding for Other Projects Fund loans and grants.
- \$1,053,815 transferred from the Community Assistance Fund to the Fresh Water Fund for additional funding for Fresh Water loans.

OHIO WATER DEVELOPMENT AUTHORITY

Notes to Financial Statements

(17) CHANGES IN LONG-TERM LIABILITIES

As of December 31, 2018, the Authority has long-term liabilities in the following amounts:

Long-Term Liability	12/31/2017 Balance, as restated	Additions	Reductions	12/31/2018 Balance	Due Within One Year	Due in More Than One Year
Compensated Absences	\$ 261,626	184,068	217,476	\$ 228,218	-	228,218
Net Pension Liability	1,931,568	-	559,176	1,372,392	-	1,372,392
Net OPEB Liability	853,443	110,335	-	963,778	-	963,778
Revenue Bonds and Notes Payable	4,046,597,026	204,193,631	382,166,533	3,868,624,124	220,168,346	3,648,455,778
Total Long-Term Liabilities	\$ 4,049,643,663	204,488,034	382,943,185	\$3,871,188,512	220,168,346	3,651,020,166

(18) CHANGES IN SHORT-TERM LIABILITIES

As of December 31, 2018, the Authority has the following short-term liability:

Short-Term Liability	12/31/2017 Balance	Additions	Reductions	12/31/2018 Balance
Short-Term Revenue Notes Payable	\$ -	5,000,000	5,000,000	-

(19) SUBSEQUENT EVENT

Since December 31, 2018, the Authority has issued additional debt. The Authority issued \$450,000,000 in Water Pollution Control Loan Fund Revenue Bonds – Series 2019A on March 14, 2019. As these bonds were not issued until 2019, they are not included in the long-term debt of the Authority as of December 31, 2018.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of Proportionate Share of Net Pension Liability

Ohio Public Employees Retirement System

Last Four Calendar Years*

Unaudited

		2015	2016	2017	2018
Proportion of the net pension liability		0.0095310%	0.0091080%	0.0085060%	0.008748%
Proportionate share of the net pension liability	\$	1,149,545	1,577,618	1,931,568	1,372,392
Covered payroll	\$	1,200,805	1,207,158	1,247,362	1,340,687
Proportionate share of the net pension liability as a percentage of covered payroll		95.73%	130.69%	154.85%	102.36%
Plan fiduciary net position as a percentage of the total pension liability		86.45%	81.08%	77.25%	84.66%

* - Table will begin to cover ten years of data starting with 2015. Amounts presented represent pension amounts as of measurement period, which is one year prior to the date of the financial statements.

Notes to Schedule:

Change in assumptions. In 2017, changes in assumptions were made based upon an updated experience study that was completed for the five-year period ended December 31, 2015. Significant changes included a reduction of the discount rate from 8.0% to 7.5%, a reduction in the wage inflation rate from 3.75% to 3.25%, and transition from the RP-2000 mortality tables to the RP-2014 mortality tables.

OHIO WATER DEVELOPMENT AUTHORITYSchedule of Pension Contributions
Ohio Public Employees Retirement System**Last Five Calendar Years***

Unaudited

		2014	2015	2016	2017	2018
Contractually required contributions	\$	140,729	142,358	139,196	146,994	150,591
Contributions in relation to the contractually required contributions	\$	140,729	142,358	139,196	146,994	150,591
Contribution deficiency (excess)		-	-	-	-	-
Covered payroll	\$	1,200,805	1,207,158	1,247,362	1,340,687	1,272,812
Contributions as a percentage of covered payroll		11.72%	11.79%	11.16%	10.96%	11.83%

* - Table will begin to cover ten years of data starting with 2014.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of Proportionate Share of Net OPEB Liability Ohio Public Employees Retirement System

Last Two Calendar Years

Unaudited

		2017	2018
Proportion of the net OPEB liability		0.008506%	0.008875%
Proportionate share of the net OPEB liability	\$	853,443	963,778
Covered payroll	\$	1,247,362	1,340,687
Proportionate share of the net OPEB liability as a percentage of covered payroll		68.42%	71.89%
Plan fiduciary net position as a percentage of the total OPEB liability		54.05%	54.14%

* - Table will begin to cover ten years of data starting with 2017. Amount presented represents OPEB amounts as of measurement period, which is one year prior to the date of the financial statements.

Notes to Schedule:

Change in assumptions . For 2018, the single discount rate changed from 4.23% to 3.85%.

OHIO WATER DEVELOPMENT AUTHORITYSchedule of OPEB Contributions
Ohio Public Employees Retirement System**Last Three Calendar Years**

Unaudited

		2016	2017	2018
Contractually required contributions	\$	23,189	11,307	-
Contributions in relation to the contractually required contributions	\$	23,189	11,307	-
Contribution deficiency (excess)		-	-	-
Covered payroll	\$	1,247,362	1,340,687	1,272,812
Contributions as a percentage of covered payroll		1.86%	0.84%	0.00%

* - Table will begin to cover ten years of data starting with 2016.

**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER
 FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
 BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN
 ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

Ohio Water Development Authority
 480 South High Street
 Columbus, Ohio 43215

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities and each major fund of the Ohio Water Development Authority (the Authority) as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated March 25, 2019, wherein we noted the Authority adopted the provisions of GASB Statement No. 75 for the year ended December 31, 2018.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Clark, Schaefer, Hackett & Co.

Springfield, Ohio
March 25, 2019

APPENDIX D

GLOSSARY

When used herein and in the Appendices hereto, the following terms shall have the meanings set forth below. Additional terms used herein are more fully defined in the Trust Agreement, copies of which are available from the Authority upon request.

“Agreement” or “Trust Agreement” means the Trust Agreement, dated as of February 15, 1995, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee, as amended and supplemented by the First Supplemental Trust Agreement, the Second Supplemental Trust Agreement, the Third Supplemental Trust Agreement, the Fourth Supplemental Trust Agreement, the Fifth Supplemental Trust Agreement, the Sixth Supplemental Trust Agreement, the Seventh Supplemental Trust Agreement, the Eighth Supplemental Trust Agreement, the Ninth Supplemental Trust Agreement, the Tenth Supplemental Trust Agreement, the Eleventh Supplemental Trust Agreement, the Twelfth Supplemental Trust Agreement, the Thirteenth Supplemental Trust Agreement, the Fourteenth Supplemental Trust Agreement, the Fifteenth Supplemental Trust Agreement, the Sixteenth Supplemental Trust Agreement, the Seventeenth Supplemental Trust Agreement, the Eighteenth Supplemental Trust Agreement, the Nineteenth Supplemental Trust Agreement, the Twentieth Supplemental Trust Agreement and the Twenty-First Supplemental Trust Agreement, and as it may be further amended or supplemented from time to time in accordance with its terms, securing the Series 1995 Fresh Water Bonds, the Series 1998 Fresh Water Bonds, the Series 2001 Fresh Water Bonds, the Series 2002 Fresh Water Bonds, the Series 2004 Fresh Water Bonds, the Series 2005 Fresh Water Refunding Bonds, the Series 2006A Fresh Water Refunding Bonds, the Series 2009A Fresh Water Revenue Bonds, the Series 2009B Fresh Water Refunding Bonds, the Series 2010A Fresh Water Bonds, the Series 2013A Fresh Water Bonds, the Series 2015A Fresh Water Floating Rate Notes, the Series 2016A Fresh Water Bonds, the Series 2016B Fresh Water Bonds, the Series 2018 Fresh Water Bonds and the Series 2019 Fresh Water Bonds, and any additional Parity Bonds issued thereunder.

“Alternate Letter of Credit” shall mean an irrevocable, direct-pay substitute Letter of Credit delivered to and accepted by the Trustee pursuant to the Seventh Supplemental Agreement. An Alternate Letter of Credit must satisfy the requirements set forth in the Seventh Supplemental Agreement, (b) have substantially the same terms as the initial Letter of Credit (except for the expiration date) and (c) be in substantially the form of the initial Letter of Credit.

“Appreciated Principal Amount” means, as of any date of computation with respect to any Capital Appreciation Bond, an amount equal to the principal amount thereof at its initial offering plus an amount of interest which, based on semi-annual compounding on each Compounding Date from the date of delivery on the basis of a 360-day year of twelve 30-day months, will produce a yield approximately equal to the yield to maturity for such Bond specified in or pursuant to the applicable Series Resolution. The Appreciated Principal Amount with respect to any date other than the Compounding Date is the Appreciated Principal Amount on the next preceding Compounding Date or dated date as noted on the form thereof, as the case may be, plus the fraction of the difference between the Appreciated Principal Amount on such next preceding Compounding Date or dated date and the next succeeding Compounding Date that equals the ratio of (a) the number of days from such next preceding Compounding Date or dated date to the date for which the determination is being calculated to (b) the total number of days from such next preceding Compounding Date or dated date to the next succeeding Compounding Date.

“Assumed Amortization Period” means the period of time specified in paragraph (a) or paragraph (b) below, as selected by the Fiscal Officer:

- (a) Five (5) years; or
- (b) The period of time, exceeding five (5) years, specified in a written opinion of the Financial Advisor as being not longer than the maximum period of time over which indebtedness having comparable terms and security and issued or incurred by similar issuers of comparable credit standing would, if then being offered, be marketable on reasonable and customary terms.

“Assumed Interest Rate” means the rate per year (determined as of the last day of the calendar month next preceding the month in which the determination of Assumed Interest Rate is being made) specified in a written opinion of the Financial Advisor as being not lower than the lowest rate of interest at which indebtedness having comparable terms, security and federal income tax status amortized on a level debt service basis over a period of time equal to the Assumed Amortization Period, and issued or incurred by similar issuers of comparable credit standing would, if being offered as of such last day of the calendar month, be marketable on reasonable and customary terms; provided that such rate shall be neither (a) lower than the rate specified in the “20-Bond Index” published in The Bond Buyer, or successor index, as in effect on the date of such opinion, nor (b) higher than the highest rate permitted by law at which such Fresh Water Bonds could be sold on said day.

“Authenticating Agent” means the Registrar, and any other bank, trust company or other Person designated as Authenticating Agent for the Series 2019 Fresh Water Bonds in accordance with the Series 2019 Fresh Water Bonds Resolution or the Trust Agreement, each of which shall be a transfer agent in accordance with Section 17A(c) of the Securities Exchange Act of 1934, as amended.

“Authority” means the Ohio Water Development Authority, a body corporate and politic, organized and existing under the provisions of Chapter 6121 of the Ohio Revised Code, and “Chairman,” “Vice-Chairman,” “Executive Director,” and “Secretary-Treasurer” shall mean, respectively, the Chairman, Vice-Chairman, Executive Director and Secretary-Treasurer of the Authority.

“Authorized Officer” means any officer, member, or employee of the Authority authorized by or pursuant to a resolution of the Authority to perform the act or sign the document in question, and, if there is no such authorization, the Executive Director.

“Balloon Bonds” means any Fresh Water Bonds or Bond Anticipation Notes, (a) 25% or more of the principal payments of which are due in a single year, excluding any such principal payments that are subject to mandatory sinking fund requirements in a prior year, or (b) 25% or more of the principal of which may, at the option of the Holder or Holders thereof, be redeemed at one time.

“Bond Anticipation Notes” means notes issued in anticipation of the issuance of Fresh Water Bonds and with a maturity of one year or less.

“Bond Purchase Agreement” means, with respect to the Series 2019 Fresh Water Bonds, the agreement between the Authority and the Original Purchasers, authorized pursuant to the Series 2019 Fresh Water Bonds Resolution, setting forth the terms and conditions of the sale of the Series 2019 Fresh Water Bonds.

“Bond Service Charges” means, for any period of time, the principal of and interest and any premium due on all or any of the Fresh Water Bonds, as the case may be, for that period or payable at that time, as the case may be, including any mandatory sinking fund requirements. In determining Bond Service Charges for any period or date, mandatory sinking fund requirements to be paid during such

period or on such date are included, and principal maturities for which, and to the extent, mandatory sinking fund requirements were or are to be paid in a prior period or on a prior date are excluded.

“Bond Year” means, with respect to a series of Bonds, each one-year period (or shorter period from the date of issue of such series) that ends on the close of business on the last day of a compounding interval used in computing the yield on such series for federal income tax purposes.

“Book entry form” or “book entry system” means a form or system under which the physical Fresh Water Bonds in fully registered form are issued only to a Depository or its nominee as Holder, with the Fresh Water Bonds held by and “immobilized” in the custody of the Depository, and the book entry system, maintained by and the responsibility of the Depository and not maintained by or the responsibility of the Authority, the State or the Trustee, is the record that records the transfer of the book entry interests in the Fresh Water Bonds.

“Capital Appreciation Bond” means any Fresh Water Bond, the interest on which, during its entire term or any portion thereof, is payable only as a component of the Appreciated Principal Amount at maturity or redemption, as so designated in or pursuant to the applicable Series Resolution.

“Capitalized Interest” means that portion, if any, of the proceeds of a series of Fresh Water Bonds that is designated as capitalized interest in or pursuant to the applicable Series Resolution and, is deposited in the Debt Service Fund for the purpose of paying interest on such Fresh Water Bonds.

“Certificate of Award” means, with respect to the Series 2019 Fresh Water Bonds, the Series 2019 Fresh Water Bonds Certificate of Award, and, with respect to any other series of Fresh Water Bonds, the Certificate of Award, if any, for the Fresh Water Bonds of that Series authorized pursuant to the applicable Series Resolution as a means of specifying and determining the final terms of the Fresh Water Bonds of that Series within limitations fixed in the applicable Series Resolution.

“Code” means the Internal Revenue Code of 1986, as it may be amended from time to time.

“Compounding Date” means, as to any Capital Appreciation Bond, any date on which interest is compounded thereon as such date is specified in or pursuant to the applicable Series Resolution.

“Cooperative Agreement” means any agreement (including, without limitation, any Existing Cooperative Agreement) between the Authority and a Local Governmental Agency participating in the Fresh Water Program in which the Authority agrees to lend money to the Local Governmental Agency for its Project and the Local Governmental Agency agrees to repay the loan.

“CP Notes” means the Fresh Water Commercial Paper Notes authorized by the Commercial Paper General Note Resolution in an amount not to exceed \$300,000,000 at any time Outstanding and issued for the purpose of paying costs of, or making loans to Local Governmental Agencies to pay costs of planning, designing, acquiring or constructing waste water treatment facilities, interceptor sewer facilities, sewage collection facilities and appurtenant sewerage facilities necessary for the effective operation thereof, and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof, or reimbursing the LOC Bank with the proceeds of refunding CP Notes, paying costs of issuance or Capitalized Interest, if any, that are attributable to the CP Notes and paying the costs of obtaining and maintaining a Credit Facility.

“Credit Facility” means a letter of credit, a policy of municipal bond insurance or other credit facility provided with respect to a particular Series of Fresh Water Bonds or with respect to all or a

portion of the Required Reserve Fund Balance attributable to a Series of Fresh Water Bonds pursuant to the Series Resolution and Supplemental Agreement applicable to such Fresh Water Bonds.

“Credit Facility Proceeds” means any amounts which represent the proceeds of a draw upon a Credit Facility.

