

NEW ISSUE — BOOK ENTRY ONLY

Ratings: S&P: “AAA”
 Moody’s: “Aa1”
 See “RATINGS” herein.

In the opinion of Norton Rose Fulbright US LLP, Los Angeles, California, and Curls Bartling P.C., Oakland, California, Co-Bond Counsel, under existing statutes, regulations, rulings and court decisions, and assuming compliance with the tax covenants in the documents pertaining to the Series 2019A Bonds and requirements of the Internal Revenue Code of 1986, as amended (the “Code”), as described herein, interest on the Series 2019A Bonds is excluded from the gross income of the owners thereof for federal income tax purposes. In the further opinion of Co-Bond Counsel, interest on the Series 2019A Bonds is not an item of tax preference for purposes of the federal alternative minimum tax. Co-Bond Counsel is also of the opinion that, under existing law, interest on the Series 2019A Bonds is exempt from personal income taxes of the State of California. See “TAX MATTERS” herein.



\$162,210,000*

**EAST BAY MUNICIPAL UTILITY DISTRICT
 (Alameda and Contra Costa Counties, California)
 WATER SYSTEM REVENUE BONDS, SERIES 2019A
 (GREEN BONDS)**

Dated: Date of Delivery

Due: June 1, as shown on inside cover

This cover page contains certain information for general reference only. It is not intended to be a summary of the security or terms of this issue. Investors are advised to read the entire Official Statement to obtain information essential to the making of an informed investment decision. Capitalized terms used on this cover page and not otherwise defined shall have the meanings set forth herein.

The East Bay Municipal Utility District (the “District”) is issuing its Water System Revenue Bonds, Series 2019A (Green Bonds) (the “Series 2019A Bonds”) pursuant to a Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the District and First Interstate Bank of California, which has been succeeded by The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019, providing for the issuance of the Series 2019A Bonds (collectively, the “Indenture”). The Series 2019A Bonds will be issued in fully-registered form, without coupons, initially registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository for the Series 2019A Bonds. Beneficial ownership interests in the Series 2019A Bonds may be purchased in book-entry form only in denominations of \$5,000 principal amount or any integral multiple thereof. Interest on the Series 2019A Bonds is payable semiannually on June 1 and December 1 of each year, commencing December 1, 2019. Principal is payable on June 1 of the years set forth on the inside front cover. The principal or redemption price of, and interest on, the Series 2019A Bonds are payable by the Trustee to DTC, which is obligated in turn to remit such principal or redemption price and interest to the DTC participants for subsequent disbursement to the beneficial owners of the Series 2019A Bonds. See APPENDIX E – “DTC AND THE BOOK-ENTRY ONLY SYSTEM.”

The Series 2019A Bonds are subject to redemption prior to maturity as more fully described herein. See “THE SERIES 2019A BONDS – Redemption.”

The Series 2019A Bonds are being issued for the purpose of (i) providing moneys to finance (and/or reimburse the District for) certain costs of improvements to the Water System of the District and (ii) pay costs of issuance in connection with the Series 2019A Bonds, as described herein.

The Series 2019A Bonds are special obligations of the District, payable solely from and secured by a pledge of Subordinated Water Revenues as more fully described herein. Subordinated Water Revenues generally consist of the District’s Water Revenues (adjusted for deposits to and withdrawals from the Rate Stabilization Fund) remaining after the payment of all Water Operation and Maintenance Costs. The Series 2019A Bonds have been issued on parity with the District’s Water System Revenue Bonds and Parity Debt heretofore or hereafter issued, as more fully described herein, including certain payment obligations of the District under interest rate swap agreements entered into by the District in connection therewith. There are no Senior Water Bonds remaining outstanding and the District has covenanted that it will not issue any Senior Water Bonds in the future. The District also operates a Wastewater System. The Series 2019A Bonds are not payable from or secured by the revenues of the Wastewater System of the District. **Neither the full faith and credit nor the taxing power of the District is pledged to the payment of the Series 2019A Bonds or the interest thereon.**

**MATURITY SCHEDULE
 (SEE INSIDE COVER)**

The Series 2019A Bonds will be offered when, as and if issued, subject to the approval of validity by Norton Rose Fulbright US LLP, Los Angeles, California, and Curls Bartling P.C., Oakland, California, Co-Bond Counsel, and certain other conditions. Certain legal matters will be passed upon for the District by its General Counsel and for the Underwriters by Orrick, Herrington & Sutcliffe LLP, San Francisco, California. Montague DeRose and Associates, LLC is serving as municipal advisor to the District in connection with the Series 2019A Bonds. It is anticipated that the Series 2019A Bonds will be available for delivery through the facilities of DTC in New York, New York by Fast Automated Securities Transfer (FAST) on or about June 27, 2019.

J.P. Morgan

BofA Merrill Lynch

Siebert Cisneros Shank & Co., L.L.C.

Dated: June __, 2019

* Preliminary, subject to change.

\$162,210,000*
EAST BAY MUNICIPAL UTILITY DISTRICT
(Alameda and Contra Costa Counties, California)
WATER SYSTEM REVENUE BONDS, SERIES 2019A
(GREEN BONDS)

MATURITY SCHEDULE*

\$81,000,000* Serial Series 2019A Bonds

<i>Maturity Date (June 1)*</i>	<i>Principal Amount*</i>	<i>Interest Rate</i>	<i>Yield</i>	<i>CUSIP[†]</i>
2020	\$2,970,000			
2021	2,555,000			
2022	2,685,000			
2023	2,815,000			
2024	2,960,000			
2025	3,105,000			
2026	3,260,000			
2027	3,425,000			
2028	3,595,000			
2029	3,775,000			
2030	3,965,000			
2031	4,160,000			
2032	4,370,000			
2033	4,590,000			
2034	4,820,000			
2035	5,060,000			
2036	5,310,000			
2037	5,575,000			
2038	5,855,000			
2039	6,150,000			

\$35,680,000* ____% Term Series 2019A Bonds due June 1, 2044*, Price ____%; CUSIP[†]: 271014 ____

\$45,530,000* ____% Term Series 2019A Bonds due June 1, 2049*, Price ____%; CUSIP[†]: 271014 ____

[†] CUSIP® is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, managed by S&P Capital IQ on behalf of the American Bankers Association. CUSIP numbers have been assigned by an independent company not affiliated with the District or the Underwriters and are included solely for the convenience of the holders of the Series 2019A Bonds. Neither the District nor the Underwriters is responsible for the selection or use of these CUSIP numbers and no representation is made as to their correctness on the Series 2019A Bonds or as indicated above. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2019A Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of the Series 2019A Bonds.

* Preliminary; subject to change.

EAST BAY MUNICIPAL UTILITY DISTRICT

Alameda and Contra Costa Counties, California
375 Eleventh Street
Oakland, California 94607
(866) 403-2683

Board of Directors

Marguerite Young, *President*
Doug A. Linney, *Vice President*
John A. Coleman
Andy Katz
Lesla R. McIntosh
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D. Scott Klein, *Controller*
Robert L. Hannay, *Treasury Manager*

Co-Bond Counsel

Norton Rose Fulbright US LLP
Los Angeles, California

Curls Bartling P.C.
Oakland, California

Municipal Advisor

Montague DeRose and Associates, LLC
Walnut Creek, California

Trustee

The Bank of New York Mellon Trust Company, N.A.
San Francisco, California

No dealer, broker, salesperson or other person has been authorized by the District to give any information or to make any representation other than as set forth herein and, if given or made, such other information or representation must not be relied upon as having been authorized by the District. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Series 2019A Bonds by a person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale. This Official Statement is not to be construed as a contract with the purchasers of the Series 2019A Bonds.

The information set forth in this Official Statement has been furnished by the District and obtained from official sources and other sources which are believed to be reliable. Statements contained in this Official Statement which involve estimates, forecasts or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of facts. 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 District since the date hereof.

The Underwriters have provided the following sentence for inclusion in this Official Statement:

The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under 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.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) website. The District also maintains a website. However, the information presented therein is not part of this Official Statement and must not be relied upon in making an investment decision with respect to the Series 2019A Bonds.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2019A BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

FORWARD-LOOKING STATEMENTS

CERTAIN STATEMENTS CONTAINED IN THIS OFFICIAL STATEMENT REFLECT NOT HISTORICAL FACTS BUT FORECASTS AND “FORWARD-LOOKING STATEMENTS.” NO ASSURANCE CAN BE GIVEN THAT THE FUTURE RESULTS DISCUSSED HEREIN WILL BE ACHIEVED, AND ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THE FORECASTS DESCRIBED HEREIN. IN THIS RESPECT, THE WORDS “ESTIMATE”, “PROJECT”, “ANTICIPATE”, “EXPECT”, “INTEND”, “BELIEVE” AND SIMILAR EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD-LOOKING STATEMENTS. ALL PROJECTIONS, FORECASTS, ASSUMPTIONS, EXPRESSIONS OF OPINIONS, ESTIMATES AND OTHER FORWARD-LOOKING STATEMENTS ARE EXPRESSLY QUALIFIED IN THEIR ENTIRETY BY THE CAUTIONARY STATEMENTS SET FORTH IN THIS OFFICIAL STATEMENT.