“Cross-Collateralization Fund” means the Cross-Collateralization Fund created in the Fresh Water General Bond Resolution.

“Crossover Amount” means the amount of money and Escrow Securities which are on deposit in a Crossover Escrow Account and which, together with investment income thereon, are held as provided in the definition of “Crossover Refunded Bond.”

“Crossover Date” means, when used with respect to any particular Crossover Refunding Bonds and Crossover Refunded Bonds, the date on which the Crossover Amount on deposit in a Crossover Escrow Account shall be used to retire all such Outstanding Crossover Refunded Bonds for which such Crossover Escrow Account was established.

“Crossover Escrow Account” means an escrow account in which a Crossover Amount is deposited.

“Crossover Refunded Bond” means any Fresh Water Bond if

- (i) The Trustee shall have received and shall hold in trust for and irrevocably committed thereto, monies sufficient, or
- (ii) The Trustee shall have received and shall hold in trust for and irrevocably committed thereto, Escrow Securities which shall be the subject of a report by an independent public accounting firm of national reputation verifying the mathematical accuracy of schedules provided by or on behalf of the Authority to demonstrate such Escrow Securities to be of such maturities, irrevocably established redemption dates or irrevocably established repurchase dates (if such Escrow Securities are subject to a repurchase agreement) and interest payment dates, and to be of such principal amounts or irrevocably established redemption prices and to bear such interest, to be sufficient together with any monies to which reference is made in paragraph (i) above, without the need for further investment or reinvestment of either the principal amount thereof or the interest earnings therefrom (which earnings are to be held likewise in trust, except as provided herein):
 - (A) for the payment of all principal of and premium, if any, on such Fresh Water Bond as the same becomes due, whether at its maturity or redemption date or otherwise, as the case may be, or if a default in payment shall have occurred on any maturity or redemption date, then for the payment of all principal of and premium on such Fresh Water Bond to the date of the tender of payment, provided, that if any such Fresh Water Bond is to be redeemed prior to the maturity thereof, notice of that redemption shall have been given or irrevocable provision shall have been made for the giving of that notice, and
 - (B) for the payment of interest (in whole or in part) on any Crossover Refunding Bonds, the proceeds of which were, in whole or in part, deposited in such Cross over Escrow Account.

Prior to the Crossover Date, the Crossover Amount may be pledged as security for the Crossover Refunding Bonds, the Crossover Refunded Bonds, or both. The monies and proceeds of such Escrow Securities, to the extent needed, will be used for the foregoing purposes or used to reimburse a provider of a Credit Facility for amounts advanced by it for the foregoing purposes.

“Crossover Refunding” means an advance refunding in which Crossover Refunding Bonds are issued to refund Crossover Refunded Bonds and in which a Crossover Amount is deposited in a Crossover Escrow Account.

“Crossover Refunding Bond” means any Fresh Water Bond, to the extent that any proceeds from the sale thereof shall, upon deposit in a Crossover Escrow Account, constitute a Crossover Amount.

“Current Interest Bonds” means any Fresh Water Bonds that are not Capital Appreciation Bonds.

“Debt Service Fund” means the Debt Service Fund created in the Fresh Water General Bond Resolution.

“Debt Service Reserve Fund” means the Debt Service Reserve Fund created in the Fresh Water General Bond Resolution, in which the Required Reserve Fund Balance is required to be on deposit pursuant to the Fresh Water General Bond Resolution.

“Depository” means any securities depository that is a clearing agency under federal law operating and maintaining with its participants or otherwise, a book entry system to record ownership of book entry interests in Fresh Water Bonds, and to effect transfers of book entry interests in Fresh Water Bonds, and includes and means initially The Depository Trust Company (“DTC”) (a limited purpose trust company), New York, New York.

“Direct Payment” means a credit payment allowed pursuant to Section 54AA(g) of the Code with respect to Direct Payment BABs that is payable to the Authority by the U.S. Treasury as provided in Section 6431 of the Code.

“Direct Payment BABs” means Fresh Water Bonds that are “Build America Bonds” within the meaning of Section 54AA(d) of the Code and that are qualified bonds within the meaning of Section 54AA(g), the interest on which is includible in gross income for federal income tax purposes and with respect to which the Authority shall have made an irrevocable election to receive one or more Direct Payments.

“Eighth Supplemental Trust Agreement” means the Eighth Supplemental Trust Agreement dated April 2, 2009 between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the Original Fresh Water Trust Agreement, and providing for the issuance of the Series 2009A Fresh Water Bonds.

“Eighteenth Supplemental Agreement”^{*} means the Eighteenth Supplemental Trust Agreement dated as of June 1, 2017, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2017 Fresh Water Taxable Notes.

^{*} The Authority intends to enter into an Amendment to Eighteenth Supplemental Agreement in connection with an increase of the total amount of Series 2017 Fresh Water Taxable Notes that may be issued. See PARITY BONDS AND BOND ANTICIPATION NOTES; OTHER SUBORDINATE OBLIGATIONS – Existing Subordinate Obligations.

“Electronic Means” shall mean telecopy, telegraphy, telex, facsimile transmission, time-sharing terminal or any electronic means of communication that produces a written record.

“Eleventh Supplemental Trust Agreement” means the Eleventh Supplemental Trust Agreement dated July 23, 2013 between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the Original Fresh Water Trust Agreement, and providing for the issuance of the Series 2013A Fresh Water Bonds.

“Eligible Investments” means and includes any of the following, if and to the extent the same are at the time legal for the investment of the Authority’s money (any reference to “rating categories” being a reference to full letter categories applied by Rating Agencies and not to subcategories indicated, for example, by “+” or “-” or by numerical suffixes):

- a. Government Obligations and Government Certificates.
- b. Obligations issued, guaranteed or collateralized by any of the following:
 - (1) Federal Home Loan Bank System,
 - (2) Government National Mortgage Association,
 - (3) Farmers Home Administration,
 - (4) Federal Home Loan Mortgage Company,
 - (5) Federal Housing Administration,
 - (6) Federal National Mortgage Association,
 - (7) Federal Farm Credit Bank System, and
 - (8) Resolution Funding Corporation.
- c. Pre-refunded municipal obligations rated in at least the third highest rating category by all Rating Agencies and meeting the following conditions:
 - (i) (A) such obligations are not to be redeemed prior to maturity or the Trustee has been given irrevocable instructions concerning their call for redemption, and (B) the issuer of such obligations has covenanted not to redeem such obligations other than as set forth in such instructions;
 - (ii) such obligations are secured by Government Obligations or Government Certificates that may be applied only to interest, principal, and premium payments on such obligations;
 - (iii) the principal of and interest on such Government Obligations or Government Certificates (plus any cash in the escrow fund with respect to such pre-refunded obligations) are sufficient to meet the liabilities of the obligations;
 - (iv) the Government Obligations or Government Certificates serving as security for the obligations are held by an escrow agent or trustee; and
 - (v) such Government Obligations or Government Certificates are not available to satisfy any other claims, including those against the trustee or escrow agent.
- d. Direct and general long-term obligations of any state of the United States of America or the District of Columbia (hereinafter referred to in this definition of “Eligible Investments” as a “State”),

to the payment of which the full faith and credit of such State is pledged and that are rated in one of the three highest rating categories by all Rating Agencies.

e. Direct and general short-term obligations of any State, to the payment of which the full faith and credit of such State is pledged and that are rated in the highest short-term rating category by all Rating Agencies.

f. Interest-bearing demand or time deposits with, or interests in money market portfolios rated “Am” or “AM-G” or higher by S&P and “A3” or higher by Moody’s issued by, state banks or trust companies or national banking associations that are members of the Federal Deposit Insurance Corporation (“FDIC”). Such deposits or interests must be (i) continuously and fully insured by FDIC, (ii) if they have a maturity of one year or less, with or issued by banks that are rated in one of the three highest short term rating categories by all Rating Agencies, (iii) if they have a maturity longer than one year, with or issued by banks that are rated in one of the three highest rating categories by all Rating Agencies, or (iv) fully secured by Government Obligations and Government Certificates. Such Government Obligations and Government Certificates must have a market value at all times at least equal to the principal amount of the deposits or interests. The Government Obligations and Government Certificates must be held by a third party who may not be the provider of the collateral, or by any Federal Reserve Bank or depository, as agent for the Trustee or the Authority. Such third party will have a perfected first lien in the Government Obligations and Government Certificates serving as collateral, and such collateral is to be free from all other third party liens.

g. Repurchase agreements, (i) the maturities of which are 30 days or less or (ii) the maturities of which are longer than 30 days and not longer than one year, provided the collateral subject to such agreements are marked to market daily, and in either case are entered into with financial institutions such as banks or trust companies organized under State law or national banking associations, insurance companies, or government bond dealers reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York and a member of the Security Investors Protection Corporation with debt rated “A” or commercial paper rated “A-1 “ by S&P and “A3” or “Prime 2” by Moody’s. Notwithstanding the preceding sentence, a repurchase agreement may have a maturity longer than one year if such agreement permits the Authority to withdraw all or any portion of the principal amount covered by such agreement on demand at par and without substantial penalty or premium. The repurchase agreement must be in respect of Government Obligations and Government Certificates or obligations described in paragraph (b) of this definition. The repurchase agreement securities and, to the extent necessary, Government Obligations and Government Certificates or obligations described in paragraph (b), exclusive of accrued interest, must be maintained in an amount equal to at least 102% of the amount invested in the repurchase agreements. In addition, the provisions of the repurchase agreement are required to meet the following additional criteria:

- (A) the third party (who may not be the provider of the collateral) must have possession of the repurchase agreement securities and the Government Obligations and Government Certificates as agent for the Trustee or the Authority;
- (B) failure to maintain the requisite collateral levels will require the third party having possession of the securities to liquidate the securities immediately; and
- (C) the third party having possession of the securities has a perfected, first priority security interest in the securities.

The foregoing does not authorize the Authority to enter into reverse repurchase transactions involving monies or investments on deposit in any Special Funds.

h. Money market accounts of any state or federal bank that is, or any state or federal bank whose holding parent company is, rated in one of the top two short-term or top three long-term rating categories by all Rating Agencies, provided that no such investment may be made that is not fully insured by the FDIC.

i. Any debt, fixed income security or investment agreement, the issuer of which is rated in the highest short-term or in the top three long-term rating categories by all Rating Agencies.

j. Star Ohio, the Ohio Subdivisions' Investment Fund created and administered by the Treasurer of the State of Ohio pursuant to Section 135.45 of the Ohio Revised Code.

Notwithstanding the foregoing, however, the Trust Agreement may be amended or supplemented to provide that any obligations (other than Government Obligations or Government Certificates) otherwise constituting Eligible Investments shall not constitute Eligible Investments for all or any portion of the monies on deposit in any one or more Special Funds if it is determined that such provision is necessary in order to enhance the perceived creditworthiness of any Fresh Water Bonds. Any of the foregoing investments may be with or purchased from the Trustee or the Construction Fund Trustee or the affiliates of either.

“Encumbered Balance in the Fresh Water Construction Fund” means the monies at any time on deposit in the Fresh Water Construction Fund that are encumbered on the Authority’s accounting records to fulfill the Authority’s obligations under Cooperative Agreements.

“Escrow Securities” means: (i) Government Certificates and Government Obligations; (ii) U.S. Agency Obligations, provided that such obligations are rated in the highest rating category by each Rating Agency; and (iii) Eligible Investments of the character described in clauses (c), (d) and (e) of the definition of “Eligible Investments”; provided, however, that obligations of the character described in clauses (c), (d) and (e) of the definition of “Eligible Investments” constitute Escrow Securities only if such obligations are not subject to redemption prior to their stated maturities or irrevocable redemption date other than at the option of the holder thereof.

“Excess Earnings” means, with respect to each Series of the Fresh Water Bonds, an amount equal to the sum of (a) the excess of: (i) the aggregate amount earned from the date of issuance of such series of Fresh Water Bonds on all nonpurpose investments in which gross proceeds of such series of Fresh Water Bonds are invested (other than investments attributable to an excess described in this clause), over (ii) the amount that would have been earned if such nonpurpose investments were invested at a rate equal to the yield on such series of Fresh Water Bonds and (b) any income attributable to any excess described in clause (a). Excess Earnings are determined in accordance with Section 148(f) of the Code and the applicable Federal Income Tax Regulations (final, temporary or proposed) thereunder. As used in this definition of Excess Earnings, the terms “gross proceeds,” “nonpurpose investment” and “yield” have the meanings assigned to them for purposes of Section 148 of the Code.

“Existing Cooperative Agreements” means the Cooperative Agreements entered into by the Authority prior to the issuance and sale of the Series 2019 Fresh Water Bonds and listed on Appendix B hereto.

“Federal Income Tax Regulations” means the Federal Income Tax Regulations promulgated by the Department of the Treasury under Title 26 of the Code of Federal Regulations.

“Fifteenth Supplemental Agreement” means the Fifteenth Supplemental Trust Agreement dated March 23, 2016, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2016A Fresh Water Bonds.

“Fifth Supplemental Trust Agreement” means the Fifth Supplemental Trust Agreement dated April 5, 2005, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the original Fresh Water Trust Agreement, and providing for the issuance of the Series 2005 Fresh Water Refunding Bonds.

“Financial Advisor” means PFM Financial Advisors LLC or any other firm or person (other than an employee or member of the Authority) with demonstrated expertise in matters of public finance designated or engaged by the Authority to serve as its financial advisor with regard to (among other things) the structuring and sale of the Authority’s debt obligations.

“First Supplemental Trust Agreement” means the First Supplemental Trust Agreement, dated as of May 1, 1998, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee, amending and supplementing the Original Fresh Water Trust Agreement, and providing for the issuance of the Series 1998 Fresh Water Bonds.

“Fiscal Officer” means the Chief Financial Officer of the Authority, or such officer as shall succeed to the fiscal responsibilities of the Chief Financial Officer.

“Fourteenth Supplemental Agreement” means the Fourteenth Supplemental Trust Agreement dated as of April 1, 2015, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2015-17 Fresh Water Notes.

“Fourth Supplemental Trust Agreement” means the Fourth Supplemental Trust Agreement, dated May 27, 2004, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee, amending and supplementing the Original Fresh Water Trust Agreement and providing for the issuance of the Series 2004 Fresh Water Bonds.

“Fresh Water Bonds” means the Series 1995 Fresh Water Bonds, the Series 1998 Fresh Water Bonds, the Series 2001 Fresh Water Bonds, the Series 2002 Fresh Water Bonds, the Series 2004 Fresh Water Bonds, the Series 2005 Fresh Water Refunding Bonds, the Series 2006A Fresh Water Refunding Bonds, the Series 2009A Fresh Water Bonds, the Series 2009B Fresh Water Refunding Bonds, the Series 2010A Fresh Water Bonds, the Series 2013A Fresh Water Bonds, the Series 2016A Fresh Water Bonds, the Series 2016B Fresh Water Bonds, the 2017 Fresh Water Notes, the Series 2018 Fresh Water Bonds, the Series 2019 Fresh Water Bonds and any additional Parity Bonds issued hereafter.

“Fresh Water Construction Fund” means the Fresh Water Construction Fund established pursuant to the Fresh Water General Bond Resolution.

“Fresh Water Construction Fund Trustee” means The Huntington National Bank, Columbus, Ohio, and any successor Fresh Water Construction Fund Trustee as determined or designated under or pursuant to the Trust Agreement.

“Fresh Water General Bond Resolution” means Resolution No. 14-95, adopted by the Authority on February 23, 1995, which is also defined as the Series 1995 Fresh Water Bonds Resolution and also constitutes the Series Resolution for the Series 1995 Fresh Water Bonds.

“Fresh Water Loans” means (i) the loans made pursuant to the Existing Cooperative Agreements, and (ii) all other loans made pursuant to Cooperative Agreements; provided, however, that any such loan will cease to be a Fresh Water Loan in the event and from the time that all conditions set forth in the Fresh Water General Bond Resolution for the removal of the payments on such Fresh Water Loan from Revenues and Pledged Revenues for purposes of the Trust Agreement shall have been met. See Appendix E - “Depledging.”

“Fresh Water Program” means the program, instituted pursuant to Chapter 6121 of the Ohio Revised Code and Resolution No. 57-92 of the Authority and administered under the Local Governmental Agency Regulations, for financing costs of the planning, designing, acquiring or constructing of waste water treatment facilities, interceptor sewer facilities, sewage collection systems and appurtenant sewerage facilities necessary for the effective operation thereof and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof.

“Fresh Water Surplus Fund” means the Fresh Water Surplus Fund created in the Fresh Water General Bond Resolution.

“Government Certificates” means (in the case of Government Obligations) evidences of ownership of proportionate interest in future interest or principal payments of Government Obligations, including depository receipts thereof. Investments in such proportionate interest must be limited to circumstances wherein (i) a bank or trust company acts as custodian and holds the underlying Government Obligations; (ii) the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor of the underlying Government Obligations; and (iii) the underlying Government Obligations are held in a special account, segregated from the custodian’s general assets, and are not available to satisfy any claim of the custodian, any person claiming through the custodian, or any person to whom the custodian may be obligated.

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

“Gross Proceeds” means, with respect to any series of Fresh Water Bonds, “gross proceeds” as such term is used in Section 148 of the Code and the Federal Income Tax Regulations applicable thereunder.

“Holder” or “Holder of a Series 2019 Fresh Water Bond” means the Person in whose name a Series 2019 Fresh Water Bond is registered on the Register, except that with respect to a Fresh Water Bond or a Bond Anticipation Note with a maturity of one year or less payable to or registered to bearer, “Holder” means the bearer of such Fresh Water Bond or Bond Anticipation Note.

“Interest Rate Hedge Agreement” means an interest rate swap, an interest rate cap or other such arrangement obtained with the goal of lowering the effective interest rate to the Authority on Fresh Water Bonds or hedging the exposure of the Authority against fluctuations in prevailing interest rates.

“Interest Payment Date” means, as to each Series of Fresh Water Bonds, each June 1 and December 1, commencing on a date to be specified in or pursuant to the applicable Series Resolution.

“Local Government Agency Regulations” means the regulations of the Authority comprising Chapter 6121-2 of the Ohio Administrative Code, as amended, providing for financing costs of the planning, designing, acquiring or constructing of waste water treatment facilities, interceptor sewer facilities, sewage collection facilities and appurtenant sewerage facilities necessary for the effective

operation thereof and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof.

“Local Governmental Agency” or “Local Governmental Agencies” means a governmental agency or governmental agencies as defined in paragraph (B) of Section 6121.01 of the Ohio Revised Code.

“Mail” or “mailed” or “mailing” means sending by first class mail, postage prepaid.

“Mandatory Sinking Fund Credit” means the credit against the mandatory sinking fund requirement and corresponding mandatory redemption obligation as provided in the Fresh Water General Bond Resolution.

“Marked to market” means valued according to then current market value.

“Maturity Amount” means the amount representing the payment of principal of and interest on Capital Appreciation Bonds equal to the Accreted Value on the date of maturity.

“Moody’s” means Moody’s Investors Service, Inc.

“Ninth Supplemental Trust Agreement” means the Ninth Supplemental Trust Agreement dated October 22, 2009 between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the Original Fresh Water Trust Agreement, and providing for the issuance of the Series 2009B Fresh Water Refunding Bonds.

“Nineteenth Supplemental Agreement” means the Nineteenth Supplemental Trust Agreement dated October 12, 2017, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2017 Fresh Water Notes.

“Non-qualified Fresh Water Loan” means, at any time, any Fresh Water Loan on which the Local Governmental Agency that is a party thereto has failed to make a payment of principal or interest at the time and in the amount required which failure has continued for more than two months and remains uncured.

“Official Statement” means, with respect to the Series 2019 Fresh Water Bonds, the final Official Statement prepared and distributed in connection with the offering and sale of the Series 2019 Fresh Water Bonds.

“Original Fresh Water Trust Agreement” means the Trust Agreement, dated as of September 1, 1992, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee.

“Original Purchasers” means, with respect to the Series 2019 Fresh Water Bonds, Loop Capital Markets LLC, UBS Financial Services Inc., Drexel Hamilton, LLC, Goldman Sachs & Co. LLC and Hutchinson, Shockey, Erley & Co. *dba* Huntington Capital Markets,.

“Parity Bonds” means any bonds authorized pursuant to and in accordance with the Fresh Water General Bond Resolution and issued under and in accordance with Article II of the Trust Agreement, and on a parity with the Series 2019 Fresh Water Bonds.

“Paying Agents” means the Trustee or any bank or trust company designated as a Paying Agent by or in accordance with Article V of the Trust Agreement.

“Payment Obligations” means any amounts other than Bond Service Charges to be paid to any provider of a Credit Facility or of an Interest Rate Hedge Agreement.

“Person” or words importing persons mean firms, associations, partnerships (including without limitation, general and limited partnerships), joint ventures, societies, estates, trusts, corporations, public or governmental bodies, Local Governmental Agencies, other legal entities and natural persons.

“Pledged Revenues” means (i) the Revenues; (ii) the Special Funds, the monies which may at any time be on deposit in the Special Funds and the income and profit from the investment thereof, except (A) the Encumbered Balance in the Fresh Water Construction Fund, and (B) any amounts required to be rebated to the United States of America under any applicable federal income tax law, (iii) any Credit Facility Proceeds; and (iv) any other funds and monies which may be subjected to the pledge of the Trust Agreement by subsequent action of the Authority.

“Principal Amount” means, with respect to any Capital Appreciation Bond, the Appreciated Principal Amount thereof, and with respect to any other Fresh Water Bond, the stated principal amount thereof.

“Principal Retirement Date” means, as to each series of Fresh Water Bonds, each June 1 and December 1 designated in or pursuant to the applicable Series Resolution as a Principal Retirement Date or a date on which principal of any Fresh Water Bond of such series is due and payable, whether at maturity or due to mandatory sink fund requirement.

“Principal Retirement Schedule” means, with respect to each series of Fresh Water Bonds, the schedule of the Principal Amounts of such series of Fresh Water Bonds to be retired at their respective Principal Retirement Dates, as specified in or pursuant to the applicable Series Resolution.

“Project” means the planning, designing, acquiring or constructing of a particular facility being financed as a part of the Fresh Water Program, and shall be identified by the Local Governmental Agency or Agencies involved and the date of the Cooperative Agreement relating thereto.

“Projected Payments” means (i) the estimated payments, as determined by the Authority, representing estimated principal of and interest to be received by the Authority on Fresh Water Loans except Non-qualified Community Assistance Loans, and (ii) any Direct Payments projected to be received by the Authority relating to Fresh Water Bonds.

“Purchase Price” means, as to the Series 2019 Fresh Water Bonds, the amount set forth as the purchase price for the Series 2019 Fresh Water Bonds in the Series 2019 Fresh Water Bonds Certificate of Award and in the Bond Purchase Agreement, including accrued interest, if any, on the Series 2019 Fresh Water Bonds from their date to the date of delivery of the Series 2019 Fresh Water Bonds to the Original Purchasers and payment therefor.

“Pure Water Construction Fund” means the Pure Water Refunding Construction Fund created under the Pure Water Trust Agreement.

“Pure Water Trust Agreement” means the Trust Agreement, dated as of September 1, 1992, between the Authority and The Huntington National Bank, as Trustee.

“Qualified Reserve Credit Facility” means a Credit Facility issued or guaranteed by an entity rated “AAA” or “Aaa” or the equivalent by all Rating Agencies, which Qualified Reserve Credit Facility permits the Trustee to draw thereon at any time that the Trust Agreement requires the Trustee to withdraw

monies from the Debt Service Reserve Fund, and which Qualified Reserve Credit Facility does not expire until the portion of the Required Reserve Fund Balance funded by such Qualified Reserve Credit Facility is no longer required to be funded thereby, either because all the Fresh Water Bonds to which such portion relates shall have ceased to be outstanding or because cash and investments and other Qualified Reserve Credit Facilities shall have been deposited in the Debt Service Reserve Fund with an aggregate Value at least equal to the Required Reserve Fund Balance.

“Rated” means, with respect to any entity that is required under the Trust Agreement to have a minimum rating from any Rating Agencies for any purposes, that such entity itself or its debt, guarantees or claims-paying ability has been assigned the specified rating.

“Rating Agencies” or “Rating Services” means Moody’s, S&P, and their respective successors and assigns.

“Rebate Fund” means the Rebate Fund created in the Fresh Water General Bond Resolution.

“Register” means the books kept and maintained by the Registrar for registration and transfer of fully registered Series 2019 Fresh Water Bonds pursuant to Article II of the Trust Agreement.

“Registered Owner” means the Person in whose name a Fresh Water Bond is registered on the Register.

“Registrar” means the Trustee, until a successor Registrar shall succeed as successor Registrar pursuant to applicable provisions of the Trust Agreement. The Registrar shall be a transfer agent registered in accordance with Section 17(A)(c) of the Securities Exchange Act of 1934.

“Regular Record Date” means the 15th day of the calendar month next preceding a June 1 or December 1 Interest Payment Date on Fresh Water Bonds.

“Reimbursement Agreement” means, with respect to a series of Fresh Water Bonds, any agreement or agreements between one or more Credit Facility providers and the Authority under or pursuant to which a Credit Facility for such series of Fresh Water Bonds is issued or provided and which sets forth the respective obligations of the Authority and of the Credit Facility provider or providers.

“Required Reserve Fund Balance” means a fund balance in the Debt Service Reserve Fund at least equal to 50% of the maximum annual Bond Service Charges on all Fresh Water Bonds outstanding, but in no event greater than the maximum amount permitted to constitute a “reasonably required reserve or replacement fund” under Section 1.148-2(f)(2) of the Federal Income Tax Regulations unless the Authority furnishes to the Trustee the opinion of nationally recognized bond counsel to the effect that the existence of a balance in the Debt Service Reserve Fund greater than such maximum amount will not cause the interest on any Fresh Water Bonds that had been excluded from gross income for federal income tax purposes to cease to be so. For purposes of determining the Required Reserve Fund Balance, Bond Service Charges are computed in accordance with paragraphs (e) through (m), inclusive, of Section 2 of the Fresh Water General Bond Resolution with respect to the categories of Fresh Water Bonds covered by those paragraphs. See Appendix E, “SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT -- Computation of Bond Service Charges With Respect to Parity Bonds.”

“Revenue Fund” means the Revenue Fund created in the Fresh Water General Bond Resolution.

“Revenues” means (i) all amounts received by the Authority pursuant to Cooperative Agreements as payment of and for the principal of and interest on all Fresh Water Loans, and (ii) all Direct Payments received by the Authority relating to Fresh Water Bonds.

“Safe Water Surplus Fund” means the Surplus Fund created in the Trust Agreement, dated as of August 1, 1985, as amended, between the Authority and BancOhio National Bank, as trustee, and in the event of the defeasance of said Trust Agreement through the issuance of refunding bonds, the fund established under the trust agreement securing such refunding bonds to which the monies and investment in such Surplus Fund are transferred.

“Second Supplemental Trust Agreement” means the Second Supplemental Trust Agreement, dated as of September 1, 2001 among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2001 Fresh Water Bonds.

“Series 1995 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, 1995 Fresh Water Series, authorized in the Fresh Water General Bond Resolution.

“Series 1995 Refunded Bonds” means those Series 1995 Fresh Water Bonds which will be caused to be deemed paid and discharged under the Trust Agreement as the result of the deposit of a portion of the proceeds of the Series 2001B Fresh Water Bonds in escrow under the Fresh Water Escrow Agreement.

“Series 1998 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, 1998 Fresh Water Series authorized in the Series 1998 Fresh Water Bond Resolution.

“Series 1998 Fresh Water Bonds Resolution” means Resolution No. 21-98, adopted by the Authority on March 26, 1998.

“Series 2001 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Refunding and Improvement Series 2001, authorized in the Series 2001 Fresh Water Bonds Resolution, and is comprised of the Series 2001A Fresh Water Bonds and the Series 2001B Fresh Water Bonds.

“Series 2001 Fresh Water Bonds Resolution” means Resolution No. 18-01 adopted by the Authority on March 29, 2001, as amended.

“Series 2001A Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Improvement Series 2001A, authorized in the Series 2001 Fresh Water Bonds Resolution.

“Series 2001B Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Refunding Series 2001B, authorized in the Series 2001 Fresh Water Bonds Resolution.

“Series 2002 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2002, authorized in the Series 2002 Fresh Water Bonds Resolution.

“Series 2002 Fresh Water Bonds Resolution” means Resolution No. 66-02 adopted by the Authority on July 25, 2002.

“Series 2004 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Improvement Series 2004, authorized in the Series 2004 Fresh Water Bonds Resolution.

“Series 2004 Fresh Water Bond Resolution” means Resolution No. 36-04 adopted by the Authority on April 29, 2004.

“Series 2005 Fresh Water Refunding Bonds” means the State of Ohio Water Development Revenue Refunding Bonds, Fresh Water Refunding Series 2005, authorized in the Series 2005 Fresh Water Refunding Bonds Resolution.

“Series 2005 Fresh Water Refunding Bonds Resolution” means Resolution No. 23-05 adopted by the Authority on February 24, 2005.

“Series 2006A Fresh Water Refunding Bonds Resolution” means Resolution No. 12-06 adopted by the Authority on January 26, 2006.

“Series 2006A Refunding Bonds” means the State of Ohio Water Development Revenue Refunding Bonds, Fresh Water Series 2006A, authorized in the Series 2006A Fresh Water Refunding Bonds Resolution.

“Series 2009A Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Improvement Series 2009A, authorized in the Series 2009A Fresh Water Bonds Resolution.

“Series 2009B Fresh Water Bonds Resolution” means Resolution No. 82-09 adopted by the Authority on August 27, 2009.

“Series 2009B Fresh Water Refunding Bonds” means the State of Ohio Water Development Revenue Refunding Bonds, Fresh Water Improvement Series 2009B, authorized in the Series 2009B Fresh Water Refunding Bonds Resolution.

“Series 2009B Fresh Water Refunding Bonds Resolution” means Resolution No. 82-09 adopted by the Authority on August 27, 2009.

“Series 2010A Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Improvement Series 2010A, authorized in the Series 2010A Fresh Water Bonds Resolution.

“Series 2010A Fresh Water Bonds Resolution” means Resolution No. 75-10 adopted by the Authority on August 26, 2010.

“Series 2013A Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2013A, authorized in the Series 2013A Fresh Water Bonds Resolution.

“Series 2013A Fresh Water Bonds Resolution” means Resolution No. 34-13 adopted by the Authority on May 30, 2013.

“Series 2014B Fresh Water Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2015B, authorized in the Series 2014-15 Fresh Water Note General Resolution.

“Series 2014B Fresh Water Note General Resolution” means Resolution No. 57-14 adopted by the Authority on June 26, 2014.

“Series 2014-15 Fresh Water Notes” means any Fresh Water Notes issued pursuant to the State of Ohio Water Development Revenue Taxable Note Program, authorized in the Series 2014-15 Fresh Water Note General Resolution.

“Series 2014-15 Fresh Water Note General Resolution” means Resolution No. 56-14 adopted by the Authority on June 26, 2014.

“Series 2015A Fresh Water Floating Rate Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2015A, authorized in the Series 2015-17 Fresh Water Note General Resolution.

“Series 2015-17 Fresh Water Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2015-17, authorized in the Series 2015-17 Fresh Water Note General Resolution.

“Series 2015-17 Fresh Water Note General Resolution” means Resolution No. 25-15 adopted by the Authority on March 26, 2015.

“Series 2016A Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2016A, authorized in the Series 2016A Fresh Water Bonds Resolution.

“Series 2016A Fresh Water Bonds Resolution” means Resolution No. 22-16 adopted by the Authority on February 25, 2016.

“Series 2016B Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2016B, authorized in the Series 2016B Fresh Water Bonds Resolution.

“Series 2016B Fresh Water Bonds Resolution” means Resolution No. 44-16 adopted by the Authority on May 26, 2016.

“Series 2016 Fresh Water Taxable Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2016 (Federally Taxable), authorized in the Series 2016 Fresh Water Note General Resolution.

“Series 2016 Fresh Water Note General Resolution” means Resolution No. 77-16 adopted by the Authority on September 29, 2016.

“Series 2017 Fresh Water Taxable Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2017 (Federally Taxable), authorized in the Series 2017 Fresh Water Note General Resolution.

“Series 2017 Fresh Water Note General Resolution” means Resolution No. 44-17 adopted by the Authority on May 25, 2017.

“Series 2017 Fresh Water Notes” means the State of Ohio Water Development Revenue Notes, Fresh Water Series 2017 authorized in the Series 2017 Fresh Water Note Resolution.

“Series 2017 Fresh Water Note Resolution” means Resolution No. 74-17 adopted by the Authority on September 28, 2017.

“Series 2018 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2018, authorized in the Series 2018 Fresh Water Bonds Resolution.

“Series 2018 Fresh Water Bonds Resolution” means Resolution No. 40-18 adopted by the Authority on May 31, 2018.

“Series 2019 Fresh Water Bonds” means the State of Ohio Water Development Revenue Bonds, Fresh Water Series 2019, authorized in the Series 2019 Fresh Water Bonds Resolution.

“Series 2019 Fresh Water Bonds Certificate of Award” means the Certificate of Award for the Series 2019 Fresh Water Revenue Bonds authorized by the Series 2019 Fresh Water Revenue Bonds Resolution.

“Series 2019 Fresh Water Bonds Resolution” means Resolution No. 71-19 adopted by the Authority on September 26, 2019.

“Series Resolution” means a resolution of the Authority authorizing the issuance of Fresh Water Bonds in accordance with the Fresh Water General Bond Resolution, and the Trust Agreement, and includes any resolution, and any certificate authorized by any resolution, providing for the award and terms of the Fresh Water Bonds authorized by such Series Resolution and any subsequent resolution amending or supplementing such resolution in accordance with the Trust Agreement.

“Seventh Supplemental Trust Agreement” means the Seventh Supplemental Trust Agreement dated October 17, 2007, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the original Fresh Water Trust Agreement, and providing for the authorization and issuance of the CP Notes.

“Seventeenth Supplemental Agreement” means the Seventeenth Supplemental Trust Agreement dated as of October 1, 2016, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2016 Fresh Water Taxable Notes.

“Sixteenth Supplemental Agreement” means the Sixteenth Supplemental Trust Agreement dated July 7, 2016, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2016B Fresh Water Bonds.

“Sixth Supplemental Trust Agreement” means the Sixth Supplemental Trust Agreement dated October 19, 2006, between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the original Fresh Water Trust Agreement, and providing for the issuance of the Series 2009A Fresh Water Bonds.

“Special Funds” means, collectively, the Revenue Fund, the Debt Service Fund, the Debt Service Reserve Fund, the Fresh Water Surplus Fund, the Cross-Collateralization Fund, and the Fresh Water Construction Fund.

“Special Record Date” means, with respect to any Fresh Water Bond, the date established by the Trustee in connection with the payment of overdue interest on that Fresh Water Bond pursuant to Article VI of the Trust Agreement.

“S&P” means S&P Global Inc., and any successor thereto.

“State” means the State of Ohio.

“Subordinate Obligations” means the Series 2015-17 Fresh Water Notes, the Series 2014B Fresh Water Notes, the Series 2017 Fresh Water Taxable Notes, the Series 2017 Fresh Water Notes and other obligations of the Authority hereafter issued and secured under the Trust Agreement on a basis subordinate to other Fresh Water Bonds and on parity with the Series 2015-17 Notes.

“Subordinate Obligations Debt Service Fund” means the Subordinate Obligations Debt Service Fund established by the Series 2014-15 Note General Resolution.

“Supplemental Agreement” means any one or more supplemental agreements, between the Authority and the Trustee and (if it is a required party thereto) the Fresh Water Construction Fund Trustee, entered into pursuant to the provisions of the Trust Agreement to amend or supplement the Trust Agreement, including the First Supplemental Trust Agreement, the Second Supplemental Trust Agreement, the Third Supplemental Trust Agreement, the Fourth Supplemental Trust Agreement, the Fifth Supplemental Trust Agreement, the Sixth Supplemental Trust Agreement, the Seventh Supplemental Trust Agreement, the Eighth Supplemental Trust Agreement, the Ninth Supplemental Trust Agreement, the Tenth Supplemental Trust Agreement, the Eleventh Supplemental Trust Agreement, the Twelfth Supplemental Trust Agreement, the Thirteenth Supplemental Trust Agreement, the Fourteenth Supplemental Trust Agreement, the Fifteenth Supplemental Trust Agreement, the Sixteenth Supplemental Trust Agreement, the Seventeenth Supplemental Trust Agreement, the Eighteenth Supplemental Trust Agreement, the Nineteenth Supplemental Trust Agreement, the Twentieth Supplemental Trust Agreement and the Twenty-First Supplemental Trust Agreement.

“Tenth Supplemental Trust Agreement” means the Tenth Supplemental Trust Agreement dated September 21, 2010 between the Authority, the Trustee, and the Fresh Water Construction Fund Trustee amending and supplementing the Original Fresh Water Trust Agreement, and providing for the issuance of the Series 2010A Fresh Water Bonds.

“Term Fresh Water Bonds” means those Fresh Water Bonds that are subject to mandatory redemption through application of mandatory sinking fund requirements prior to their stated maturity, and “Term Series 2019 Fresh Water Bonds” means those Series 2019 Fresh Water Bonds, if any, that are Term Fresh Water Bonds.

“Third Supplemental Agreement” means the Third Supplemental Trust Agreement, dated as of September 5, 2002, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2002 Fresh Water Bonds.

“Thirteenth Supplemental Agreement” means the Thirteenth Supplemental Trust Agreement, dated as of August 20, 2014, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2014B Fresh Water Notes.

“Trustee” means The Bank of New York Mellon Trust Company, N.A. (as successor trustee to Fifth Third Bank), and any successor Trustee as determined or designated under or pursuant to the Trust Agreement.

“Twelfth Supplemental Agreement” means the Twelfth Supplemental Trust Agreement dated as of July 1, 2014, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2014-15 Fresh Water Notes.

“Twentieth Supplemental Agreement” means the Twentieth Supplemental Trust Agreement dated August 22, 2018, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2018 Fresh Water Bonds.

“Twenty-first Supplemental Agreement” means the Twenty-first Supplemental Trust Agreement dated as of November 19, 2019, among the Authority, the Fresh Water Construction Fund Trustee and the Trustee, providing for the issuance of the Series 2019 Fresh Water Bonds.

“U.S. Agency Obligations” means obligations issued by any agency or instrumentality of the United States of America.

“Value” means (i) with respect to an investment held in or credited to any Special Fund, as of any date of determination, the greater of the original cost of such investment or the fair market value thereof as of such date of determination, except that for the purpose of complying with the provisions of Section 148 of the Code and the Federal Income Tax Regulations applicable thereunder, “Value” shall be determined as required by such Section 148 and regulations; and (ii) with respect to a Qualified Reserve Credit Facility, the amount permitted to be drawn thereunder.

“Variable Rate Bond” means any Fresh Water Bond not bearing interest throughout its term at a fixed interest rate, but rather at a rate which varies from time to time based upon a formula or other method of determination set forth in the applicable Series Resolution.

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APPENDIX E

SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT

The following is a summary of certain provisions of the Trust Agreement. The summary does not purport to be a complete description of the Trust Agreement and is subject in all respects to the provisions of, and is qualified in its entirety by reference to, the Trust Agreement, copies of which are available upon request to the Ohio Water Development Authority, 480 South High Street, Columbus, Ohio 43215, Attention Secretary-Treasurer.

The Series 2019 Fresh Water Bonds are being issued pursuant to and secured by the Trust Agreement among the Authority, the Trustee and the Fresh Water Construction Fund Trustee. See “SECURITY FOR AND SOURCE OF PAYMENT OF THE BONDS -- General.” The Series 2019 Fresh Water Bonds Resolution authorizing and providing for awarding the Series 2019 Fresh Water Bonds will be incorporated in and will constitute part of the Trust Agreement.

Establishment, Application and Investment of Fresh Water Construction Fund

The Fresh Water Construction Fund created pursuant to the Trust Agreement is maintained in the custody of the Fresh Water Construction Fund Trustee. The amounts on deposit in the Fresh Water Construction Fund, except the Encumbered Balance in the Fresh Water Construction Fund, are pledged to the payment of Fresh Water Bonds as security for payment of Bond Service Charges and are subject to the lien created by the Trust Agreement. The Fresh Water Construction Fund is applied to paying any costs of Projects being financing pursuant to the Cooperative Agreements and all things necessary and incidental thereto, including all costs incurred by the Authority in connection with the issuance, sale and delivery of the Fresh Water Bonds. The Fresh Water Construction Fund Trustee pays costs of the Projects as described in this paragraph. Such costs are paid only upon receipt of a requisition signed by the Executive Director of the Authority identifying, in respect of each payment to be made, the person to whom payment is to be made, the amount to be paid, the purpose of the payment, that the Authority has incurred the obligations, and that each item is a proper charge against the Fresh Water Construction Fund and has not been paid. In addition, the requisition must state that the Authority has not been served notice of any lien or attachment or claim affecting the right to receive payment by the identified payee; and each such requisition for payment pursuant to a construction contract must be accompanied by a certificate signed by the consulting engineers for the Local Governmental Agency which entered into the construction contract or the chief engineer of the Authority, if the Authority entered into the contract, evidencing the engineer’s approval of the requisition and certifying that each obligation has been properly incurred, is then due and unpaid, that such work was actually performed, and materials, equipment or supplies were installed or delivered to the site of the Project in furtherance of the construction of the Project.

Monies in the Fresh Water Construction Fund may also be used (pursuant to Authority direction to the Fresh Water Construction Fund Trustee) for the purchase of Fresh Water Bonds if the Executive Director determines, based on advice from the Financial Advisor, that such purchase on terms then available in the market will serve the best interests of the Authority.

The Authority has covenanted that it will not cause or permit to be paid from the Fresh Water Construction Fund any sums except in accordance with the foregoing provisions and restrictions.

All requisitions and certificates received by the Fresh Water Construction Fund Trustee may be relied upon by and must be retained by the Fresh Water Construction Fund Trustee, subject at all times to

the inspection of the Authority and its officials, and the consulting engineers of the Local Governmental Agency which entered into the construction contracts, and their respective agents and representatives.

Deposit and Disposition of Revenues

Under the Trust Agreement, all Revenues will be deposited as received in the Revenue Fund. On the first day of each May and November, the Trustee will allocate or pay out monies then on hand in the Revenue Fund in the following order:

FIRST: To the payment of the amounts requisitioned by the Trustee for the payment of its fees or fees of the Fresh Water Construction Fund Trustee or the Paying Agents for the performance of their duties under the terms of the Trust Agreement, approved by the Authority and remaining unpaid.

SECOND: To the Debt Service Fund (i) a sum which, when added to any balance then on deposit in said fund and available for such purpose, will be equal to the interest due on the next ensuing Interest Payment Date on all Fresh Water Bonds outstanding, (ii) commencing on the first day of the month preceding the first mandatory redemption date of any Term Fresh Water Bonds, a sum which will be equal to the next ensuing mandatory redemption requirement, and (iii) commencing on the first day of the month preceding the first date on which principal of the Fresh Water Bonds is to be retired at stated maturity, a sum which will be equal to the next ensuing principal maturity. Until fully expended on interest on the related Fresh Water Bonds, Capitalized Interest in the Capitalized Interest Account in the Debt Service Fund is to remain on deposit even if the balance at any time exceeds the interest due on the next ensuing Interest Payment Date on such Fresh Water Bonds.

THIRD: To the Debt Service Reserve Fund, so much of the balance remaining in the Revenue Fund after the deposit under the preceding paragraph Second as may be necessary to maintain in said Debt Service Reserve Fund, cash, certain Eligible Investments and Qualified Reserve Credit Facilities having an aggregate Value at least equal to the Required Reserve Fund Balance (i.e., generally one-half of the maximum annual Bond Service Charges required to be paid in that year or any succeeding year). So long as the Debt Service Reserve Fund is at the Required Reserve Fund Balance, the income realized from the investment of the Debt Service Reserve Fund and any income realized from the investment of such income shall be transferred to the Debt Service Fund on the first day of November of each year prior to making allocations or payments of monies on hand in the Revenue Fund, but any increase in the principal value of the Debt Service Reserve Fund shall be retained in that Fund.

FOURTH: To the Subordinate Obligations Debt Service Fund (i) a sum which, when added to any balance then on deposit in said fund and available for such purpose, will be equal to the interest due on the next ensuing interest payment date on all Subordinate Obligations outstanding and (ii) a sum which will be equal to the next ensuing principal maturity.

On the first day of June and December of each year, the Trustee allocates to the Fresh Water Surplus Fund the entire remainder, if any, of monies and investments then in the Revenue Fund, excluding any Revenues which may be contained therein for the next ensuing due date for repayments from Local Governmental Agencies, but only after first making all then current requirements of paragraph First to paragraph Fourth above.

Establishment and Application of Special Funds

Under the Trust Agreement the following are the special funds into which the repayments pursuant to the Cooperative Agreements will be deposited or allocated: the Revenue Fund, the Debt Service Fund, the Debt Service Reserve Fund, the Subordinate Obligation Debt Service Fund, the Fresh Water Surplus Fund, and the Cross-Collateralization Fund (collectively with the Fresh Water Construction Fund, the “Special Funds”). The Fresh Water Construction Fund has also been established under the Trust Agreement. All of the Special Funds are maintained in the custody of the Trustee, except the Fresh Water Construction Fund, which is maintained in the custody of the Fresh Water Construction Fund Trustee.

All Revenues as and when received by the Authority will be deposited in the Revenue Fund. As described under “SECURITY FOR AND SOURCES OF PAYMENT OF THE FRESH WATER BONDS” specified amounts in the Revenue Fund are required to be transferred to other Special Funds under the Trust Agreement and applied by the Trustee in accordance with the provisions of the Trust Agreement.

The Debt Service Fund will be used solely and exclusively to pay Bond Service Charges as they become due. Bond Service Charges do not include Subordinate Obligation Service Charges. If after making any allocation of monies from the Revenue Fund in accordance with the Fresh Water General Bond Resolution, the Trustee determines that the amount in the Debt Service Fund is less than the amount of the Bond Service Charges then due, the Trustee shall transfer to the Debt Service Fund amounts from the following funds in the following order to the extent necessary to make good such deficiency or deficiencies:

- i) the Fresh Water Surplus Fund;
- ii) the Subordinate Obligations Debt Service Fund;
- iii) the Cross-Collateralization Fund;
- iv) the Debt Service Reserve Fund;
- v) the Fresh Water Construction Fund except for the Encumbered Balance in the Fresh Water Construction Fund.

The Debt Service Reserve Fund will be used solely and exclusively for making the transfers from the Debt Service Reserve Fund to the Debt Service Fund for the payment of Bond Service Charges as they become due. Prior to making the allocations from the Revenue Fund described under “Deposit and Disposition of Revenues” in this Appendix E, the Trustee will transfer interest income realized from the investment of the Debt Service Reserve Fund and any income realized from the investment of such interest income to the Debt Service Fund to the extent that such income is in excess of the Required Reserve Fund Balance. Any increase in the principal value of investments in the Debt Service Reserve Fund shall be retained in that Fund. If at any time the Value of the monies, Eligible Investments and Qualified Reserve Credit Facilities on deposit in the Debt Service Reserve Fund is less than the Required Reserve Fund Balance, then the Trustee shall transfer to the Debt Service Reserve Fund amounts from the following funds in the following order to the extent necessary to make good such deficiency or deficiencies:

- i) the Fresh Water Surplus Fund;

- ii) the Cross-Collateralization Fund;
- iii) the Fresh Water Construction Fund except for the Encumbered Balance in the Fresh Water Construction Fund.

If at any time the monies on deposit in the Debt Service Reserve Fund together with those on deposit in the other Special Funds and available for the purpose shall be sufficient to retire in full all Fresh Water Bonds then outstanding on the next available redemption date, then the Trustee upon request of the Authority will use such Debt Service Reserve Fund monies together with such other monies to accomplish such retirement.

The Fresh Water Surplus Fund will be used to make up any deficiency existing at any time in the amounts required to be on deposit in the Debt Service Fund and Debt Service Reserve Fund. Monies in the Fresh Water Surplus Fund shall be transferred to the Cross-Collateralization Fund no later than twenty-four months after deposit into the Fresh Water Surplus Fund and may be used for any lawful purpose or activity in which the Authority may engage.

The Cross-Collateralization Fund will be used to make up any deficiency existing at any time in the amounts required to be on deposit in the Debt Service Fund and Debt Service Reserve Fund. In addition, the Cross-Collateralization Fund may be used to make up any deficiency in any debt service fund or debt service reserve fund that the Authority establishes in connection with the issuance of debt obligations to provide funds for any program that may supersede the Fresh Water Program. The Authority may grant to the holders of those debt obligations a pledge of and lien on the Cross-Collateralization Fund on a parity with the pledge thereof and lien thereon granted by the Trust Agreement to the holders of the Fresh Water Bonds.

Any monies in the Cross-Collateralization that are not required to be applied to eliminate any deficiency in the Debt Service Fund or the Debt Service Reserve Fund may be used for any lawful purpose or activity in which the Authority may engage. For purposes of the preceding sentence, the transfer of monies from the Cross-Collateralization Fund to another fund established by the Authority for a lawful purpose and the dedication of such monies to the purposes for which the fund was established shall cause such monies to be deemed “used for any lawful purpose.”

Investment of Special Funds

Monies in the Special Funds will be invested and reinvested by the Trustee in Eligible Investments at the oral or written direction of the Fiscal Officer. However, monies in the Debt Service Fund, the Debt Service Reserve Fund, and the Revenue Fund may be invested only in (i) Government Obligations, (ii) Government Certificates, (iii) repurchase agreements that qualify as Eligible Investments under paragraph (g) in the definition of Eligible Investments, and (iv) investment agreements that are either (A) entered into with an entity rated “AAA”, “Aaa” or the equivalent by all Rating Agencies, or (B) fully collateralized by Government Obligations and Government Certificates that are marked to market daily. Additional investment restrictions may be imposed by providers of bond insurance or credit facilities relating to outstanding Bonds. Investments of monies in the Fresh Water Construction Fund, Debt Service Fund and Revenue Fund shall mature or be redeemable at the times and in the amounts necessary to provide monies to make payments for which such funds are established. Investments of monies in the Debt Service Reserve Fund shall mature, or be redeemable by the holders, not later than five years from the date of investment, or in the case of investment agreements, shall be subject to withdrawal by the Authority or the Trustee at any time the Trust Agreement may permit or require withdrawal from the Debt Service Reserve Fund for the payment of Bond Service Charges. Debt Service

Reserve Fund investments, except investment of income realized, must be of a type which pay interest at least annually.

The Trustee may sell the investments and reinvest the proceeds therefrom in Eligible Investments maturing or redeemable as aforesaid. Any of those investments may be purchased from or sold to the Trustee, the Fresh Water Construction Fund Trustee, the Registrar, an Authenticating Agent or a Paying Agent, or any bank, trust company or savings and loan association affiliated with any of the foregoing. The Trustee shall sell or redeem investments credited to the Special Funds at the then existing market price to produce sufficient monies applicable hereunder to and at the times required for the purposes of making payments required to be made when due as aforesaid, and also whenever so instructed by the Executive Director. An investment made from monies credited to any Special Fund shall constitute part of that Fund, and each Fund shall be credited with all proceeds of sale and income from investment of monies credited thereto. For purposes of the Trust Agreement, those investments shall be valued at their value. The Value of all Eligible Investments in the Debt Service Reserve Fund shall be marked to market at least annually on December 1 to determine whether the Required Reserve Fund Balance are on deposit therein, respectively. The Trustee shall not be responsible for any depreciation in the value of, or for any loss arising from, any such investment.

The uninvested monies in all Special Funds shall at all times be secured by the depository or custodian thereof by pledge of obligations of the United States to the extent and in the manner required by law for the security of deposits of public funds.

The Authority may from time to time enter into an agreement with a seller of Eligible Investments, pursuant to which such seller agrees to sell, and the Authority agrees to direct the Trustee to buy, specified Eligible Investments for particular Special Funds for delivery against payment on one or more future dates on terms fixed at the time of the agreement. The Eligible Investments to be purchased pursuant to any such agreement must fulfill all requirements for the investments in the Special Fund for which such Eligible Investment is to be purchased, and any such agreement shall provide that a failure by the seller to deliver any Eligible Investment at the time and on the terms agreed upon shall in no way prevent the Trustee or the Authority from immediately applying the monies that would have been payable to the seller against such delivery to the purchase of other Eligible Investments then available. Any such agreement may provide for the seller's payment of a lump sum to the Authority in consideration of its entering into such agreement, and the Authority may direct that such lump sum be deposited in the Cross-Collateralization Fund as long as it is not required to eliminate a deficiency in any other Special Fund.

Rebate Fund

A Rebate Fund is established pursuant to the Trust Agreement for the Fresh Water Bonds to comply with the provisions of Section 148(f) of the Internal Revenue Code of 1986, as amended. The amounts on deposit in the Rebate Fund are not pledged to the payment of the Fresh Water Bonds as security for payment of Bond Service Charges and are not subject to the lien created by the Trust Agreement.

Covenants of Authority

So long as the DTC book-entry-only system is in effect, the Authority and the Trustee will recognize DTC, or its nominee, Cede & Co., as the Holder of the Fresh Water Bonds for all purposes, including compliance with the covenants described in this section.

The following is a summary of certain covenants the Authority has made in the Trust Agreement with the Holders of the Fresh Water Bonds:

(a) It will pay all Bond Service Charges, or cause them to be paid, solely from the sources provided in the Fresh Water Bond Resolution and the Trust Agreement, on the dates, at the places and in the manner provided in the Fresh Water General Bond Resolution and the Trust Agreement.

(b) It will segregate the Revenues from all other funds of the Authority, will keep proper books of record and account so as to show the complete financial results relevant to the Cooperative Agreements, and will furnish to the Trustee and to any Holder making a written request therefor an annual report certified by the Secretary-Treasurer of the Authority of the accounts and operations relating to the Revenues and the collection thereof, together with (or thereafter as soon as possible) the audit report thereon required by Section 6121.14 of the Ohio Revised Code.

(c) In the event that the Authority shall, directly or indirectly, enter into or otherwise consent to any credit agreement, bond purchase agreement, liquidity agreement, letter of credit reimbursement agreement or other agreement or instrument (or any amendment, supplement or modification thereto) under which, directly or indirectly, any Person or Persons undertakes to purchase Subordinate Obligations or extend credit or liquidity, to or for the account of the Authority with respect to Subordinate Obligations, which such agreement (or amendment thereto) provides such Person with more favorable terms, more restrictive covenants and/or greater rights and remedies than are provided to the Trustee in the Trust Agreement, that the Authority will provide the Trustee with a copy of each such agreement (or amendment thereto) and such more favorable terms, more restrictive covenants and/or greater rights and remedies shall automatically be deemed to be incorporated into the Trust Agreement as they relate to Subordinate Obligations and applicable to the Authority and the Trustee shall have the benefits of such more favorable terms, more restrictive covenants and/or such greater rights and remedies as if specifically set forth herein. If requested by the Trustee in writing, the Authority shall promptly enter into a supplemental trust agreement to include such more favorable terms, more restrictive covenants and/or greater rights or remedies (provided that the Trustee shall maintain the benefit of such more restrictive covenants and/or greater rights and remedies even if the Authority fails to provide such supplemental trust agreement).

(d) Anything in the Trust Agreement to the contrary notwithstanding, all Subordinate Obligations issued under the Trust Agreement shall be issued subject to the following provisions and each person taking or holding any such Subordinate Obligation whether upon original issue or upon transfer or assignment thereof accepts and agrees to be bound by such provisions.

(i) All Subordinate Obligations issued under the Trust Agreement and any coupons thereto appertaining shall, to the extent and in the manner hereinafter set forth, be subordinated and subject in right to the prior payment of Fresh Water Bonds as and when the same become due and payable.

(ii) No payment on account of principal, premium, if any, sinking funds or interest on the Subordinate Obligations shall be made, nor shall any property or assets be applied to the purchase or other acquisition or retirement of the Subordinate Obligations, unless full payment of amounts then due and payable for principal, premium, if any, sinking funds and interest on Fresh Water Bonds has been made or duly provided for in accordance with the terms of such Fresh Water Bonds. No payment on account of

principal, premium, if any, sinking funds or interest on the Subordinate Obligations shall be made, nor shall any property or assets be applied to the purchase or other acquisition or retirement of the Subordinate Obligations, if, at the time of such payment or application or immediately after giving effect thereto, (a) there shall exist a default in the payment of principal, premium, if any, sinking funds or interest with respect to any Fresh Water Bonds, or (b) there shall have occurred an Event of Default (other than a default in the payment of principal, premium, if any, sinking funds or interest) with respect to any Fresh Water Bonds or in the instrument under which the same is outstanding, permitting the holders thereof to accelerate the maturity thereof and written notice of such occurrence shall have been given to the Authority pursuant to the Trust Agreement and such Event of Default shall not have been cured or waived or shall not have ceased to exist.

(iii) Pursuant to the Trust Agreement, Subordinate Obligations under the Trust Agreement, may not be accelerated if any Fresh Water Bonds are outstanding. Upon acceleration of the Fresh Water Bonds, all principal, premium, if any, and interest due or to become due upon all Fresh Water Bonds shall first be paid in full, or payment thereof provided for in accordance with the terms of such Fresh Water Bonds, before any payment is made on account of the principal, premium, if any, or interest on the Subordinate Obligations.

(iv) In the event that, in violation of any of the foregoing provisions, any payment or distribution of any kind or character, whether in cash, property or securities, shall be received by the Trustee under the Trust Agreement or by the holders of the Subordinate Obligations before all Fresh Water Bonds are paid in full, or provision for such payment in accordance with the terms of such Fresh Water Bonds, such payment or distribution shall be held in trust for the benefit of, and shall be paid over or delivered to the Trustee for application to the payment of all Fresh Water Bonds remaining unpaid to the extent necessary to pay all such Fresh Water Bonds in full in accordance with its terms, after giving effect to any concurrent payment or distribution to the Trustee for the holders of such Fresh Water Bonds.

(v) No present or future holder of Fresh Water Bonds shall be prejudiced in his right to enforce subordination of the indebtedness evidenced by the Subordinate Obligations by any act or failure to act on the part of the Authority or anyone in custody of its assets or property.

(vi) The foregoing subordination provisions shall be for the benefit of the holders of Fresh Water Bonds and may be enforced by the Trustee against the holders of Subordinate Obligations; provided, however, that the foregoing provisions are solely for the purpose of defining the relative rights of the holders of Fresh Water Bonds on the one hand and the holders of the Subordinated Obligations on the other hand, and that nothing therein shall impair, as between the Authority and the holders of the Subordinated Obligations, the obligation of the Authority to pay to the holders thereof the principal thereof, premium, if any, and interest thereon in accordance with its terms, nor shall anything therein prevent the holders of the Subordinated Obligations or any Trustee on their behalf from exercising all remedies otherwise permitted by applicable law or under the Trust Agreement upon default thereunder, subject to the rights set forth above of the holders of Fresh Water Bonds to receive cash, property or securities otherwise payable or deliverable to the holders of the Subordinated Obligations

(d) It will permit the authorized representative of the Trustee, or of the Holders of 25% or more of the aggregate principal amount of Fresh Water Bonds then outstanding, or the Original Purchaser or its designee to inspect, at all times during the Authority's regular business hours, all books, instruments and documents of the Authority relating to the Revenues and the collection thereof and relating to the Trust Agreement and the Special Funds. The books, instruments and documents in the Authority's possession relating to the Revenues shall also be open to inspection to the full extent required by State law.

(e) It will permit, at reasonable times and under reasonable regulations established by the Registrar for the Fresh Water Bonds, the inspection and copying of the Register established pursuant to the Trust Agreement by the Trustee and by Holders of 25% or more in principal amount of Fresh Water Bonds then outstanding, or a designated representative thereof.

(f) It will promptly and diligently fulfill its obligations under the Cooperative Agreements. However, the Authority may contest in good faith any obligation on the part of the Authority that any other party may allege exists subject to not permitting an event of default to occur.

(g) It will take necessary actions to collect the Revenues when due from the Local Governmental Agencies including sending invoices or any other appropriate demand for payment at least 15 days prior to the due date and making demand for payment of any amount in default within 20 days after such default together with notice to the defaulting Local Governmental Agency that if such default is not remedied within two months from the date of default the Authority will file suit to collect such amount which is in default, and filing such suit within three months of the date of default if such default is not remedied.

(h) If on any May 1 or November 1, after the Trustee has made the allocation and payment of monies described in this Appendix E under the heading "Deposit and Disposition of Revenues" and has made the transfer or transfers from the Fresh Water Surplus Fund described in this Appendix E under the heading "Establishment and Application of Special Funds", (i) the monies in the Debt Service Fund are insufficient to pay in full on the next ensuing Interest Payment Date (a) all interest due on such next ensuing Interest Payment Date on all Fresh Water Bonds outstanding, (b) any mandatory sinking fund redemption requirement due on such next ensuing Interest Payment Date on all Fresh Water Bonds outstanding and (c) any principal maturity due on such next ensuing Interest Payment Date on all Fresh Water Bonds outstanding and (ii) the monies, certain Eligible Investments, and any Qualified Reserve Credit Facility in the Debt Service Reserve Fund are insufficient to maintain the Required Reserve Fund Balance in the Debt Service Reserve Fund, the Authority will requisition monies from the Cross-Collateralization Fund, in an aggregate amount equal to the lesser of (1) the aggregate of the insufficiencies in clauses (i) and (ii) of this sentence or (2) the amount remaining in the Cross-Collateralization Fund. Upon receipt the Authority will deposit, or cause the Trustee to deposit, to the credit of the Debt Service Fund or Debt Service Reserve Fund, as applicable with respect to such insufficiencies, amounts received from the above-described requisitions.

Depledging

Notwithstanding the covenant summarized in subparagraph (c) under the caption "Covenants of the Authority" in this Appendix E, the Authority may from time to time cause the amounts to be received by the Authority as payment of and for the principal of and interest on one or more Fresh Water Loans to be removed from Revenues and Pledged Revenues and thereby terminate the pledge of such amounts for the benefit of Holders, if the Executive Director certifies to the Trustee as follows, and accompanies his

certification with respect to the requirements set forth in clause (ii) below with a report by an independent public accounting firm of national reputation, and reasonably acceptable to the Trustee, verifying the mathematical accuracy of schedules provided by or on behalf of the Authority to demonstrate fulfillment of such requirements:

(i) The purpose for the removal of the payments on such Fresh Water Loan or Fresh Water Loans from Revenues is to cause the payment of the principal of and/or the interest on such Fresh Water Loan or Fresh Water Loans to secure other debt obligations of the Authority, except that the payments on any Fresh Water Loan that at any time constituted a Non-qualified Fresh Water Loan may be removed for any purpose, regardless of whether such Fresh Water Loan constitutes a Non-qualified Fresh Water Loan at the time of the removal;

(ii) After the removal of the payments on such Fresh Water Loan or Fresh Water Loans from Revenues, the sum of the Projected Payments to be received during each calendar year will aggregate an amount at least equal to 105% of the amount required to be paid into the Debt Service Fund during each such calendar year to pay the Bond Service Charges due in such year, less an amount equal to any capitalized interest to be applied against the Bond Service Charges in such year, on all Fresh Water Bonds then outstanding; and

(iii) The method of selecting the particular Fresh Water Loan or Fresh Water Loans the payments of which are to be removed from Revenues shall be a “last in, first out” basis determined by the date of the Fresh Water Loan or Fresh Water Loans, except that the payments on any Fresh Water Loan that at any time constituted a Non-qualified Fresh Water Loan may be removed by specific designation of the Executive Director, regardless of the “last in, first out” basis of selection and regardless of whether such Fresh Water Loan constitutes a Non-qualified Fresh Water Loan at the time of the removal.

The foregoing certification of the Executive Director is to be accompanied by the Executive Director’s certified list of all Cooperative Agreements that then exist, listed in order of their date. Following any removal of the payments on any Fresh Water Loan from Revenues pursuant to this paragraph, the Authority and the Trustee shall enter into a Supplemental Agreement acknowledging such removal and appending thereto a then current list of the Cooperative Agreements, listed in order of their date.

Upon receipt of such verification, the Trustee will acknowledge in writing the removal of the payments on such Fresh Water Loan or Fresh Water Loans from Revenues and Pledged Revenues, and thereupon the pledge of such payments for the benefit of Holders will terminate, and thereafter the Holders will have no interest in any payments on such Fresh Water Loan or Fresh Water Loans or in any other loans funded from bonds secured by the payments on such Fresh Water Loan or Fresh Water Loans. For purposes of this subsection (c) any Fresh Water Loan may be divided into portions, and the payments of principal of and interest on any such portion may be removed from Revenues and Pledged Revenues as provided herein. The Trustee shall deliver copies of the written acknowledgment to which reference is made in the first sentence of this paragraph to the Authority and to the Rating Agencies.

Events of Default and Remedies Therefor

So long as the DTC book entry only system is in effect, the Authority and the Trustee will recognize DTC, or its nominee, CEDE & Co., as the Holder of the Fresh Water Bonds for all purposes including the default and remedies provisions described in the following paragraphs.

Each of the following occurrences or events is an “Event of Default” under the Trust Agreement:

- (a) Payment of any interest on any Fresh Water Bond shall not be made when and as that interest shall become due and payable;
- (b) Payment of the principal of or any premium on any Fresh Water Bond shall not be made when and as that principal or premium shall become due and payable, whether at stated maturity, by redemption, pursuant to any mandatory sinking fund requirements, by acceleration or otherwise; or
- (c) The Authority shall have failed to observe or perform any other covenant, agreement or obligation on its or his part, respectively, to be observed or performed contained in the Trust Agreement or in the Fresh Water Bonds, which failure shall have continued for a period of 60 days after written notice, by registered or certified mail, to the Authority specifying the failure and requiring that it be remedied, which notice may be given by the Trustee in its discretion and shall be given by the Trustee at the written request of the Holders of not less than 25% in aggregate principal amount of all Fresh Water Bonds then outstanding.

Upon the occurrence and continuance of an Event of Default the Trustee may, and upon the written request of the Holders of not less than 25% in aggregate principal amount of Fresh Water Bonds then outstanding the Trustee will, subject to the provisions of the Trust Agreement, proceed in its own name, to protect and enforce its rights and the rights of the Holders under the Trust Agreement, by such of the following remedies as the Trustee, being advised by counsel, shall deem most effective to protect those rights:

- (i) Institution of legal or equitable action, including mandamus, to enforce all rights of the Holders, including compelling the Authority or any Local Governmental Agency to perform all their duties under the Fresh Water Bond proceedings, and the enforcement of payment of Bond Service Charges as covenanted;
- (ii) Institution of suit on the Fresh Water Bonds;
- (iii) Injunction against unlawful activities or activities in violation of the rights of Holders of Fresh Water Bonds under the Trust Agreement;
- (iv) Application to a court having jurisdiction of litigation to which the Authority is a party (A) involving the Revenues or the Pledged Revenues, (B) involving the operation or administration of the Fresh Water Program by the Authority, (C) involving a default by the Authority in the performance of the terms and conditions of the Fresh Water General Bond Resolution or the Trust Agreement or (D) seeking to enforce the rights of the Trustee and of the Holders of Fresh Water Bonds under the Trust Agreement, for, among other things, the appointment of a receiver, who may be the Trustee, to administer and operate the Fresh Water Program on behalf of the Authority with full power to pay and provide for the payment of principal of, premium, if any, and interest on the Fresh Water Bonds. The appointed receiver shall not have the power to pledge the general credit or other revenues or receipts of the Authority or the State to the payment of principal of, premium if any, or interest on the Fresh Water Bonds; or
- (v) Acceleration of the principal and interest on all Fresh Water Bonds then outstanding only if an Event of Default described in subparagraph (a) or (b) above occurs.

If, however, at any time after the declaration of acceleration described in subparagraph (v) above and prior to the entry of judgment in a court for enforcement under the Trust Agreement, all sums payable under the Trust Agreement (except the principal of and interest accrued on the Fresh Water Bonds which have not reached their maturity dates) shall have been duly paid or provided for by deposit with the Trustee or paying agents and all existing Events of Default shall have been cured, then and in every such case the Trustee shall waive such Event of Default and its consequences and shall rescind and annul such declaration under subparagraph (v) but no such waiver and rescission shall extend to or affect any such subsequent Event of Default or impair any rights consequent thereon.

All monies (except any monies in an account of the Debt Service Fund which represent Credit Facility Proceeds) held or received by the Authority or the Trustee after an Event of Default under the Trust Agreement occurs and after the payment of the costs and expenses incurred in the collection thereof and the costs, expenses, liabilities and advances of the Trustee shall be applied as follows: (i) unless the principal of all the Fresh Water Bonds has become or been declared due and payable, (a) to the payment of all installments of interest then due on the Fresh Water Bonds in the order of the maturity of the installments of such interest beginning with the earliest date of maturity, and if the amount available is not 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 privilege except as to any difference in the respective rates of interest specified in the Fresh Water Bonds; (b) to the payment of the unpaid principal of any Fresh Water Bonds which have become due (other than Fresh Water Bonds previously called for redemption for the payment of which monies are held pursuant to the provisions of the Trust Agreement) whether at stated maturity, by redemption or pursuant to any mandatory sinking fund requirements in the order of their due dates beginning with the earliest of such dates, with interest on the Fresh Water Bonds from the respective dates upon which they became due at the rate specified in the Fresh Water Bonds, and if the amount available is not sufficient to pay in full all Fresh Water Bonds due on any particular date, together with interest, then to the payment thereof ratably, according to the amount of principal due on such date to the persons entitled thereto without any discrimination or privilege; or (ii) if the principal of all Fresh Water Bonds has become or been declared due and payable, to the payment of principal and of interest then due and unpaid upon the Fresh Water Bonds 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 Fresh Water Bond, over any other Fresh Water Bond, ratably, according to the amounts due respectively for principal and interest to the persons entitled thereto without any discrimination or privilege except as to any difference in the respective rates of interest specified in the Fresh Water Bonds; or (iii) if the principal of all Fresh Water Bonds has been declared due and payable, and if such declaration shall thereafter have been rescinded and annulled as provided in the Trust Agreement then, subject to clause (ii) of this paragraph in the event that the principal of all such Fresh Water Bond shall later become due and payable, the monies shall be applied in accordance with the provisions of clause (i) of this paragraph.

The Holders of not less than twenty-five percent in aggregate principal amount of the Fresh Water 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 or for appointment of a receiver or any other proceedings under the Trust Agreement by the Trustee, provided that such direction shall not be otherwise than in accordance with the provisions of law and of the Trust Agreement, provided that the Trustee shall be indemnified to its satisfaction and that the Trustee may take any other action which it deems to be proper and which is not inconsistent with the direction; and the Trustee shall have the right to decline to follow any direction which in the opinion of the Trustee would be unjustly prejudicial to Holders of Fresh Water Bonds not parties to such direction.

Supplemental Trust Agreement; Modifications

So long as the DTC book entry only system is in effect, the Authority and the Trustee will recognize DTC, or its nominees, Cede & Co., as the Holder of the Fresh Water Bonds for all purposes, including the granting of consents as described in the following paragraphs.

The Authority and the Trustee and the Fresh Water Construction Fund Trustee (if it is a required party thereto) may enter into Supplemental Trust Agreements without the consent of or notice to the Holders for any of the following purposes, among others, when such Supplemental Trust Agreement does not; in the opinion of the Trustee and the Authority, conflict with the terms of the Trust Agreement:

- (a) To cure any ambiguity, inconsistency, omission or formal defect in the Trust Agreement;
- (b) To grant to or confer upon the Trustee for the benefit of the Holders such additional rights, remedies, powers or authority that lawfully may be granted to or conferred upon the Holders or the Trustee;
- (c) To subject additional revenues, receipts or monies to the lien and pledge of the Trust Agreement;
- (d) To add to the covenants, agreements and obligations of the Authority contained in the Trust Agreement other covenants, agreements and obligations thereafter to be observed for the protection of the Holders, or to surrender or limit any right, power or authority reserved to or conferred upon the Authority in the Trust Agreement, including the limitation of rights of redemption so that in certain instances Fresh Water Bonds of different series will be redeemed in some prescribed relation to one another;
- (e) To evidence any succession to the Authority and the assumption by such successors of the covenants, agreements and obligations of the Authority contained in the Trust Agreement and the Fresh Water Bonds; and
- (f) To permit the exchange of registered Fresh Water Bonds for coupon Fresh Water Bonds of the same series if in the opinion of nationally recognized bond counsel selected or approved by the Trustee that exchange would not result in the interest on any of the Fresh Water Bonds outstanding ceasing to be excluded from gross income for purposes of federal income taxation.
- (g) To permit the use of a book entry system to identify the owner of an interest in an obligation issued by the Authority under the Trust Agreement, whether that obligation was formerly, or could be, evidenced by a tangible security.
- (h) To permit the Trustee to comply with any obligations imposed upon it by law.
- (i) To specify further the duties and responsibilities of, and to define further the relationship among, the Trustee, the Registrar, and any Authenticating Agents or Paying Agents.
- (j) To achieve compliance of the Trust Agreement with any applicable federal securities or tax law.

(k) To provide for the issuance, payment and securing of any Parity Bonds in accordance with the Trust Agreement.

(l) To make amendments to the provisions of the Trust Agreement relating to (i) arbitrage matters under Section 148 of the Code, if, in the opinion of nationally recognized bond counsel selected by the Authority and approved by the Trustee, those amendments would not cause the interest on the Fresh Water Bonds outstanding to become included in gross income of the Holders thereof for federal income tax purposes, (ii) the investment of amounts held by the Trustee or the Fresh Water Construction Fund Trustee, and (iii) transfers among the various funds, subfunds and accounts held by the Trustee or the Fresh Water Construction Fund Trustee.

(m) To evidence the appointment of a new Trustee or Fresh Water Construction Fund Trustee for the Fresh Water Bonds.

(n) To permit any other amendment which, in the judgment of the Trustee is not to the prejudice of the Trustee or the Holders.

(o) To make any other change to insert any provision into or delete or amend any provision of the Trust Agreement, provided that such insertion, deletion or amendment will not adversely affect the rating (other than any rating based upon credit enhancement or liquidity support provided by any party other than the Authority, which shall not be taken into account for purpose of this clause) then assign to any Fresh Water Bonds Outstanding by any Rating Agency.

Additionally, the Holders of not less than a majority of the aggregate principal amount of the Fresh Water Bonds then outstanding (exclusive of Fresh Water Bonds held or owned by the Authority) have the right to consent to and approve the modification, alteration or rescission of any provision of the Trust Agreement or restricting in any manner the rights of the Holders, except that (i) an extension of the maturity of the principal of or interest thereon, or a reduction in the principal amount of any Fresh Water Bond or the rate of interest or premium thereon or extension of the time of any payment required by any mandatory sinking fund requirement, requires the consent of the Holder of each Fresh Water Bond so affected and (ii) the creation of a privilege or priority of any Fresh Water Bond over any other or any reduction in the aggregate principal amount of the Fresh Water Bonds required for consent to any such Supplemental Trust Agreement requires the consent of the Holders of all of the then outstanding Fresh Water Bonds, and except that the execution of a Supplemental Agreement (except a Supplemental Agreement executed with respect to the issuance of Parity Bonds) which materially adversely affects the right of a provider of a Credit Facility requires the consent of the provider of the Credit Facility but no such consent shall be required if the provider is in default under the Credit Facility or any agreement between the Authority and that provider executed in connection with the Credit Facility.

Defeasance

So long as the DTC book entry only system is in effect, the Authority and the Trustee will recognize DTC, or its nominee, Cede & Co., as the Holder of the Fresh Water Bonds for all purposes, including the payment of all Bond Service Charges with respect to the Fresh Water Bonds due or to become due thereon for the purpose of discharging the Trust Agreement.

The Trust Agreement will be discharged if (i) the Authority pay or causes to be paid all of the outstanding Fresh Water Bonds, or there is otherwise paid to the Holders of the outstanding Fresh Water Bonds all Bond Service Charges due or to become due thereon and (ii) provision is also made for the payment of all other sums payable under the Trust Agreement.

All or any part of the outstanding Fresh Water Bonds will be deemed to have been paid and discharged if the Trustee has received (a) sufficient monies or (b) Escrow Securities which are the subject of a report by an independent public accounting firm of national reputation which verifies the mathematical accuracy of schedules provided by or on behalf of the Authority to demonstrate that the Escrow Securities are of such maturities or redemption dates and interest payment dates, and bear such interest, without further investment or reinvestment of either the principal amount thereof or the interest earnings thereon, as will be sufficient, together with the monies referred to in clause (a), for the payment of all Bond Service Charges on the Fresh Water Bonds, at their maturity or redemption dates.

Rights and Remedies of Holders of Fresh Water Bonds

So long as the DTC book entry only system is in effect, the Authority and the Trustee will recognize DTC, or its nominee, Cede & Co., as the Holder of the Fresh Water Bonds for all purposes, including the granting of consents as described in the following paragraphs.

No Holder of any Fresh Water Bond shall have any right to institute any suit, action or proceeding for the enforcement of the Trust Agreement or for the execution of any trust thereof or for the appointment of a receiver or for the exercise of any other remedy thereunder unless (i) an Event of Default has occurred and is continuing, (ii) the Trustee shall previously have received written notice, or shall be deemed to have received such notice, (iii) the Holders of at least 25% in aggregate principal amount of Fresh Water Bonds then outstanding shall have made written request to the Trustee and shall have afforded the Trustee reasonable opportunity either to proceed to exercise the rights, remedies and powers granted in the Trust Agreement or to institute such action, suit or proceeding in its own name and have also offered to the Trustee a satisfactory indemnity bond for the reimbursement of all expenses to which it may be put and to protect it against all liability except liability from negligence or willful default, and (iv) the Trustee shall thereafter fail or refuse to exercise such rights, remedies and powers, or to institute such action, suit or proceeding in its own name. Such notification, request and offer of indemnity are in every case, at the option of the Trustee, conditions precedent to the institution of any suit, action or proceeding for the enforcement of the Trust Agreement, or for the appointment of a receiver. No one or more Holder(s) of the Fresh Water Bonds shall have any right in any manner whatsoever to affect, disturb or prejudice the benefit of the Trust Agreement by his or their action or to enforce any right thereunder except in the manner therein provided and proceedings are to be instituted, and maintained in the manner therein provided and for the benefit of the Holders of all Fresh Water Bonds then outstanding. Nothing in the Trust Agreement shall affect or impair the right of any Holder to enforce the payment of the principal of, premium, if any, and interest on any Fresh Water Bond held or owned by him at and after the maturity thereof at the place, from the sources and in the manner in said Fresh Water Bond expressed.

Computation of Bond Service Charges With Respect to Parity Bonds

The Authority may issue Parity Bonds from time to time for the purpose of paying costs of, or making loans to governmental agencies to pay costs of planning, designing, acquiring or constructing waste water treatment facilities, interceptor sewer facilities, sewage collection facilities and appurtenant sewerage facilities necessary for the effective operation thereof, and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof, paying the issuance costs of the Parity Bonds and providing the amount, if any, required to be deposited in the Debt Service Reserve Fund. For a discussion of the conditions for issuing Parity Bonds, see “PARITY BONDS AND BOND ANTICIPATION NOTES” in the forepart of this Official Statement.

In the event that the payment of Bond Service Charges on all or any portion of any series of Fresh Water Bonds are to be insured or secured by a Credit Facility, then the Supplemental Trust Agreement with respect to such Fresh Water Bonds may contain such provisions as are necessary and appropriate to

reflect (i) the time at which and manner in which amounts paid under such Credit Facility shall be applied to the payment of Bond Service Charges, (ii) the rights to be granted to the provider of such Credit Facility for reimbursement of such amounts paid or drawn, provided that no such provider will be granted a right to payment from or security interest in the Pledged Revenues prior or superior to such right or security interest granted to the Trustee under the Trust Agreement, (iii) the rights, if any, to be granted to such provider to approve amendments to the Trust Agreement, to instruct or request the Trustee to exercise remedies or to take any other action under the Trust Agreement on behalf of, in lieu of, or as subrogee for, the Holders of such Fresh Water Bonds, or (iv) any other terms or conditions relating to such Credit Facility not contrary to or inconsistent with the Trust Agreement.

If the Holders of all or any of the Fresh Water Bonds of any series are, by the terms thereof, entitled or required to tender such Fresh Water Bonds to the Authority for purchase at one or more times prior to the stated maturity of such Fresh Water Bonds, the purchase price required to be paid upon such a tender shall not be deemed Bond Service Charges payable on such Fresh Water Bonds for the purpose of determining the fulfillment of the test set forth in the Fresh Water General Bond Resolution for the issuance of Parity Bonds or the amount of the Required Reserve Fund Balance attributable to Balloon Bonds, or for any other purpose of the Trust Agreement, provided that the payment of the purchase price payable upon the exercise of such a tender is, and at all times is required to be, insured or secured by a Credit Facility, and provided further that the amounts paid or drawn under such Credit Facility for the payment of the principal portion of the purchase price for such tendered Fresh Water Bonds are not required under the applicable Reimbursement Agreement to be reimbursed by the Authority any earlier than the principal amount so tendered would otherwise be required to be retired pursuant to the stated maturity schedule or mandatory sinking fund schedule for such Fresh Water Bonds. If the Authority is required to reimburse such amounts earlier than it would have been required to retire the principal amount so tendered, then such reimbursement schedule shall be deemed to be the Principal Retirement Schedule for such Fresh Water Bonds for the purpose of determining the fulfillment of the test set forth in the Fresh Water General Bond Resolution for the issuance of Parity Bonds, irrespective of whether any such reimbursement obligation has yet occurred, and for all other purposes of the Trust Agreement once such a reimbursement obligation has accrued and until such reimbursement obligation has been fully discharged.

In the event that all or any portion of any series of Fresh Water Bonds have been issued as or are proposed to be issued as Variable Rate Bonds, Balloon Bonds, Capital Appreciation Bonds, and Crossover Refunding Bonds then in order to compute the Bond Service Charges on such Fresh Water Bonds for the purposes of the Trust Agreement, the following rules will apply:

Variable Rate Bonds. For the purpose of determining whether Fresh Water Bonds, regardless of whether they are to be Variable Rate Bonds, may be issued in compliance with the requirements of the Fresh Water General Bond Resolution when any Variable Rate Bonds are outstanding, the rate of interest borne by any outstanding Variable Rate Bonds will be deemed to be the highest rate of interest borne by such Variable Rate Bonds during the preceding twelve months or such shorter period that such Variable Rate Bonds may have been outstanding.

For the purpose of determining whether Fresh Water Bonds that are to be Variable Rate Bonds may be issued in compliance with the requirements of the Fresh Water General Bond Resolution, and for the purpose of determining the amount of the Required Reserve Fund Balance attributable to such Variable Rate Bonds, the rate of interest to be borne by such Variable Rate Bonds will be deemed to be the median between the initial rate of interest actually to be borne by such Variable Rate Bonds and the maximum rate of interest such Variable Rate Bonds may bear pursuant to the Series Resolution applicable thereto.

For the purpose of determining whether any outstanding Variable Rate Bond is deemed paid and discharged pursuant to the Trust Agreement, such Variable Rate Bond will be deemed to bear interest at the actual rate of interest borne thereby for the remainder of the period that such rate will remain in effect, and for any subsequent period prior to the time at which such Variable Rate Bond is actually to be paid and discharged, such Variable Rate Bond will be deemed to bear interest at the maximum rate of interest such Variable Rate Bond may bear pursuant to the Series Resolution applicable thereto.

If any Fresh Water Bond is issued in conjunction with another Fresh Water Bond which bears interest at a rate that is, at all times, the balance remaining after the subtraction of the rate of interest on the other Fresh Water Bond from a constant, with the result that the rate of interest paid by the Authority on the two Fresh Water Bonds is, and must at all times be, fixed, then neither such Fresh Water Bond shall be treated as a Variable Rate Bond, but rather such Fresh Water Bonds shall be treated together as a fixed rate Fresh Water Bond.

Interest Rate Hedge. In the event the Authority enters into an Interest Rate Hedge Agreement to simulate a fixed rate of interest on Variable Rate Bonds, the debt structure that is simulated through the combination of the Variable Rate Bonds with such Interest Rate Hedge Agreement shall apply for purposes of calculating or projecting the Bond Service Charges on such Variable Rate Bonds for any period of time during which such Interest Rate Hedge Agreement is to be effective, provided that (i) the debt structure that is simulated through the combination of the Variable Rate Bonds with such Interest Rate Hedge Agreement complies with the restrictions of the Fresh Water General Bond Resolution and the Trust Agreement on the terms of and security for the Fresh Water Bonds applied to that structure as though it consisted entirely of Fresh Water Bonds and as though the portion of the Payment Obligations of the Authority thereunder that represents the equivalent of interest on the notional amount of the Interest Rate Hedge Agreement payable to the counterparty to the Interest Rate Hedge Agreement constituted Bond Service Charges; (ii) the counterparty to any swap agreement and the provider of any interest rate cap is rated at least “AA”, “Aa” or the equivalent by all Rating Agencies; (iii) no such Interest Rate Hedge Agreement purports to entitle the counterparty to the Interest Rate Hedge Agreement to payment by the Authority from any source other than the Pledged Revenues, but such Interest Rate Hedge Agreement may provide for securing any portion of the Payment Obligations of the Authority thereunder that represents the equivalent of interest on the notional amount of the Interest Rate Hedge Agreement (but does not represent, among other things, any termination payment that may be payable by the Authority thereunder) with a pledge of the Pledged Revenues on a parity with the pledge thereof that secures the Fresh Water Bonds; and (iv) the cost of obtaining such Interest Rate Hedge Agreement has been determined by the Executive Director, based on the written advice of the Financial Advisor, to be justified by the corresponding benefit to the Authority and to be commercially reasonable based on then current market conditions. In the event the Authority enters into any such Interest Rate Hedge Agreement, it shall not exercise any option to terminate such Interest Rate Hedge Agreement unless the Variable Rate Bonds to which such Interest Rate Hedge Agreement had related and which will remain outstanding after the termination thereof would fulfill the requirements of paragraph (b) of Section 3 of the Fresh Water General Bond Resolution as they apply to Variable Rate Bonds under paragraph (3) of Section 2 of the Fresh Water General Bond Resolution, as though such Variable Rate Bonds were being issued on the date of the termination of such Interest Rate Hedge Agreement.

Balloon Bonds. In the event that all or any portion of any series of Fresh Water Bonds have been issued as or are proposed to be issued as Balloon Bonds, then in order to compute the Bond Service Charges on such series of Fresh Water Bonds for the purposes of determining (1) whether Fresh Water Bonds, regardless of whether they are to be Balloon Bonds, may be issued in compliance with the requirements of the Fresh Water General Bond Resolution when any Balloon Bonds are outstanding, (2) whether Fresh Water Bonds that are Balloon Bonds may be issued in compliance with the requirements of the Fresh Water General Bond Resolution, and (3) the amount of the Required Reserve

Fund Balance attributable to such Balloon Bonds, the Bond Service Charges on such Fresh Water Bonds will be determined:

- (i) if such Balloon Bonds are not Capital Appreciation Bonds, by assuming that such Balloon Bonds are to be amortized on the basis of level debt service over the Assumed Amortization Period and that such Bonds bear interest at the Assumed Interest Rate; and
- (ii) if such Balloon Bonds are Capital Appreciation Bonds, by assuming that the Appreciated Principal Amount of such Balloon Bonds at maturity is to be amortized on the basis of level principal payments over the Assumed Amortization Period.

Capital Appreciation Bonds. In the event that all or any portion of any series of Fresh Water Bonds have been issued as or are proposed to be issued as Capital Appreciation Bonds, then in order to compute the Bond Service Charges on such series of Fresh Water Bonds for the purposes of determining (1) whether Fresh Water Bonds, regardless of whether they are to be Capital Appreciation Bonds, may be issued in compliance with the requirements of the Fresh Water General Bond Resolution when any Capital Appreciation Bonds are outstanding, (2) whether Fresh Water Bonds that are Capital Appreciation Bonds may be issued in compliance with the requirements of the Fresh Water General Bond Resolution, and (3) the amount of the Required Reserve Fund Balance attributable to such Capital Appreciation Bonds, the Bond Service Charges on such Fresh Water Bonds shall include the applicable Appreciated Principal Amounts at maturity.

Crossover Refunded Bonds and Crossover Refunding Bonds. If any outstanding Fresh Water Bonds are Crossover Refunded Bonds then any principal of and premium on such Crossover Refunded Bonds to be paid from a Crossover Escrow Account shall be excluded from Bond Service Charges. If any outstanding Fresh Water Bonds are Crossover Refunding Bonds then any interest paid or to be paid on such Crossover Refunding Bonds from any Crossover Escrow Account shall be excluded from Bond Service Charges.

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APPENDIX F

BOOK ENTRY ONLY SYSTEM

Owners of book entry interests in the Series 2019 Fresh Water Bonds will not receive or have the right to receive physical delivery of the Series 2019 Fresh Water Bonds and will not be or be considered to be, and will not have any rights as, registered owners (“Holders”) of Series 2019 Fresh Water Bonds under the Trust Agreement.

The following information on the Book Entry Only System applicable to the Series 2019 Fresh Water Bonds has been supplied by The Depository Trust Company, New York, New York, and none of the Authority, the Authority’s Financial Advisor, the Underwriters, Bond Counsel, or Underwriters’ Counsel make any representations, warranties or guarantees with respect to its accuracy or completeness.

The Depository Trust Company (“DTC “). New York, New York, will act as securities depository for the Series 2019 Fresh Water Bonds. The Series 2019 Fresh Water Bonds will be issued as securities registered in the name of Cede & Co. (DTC’s partnership nominee). One fully-registered Fresh Water Bond certificate for each maturity will be issued in the aggregate principal amount of the Series 2019 Fresh Water Bonds and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has S&P’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 the Series 2019 Fresh Water Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2019 Fresh Water Bonds on DTC’s records. The ownership interest of each book entry interest owner is in turn to be recorded on the Direct and Indirect Participants’ records. Book entry interest owners will not receive written confirmation from DTC of their purchase. Book entry interest 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 book entry interest owner entered into the transaction. Transfers of book entry interests in the Series 2019 Fresh Water Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of book entry interest owners. Book entry interest owners will not receive certificates representing their ownership interests in the Series

2019 Fresh Water Bonds, except in the event that use of the book-entry system for the Series 2019 Fresh Water Bonds is discontinued.

To facilitate subsequent transfers, all Series 2019 Fresh Water Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co, or such other name as may be requested by an authorized representative of DTC. The deposit of the Series 2019 Fresh Water Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual book entry interest owners of the Series 2019 Fresh Water Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2019 Fresh Water Bonds are credited, which may or may not be the book entry interest 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 book entry interest owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Book entry interest owners of the Series 2019 Fresh Water Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2019 Fresh Water Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2019 Fresh Water Bonds. For example, book entry interest owners of the Series 2019 Fresh Water Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to book entry interest owners. In the alternative, book entry interest owners may wish to provide their names and addresses to the Trustee and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to ATC. If less than all of the Series 2019 Fresh Water Bonds within a single maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2019 Fresh Water Bonds unless authorized by a Direct Participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2019 Fresh Water Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series 2019 Fresh Water Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to book entry interest 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) or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the book entry interest owners shall be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Authority or the Bond Registrar. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be prepared and delivered.

The Authority may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository) only if DTC determines not to continue to act as securities depository for the Bonds. In that event, Bond certificates will be prepared and delivered to DTC. See **Revision of Book-Entry Only Transfer System; Replacement Series 2019 Fresh Water Bonds**.

The information above in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, including DTC, but the Authority takes no responsibility for its accuracy.

Disclaimer by State, Authority, Trustee, Financial Advisor and Underwriter

Neither the State, the Authority or the Trustee has any responsibility or liability for any aspect of the records relating to, or payments made on account of book entry interest ownership, or for maintaining, supervising or reviewing any records relating to that ownership.

The State, the Authority, the Trustee, the Authority's Financial Advisor and the Underwriter cannot and do not give any assurances that DTC, DTC Participants or others will distribute to the book entry interest owners (i) payments of Bond Service Charges on the Series 2019 Fresh Water Bonds paid or (ii) redemption or other notices sent to DTC as the Holder or that they will do so on a timely basis, or that DTC or DTC Participants will serve and act in the manner described in this Official Statement. The Authority has been advised by DTC that the current "Rules" applicable to DTC and its Participants are on file with the Securities and Exchange Commission and that the current "Procedures" of DTC to be followed in dealing with DTC Participants are on file with DTC.

Revision of Book Entry Only Transfer System; Replacement Series 2019 Fresh Water Bonds

The Trust Agreement authorizing the issuance of the Series 2019 Fresh Water Bonds will provide for issuance of fully registered replacement Series 2019 Fresh Water Bonds ("Replacement Series 2019 Fresh Water Bonds") directly to persons other than DTC or its nominee only in the event that DTC determines not to continue to act as securities depository for the Series 2019 Fresh Water Bonds or the Authority determines that continuation of the book entry only system with DTC is not in the best interests of the Authority or the best interests of the book entry interest owners.

Upon a discontinuance of the book entry only system with DTC, the Authority may in its discretion attempt to have established a securities depository/book entry only relationship with another qualified securities depository. If the Authority is unable to do so, or desires not to do so, and after the Trustee has made provisions for notification of the book entry interest owners of the Series 2019 Fresh Water Bonds by appropriate notice to DTC, the Authority and the Trustee shall authenticate and deliver Replacement Series 2019 Fresh Water Bonds of the same series in the denomination of any integral multiple of \$5,000 to or at the direction of, and, if the event is not the result of Authority action or inaction, at the expense (including printing costs), of DTC's assigns.

Principal of, premium, if any, and interest on Replacement Series 2019 Fresh Water Bonds will be payable when due without deduction for the services of the Paying Agent. Principal of any Replacement Series 2019 Fresh Water Bonds will be payable to the registered owner thereof upon presentation and surrender thereof at the principal corporate trust office of the Trustee. Interest thereon

will be payable by the Trustee by check, draft or wire transfer, mailed to the registered owner of record on the registration books maintained by the Trustee (the “Register”) as of the 15th day of the calendar month preceding the Interest Payment Date.

Replacement Series 2019 Fresh Water Bonds will be exchangeable for Replacement Series 2019 Fresh Water Bonds of authorized denominations and of the same series, and transferable, at the designated office of the Registrar, without charge (except taxes or other governmental fees). Exchange or transfer of then redeemable Replacement Series 2019 Fresh Water Bonds is not required to be made (i) between the 15th day preceding the mailing of notice of Replacement Series 2019 Fresh Water Bonds to be redeemed and the date of that mailing, (ii) during the period from the day following the Regular Record Date through the day preceding the ensuing Interest Payment Date, or (iii) of a particular Replacement Series 2019 Fresh Water Bond selected for redemption (in whole or in part) until redemption.

APPENDIX G

FORM OF APPROVING BOND COUNSEL OPINION

November 19, 2019

To: Ohio Water Development Authority
 Columbus, Ohio

We have served as bond counsel to our client the Ohio Water Development Authority (the “Authority”) in connection with the issuance by the Authority of its \$150,000,000 Water Development Revenue Bonds, Fresh Water Series 2019 (the “Series 2019 Fresh Water Bonds”), dated the date of this letter and issued for the purpose of (i) paying costs of, or making loans to Local Governmental Agencies to pay costs of, planning, designing, acquiring or constructing waste water treatment facilities, interceptor sewer facilities, sewage collection facilities and appurtenant sewerage facilities necessary for the effective operation thereof, and water supply facilities, water distribution facilities and appurtenant water facilities necessary for the effective operation thereof, and (ii) paying the issuance costs of the Series 2019 Fresh Water Bonds. The Series 2019 Fresh Water Bonds are issued under the Trust Agreement, dated as of February 15, 1995 (the “Original Trust Agreement”), as supplemented and amended by the First Supplemental Trust Agreement, dated as of May 1, 1998 (the “First Supplemental Agreement”), the Second Supplemental Trust Agreement, dated as of September 1, 2001 (the “Second Supplemental Agreement”), the Third Supplemental Trust Agreement, dated as of September 5, 2002 (the “Third Supplemental Agreement”), the Fourth Supplemental Trust Agreement, dated May 27, 2004 (the “Fourth Supplemental Agreement”), the Fifth Supplemental Trust Agreement, dated April 5, 2005 (the “Fifth Supplemental Agreement”), the Sixth Supplemental Trust Agreement, dated October 19, 2006 (the “Sixth Supplemental Agreement”), the Seventh Supplemental Trust Agreement, dated October 17, 2007 (the “Seventh Supplemental Agreement”), the Eighth Supplemental Trust Agreement, dated April 2, 2009 (the “Eighth Supplemental Agreement”), the Ninth Supplemental Trust Agreement, dated October 22, 2009 (the “Ninth Supplemental Agreement”), the Tenth Supplemental Trust Agreement, dated September 21, 2010 (the “Tenth Supplemental Agreement”), the Eleventh Supplemental Trust Agreement, dated July 23, 2013 (the “Eleventh Supplemental Agreement”), the Twelfth Supplemental Trust Agreement, dated as of July 1, 2014 (the “Twelfth Supplemental Agreement”), the Thirteenth Supplemental Trust Agreement, dated as of August 20, 2014 (the “Thirteenth Supplemental Agreement”), the Fourteenth Supplemental Trust Agreement, dated as of April 1, 2015 (the “Fourteenth Supplemental Agreement”), the Fifteenth Supplemental Trust Agreement, dated March 23, 2016 (the “Fifteenth Supplemental Agreement”), the Sixteenth Supplemental Trust Agreement, dated July 7, 2016 (the “Sixteenth Supplemental Agreement”), the Seventeenth Supplemental Trust Agreement, dated as of October 1, 2016 (the “Seventeenth Supplemental Agreement”), the Eighteenth Supplemental Trust Agreement, dated as of June 1, 2017 (the “Eighteenth Supplemental Agreement”), the Nineteenth Supplemental Trust Agreement, dated October 12, 2017 (the “Nineteenth Supplemental Trust Agreement”), the Twentieth Supplemental Trust Agreement, dated May 31, 2018 (the “Twentieth Supplemental Agreement”) and the Twenty-First Supplemental Trust Agreement, dated November 19, 2019 (the “Twenty-First Supplemental Agreement”) and, collectively with the Original Trust Agreement, the First Supplemental Agreement, the Second Supplemental Agreement, the Third Supplemental Agreement, the Fourth Supplemental Agreement, the Fifth Supplemental Agreement, the Sixth Supplemental Trust Agreement, the Seventh Supplemental Agreement, the Eighth Supplemental Agreement, the Ninth Supplemental Agreement, the Tenth Supplemental Agreement, the Eleventh Supplemental Agreement, the Twelfth Supplemental Agreement, the Thirteenth Supplemental Agreement, the Fourteenth Supplemental Agreement, the Fifteenth Supplemental Agreement, the Sixteenth Supplemental Agreement, the Seventeenth Supplemental

Agreement, the Eighteenth Supplemental Agreement, the Nineteenth Supplemental Agreement and the Twentieth Supplemental Agreement, and as the same may be further amended and supplemented from time in accordance with its terms, the “Trust Agreement”), all by and among the Authority, The Bank of New York Mellon Trust Company, N.A., New Albany, Ohio (as successor to The Fifth Third Bank, Cincinnati, Ohio), as Trustee, and The Huntington National Bank, Columbus, Ohio, as Fresh Water Construction Fund Trustee. All capitalized words and terms not otherwise defined herein are used with the definitions assigned to them in the Trust Agreement.

In our capacity as bond counsel, we have examined the transcript of proceedings relating to the issuance of the Series 2019 Fresh Water Bonds, an executed counterpart of the Twenty-First Supplemental Agreement, the Series 2019 Resolution, and the Certificate of Award, and executed copies of the Original Trust Agreement, the First Supplemental Agreement, the Second Supplemental Agreement, the Third Supplemental Agreement, the Fourth Supplemental Agreement, the Fifth Supplemental Agreement, the Sixth Supplemental Agreement, the Seventh Supplemental Agreement, the Eighth Supplemental Agreement, the Ninth Supplemental Agreement, the Tenth Supplemental Agreement, the Eleventh Supplemental Agreement, the Twelfth Supplemental Agreement, the Thirteenth Supplemental Agreement, the Fourteenth Supplemental Agreement, the Fifteenth Supplemental Agreement, the Sixteenth Supplemental Agreement, the Seventeenth Supplemental Agreement, the Eighteenth Supplemental Agreement, the Nineteenth Supplemental Agreement and the Twentieth Supplemental Agreement. We have also examined (i) the executed agreements (the “Existing Cooperative Agreements”) among the Authority and certain political subdivisions of the State of Ohio (the “Local Governmental Agencies”) relating to the projects identified in Appendix B to the Official Statement, dated November 5, 2019 relating to the Series 2019 Fresh Water Bonds, (ii) the proceedings of the Authority and the Local Governmental Agencies authorizing the execution of the Existing Cooperative Agreements, (iii) a copy of a fully executed and authenticated Series 2019 Fresh Water Bond, and (iv) the law and such other certified proceedings and papers as we deem necessary to render this opinion.

Based on this examination and subject to the limitations stated below, we are of the opinion that, under existing law:

1. The Series 2019 Fresh Water Bonds and the Trust Agreement constitute legal, valid and binding obligations of the Authority.
2. The Existing Cooperative Agreements have been duly entered into by the Authority and the respective Local Governmental Agencies and constitute valid and legally binding contractual obligations of such parties.
3. The Series 2019 Fresh Water Bonds constitute special obligations of the Authority, and the principal of and interest on (collectively, “debt service”) the Series 2019 Fresh Water Bonds, together with debt service on any other obligations issued and outstanding on a parity with the Series 2019 Fresh Water Bonds as provided in the Trust Agreement, are payable from and secured solely by a pledge of the Pledged Revenues and the Special Funds. The payment of debt service on the Series 2019 Fresh Water Bonds is not secured by an obligation or pledge of any money raised by taxation, and Series 2019 Fresh Water Bonds do not represent or constitute a general obligation or a pledge of the faith and credit of the Authority, the State of Ohio (the “State”) or any of its political subdivisions.
4. Interest on the Series 2019 Fresh Water Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code

of 1986, as amended (the “Code”), and is not an item of tax preference for purposes of the federal alternative minimum tax. Interest on, and any profit made on the sale, exchange or other disposition of, the Series 2019 Fresh Water Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. We express no opinion as to any other tax consequences regarding the Series 2019 Fresh Water Bonds.

The opinions stated above are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. In rendering all such opinions, we assume, without independent verification, and rely upon (i) the accuracy of the factual matters represented, warranted or certified in the proceedings and documents we have examined and (ii) the due and legal authorization, execution and delivery of those documents by, and the valid, binding and enforceable nature of those documents upon, any parties other than the Authority.

We express no opinion herein regarding the priority of the lien on Pledged Revenues and the Special Funds or other funds created by the Trust Agreement.

In rendering those opinions with respect to treatment of the interest on the Series 2019 Fresh Water Bonds under the federal tax laws, we further assume and rely upon compliance with the covenants in the proceedings and documents we have examined, including those of the Authority. Failure to comply with certain of those covenants subsequent to issuance of the Series 2019 Fresh Water Bonds may cause interest on the Series 2019 Fresh Water Bonds to be included in gross income for federal income tax purposes retroactively to their date of issuance.

The rights of the owners of the Series 2019 Fresh Water Bonds and the enforceability of the Series 2019 Fresh Water Bonds and the Trust Agreement are subject to bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or transfer, and other laws relating to or affecting the rights and remedies of creditors generally; to the application of equitable principles, whether considered in a proceeding at law or in equity; to the exercise of judicial discretion; and to limitations on legal remedies against public entities.

No opinions other than those expressly stated herein are implied or shall be inferred as a result of anything contained in or omitted from this letter. The opinions expressed in this letter are stated only as of the time of its delivery and we disclaim any obligation to revise or supplement this letter thereafter. Our engagement as bond counsel in connection with the original issuance and delivery of the Series 2019 Fresh Water Bonds is concluded upon delivery of this letter.

Respectfully submitted,

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Ohio Water
Development Authority



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