References to web site addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader’s convenience. Unless specified otherwise, such web sites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of, and as that term is defined in, Securities and Exchange Commission Rule 15c2-12.

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OFFICIAL STATEMENT

\$162,210,000*

**East Bay Municipal Utility District
(Alameda and Contra Costa Counties, California)
Water System Revenue Bonds, Series 2019A
(Green Bonds)**

INTRODUCTION

This Introduction is not a summary of this Official Statement, and is qualified by more complete and detailed information contained in the entire Official Statement. A full review should be made of the entire Official Statement, including the cover page and attached appendices. The offering of Series 2019A Bonds to potential investors is made only by means of the entire Official Statement. Certain definitions of capitalized terms used and not defined herein are set forth in APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Purpose

The purpose of this Official Statement, which includes the cover page and appendices hereto, is to set forth certain information concerning the East Bay Municipal Utility District (the “District”), the water supply, treatment and distribution system owned by the District (the “Water System” or the “System”), and System finances, in connection with the sale of the District’s \$162,210,000* Water System Revenue Bonds, Series 2019A (Green Bonds) (the “Series 2019A Bonds”). The Series 2019A Bonds are being issued pursuant to the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the District and First Interstate Bank of California, which has been succeeded by The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by the Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019, by and between the District and the Trustee, relating to the Series 2019A Bonds (as so amended and supplemented, the “Indenture”).

The Series 2019A Bonds are being issued for the purpose of (i) providing moneys to finance (and/or reimburse the District for) certain costs of improvements to the Water System of the District and (ii) pay costs of issuance in connection with the Series 2019A Bonds. See “ESTIMATED SOURCES AND USES OF FUNDS” and APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Capital Improvement Program.”

The District

The District is a municipal utility district, created in 1923 by vote of the electorate in portions of Alameda and Contra Costa Counties in the State of California (the “State”). The District is formed under the authority of the Municipal Utility District Act, constituting Division 6 of the Public Utilities Code of the State, commencing with Section 11501 (the “Municipal Utility District Act”). Pursuant to the Municipal Utility District Act, the District is empowered to own and operate the Water System. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM).” The District also operates a wastewater system (the “Wastewater System”). The District’s Wastewater System treats and disposes of sewage from a portion of the area within the District, which is designated as Special District No. 1.

* Preliminary; subject to change.

The Series 2019A Bonds are not payable from or secured by the revenues of the Wastewater System of the District.

Security for the Series 2019A Bonds

The Series 2019A Bonds are special obligations of the District, payable solely from and secured by a pledge of the Subordinated Water Revenues of the District, as defined in the Indenture. Subordinated Water Revenues generally consist of the District's Water Revenues (adjusted for deposits to and withdrawals from the Rate Stabilization Fund) remaining after the payment of (a) all Water Operation and Maintenance Costs and (b) all amounts required to be paid under the District's Senior Water Bond Resolution for principal, interest, reserve fund and any other debt service requirements on the Senior Water Bonds. **There are no Senior Water Bonds currently outstanding and the District has covenanted pursuant to the Eighteenth Supplemental Indenture, dated as of September 15, 2010 (the "Eighteenth Supplemental Indenture") that it will not issue any Senior Water Bonds in the future.** Prior to the date of execution and delivery of the Eighteenth Supplemental Indenture, all Water System revenue bonds of the District issued under the Indenture were designated "Water System Subordinated Revenue Bonds." Pursuant to the Eighteenth Supplemental Indenture, any Water System revenue bonds of the District issued (or remarketed or otherwise reoffered) under the Indenture following the execution and delivery of the Eighteenth Supplemental Indenture are designated "Water System Revenue Bonds" in order to reflect that the lien of the Senior Water Bonds has been closed. All Outstanding Water System revenue bonds issued under the Indenture (howsoever designated), together with any additional Water System revenue bonds hereafter issued under the Indenture are secured on parity by Subordinated Water Revenues and are collectively referred to herein as the "Water System Revenue Bonds." See "SECURITY FOR THE SERIES 2019A BONDS – Pledge of Subordinated Water Revenues."

The Series 2019A Bonds are secured on a parity with the District's other Water System Revenue Bonds to be Outstanding upon the delivery thereof, together with any additional Water System Revenue Bonds hereafter issued, with certain scheduled payments that are payable by the District with respect to certain interest rate swap agreements as described under "SECURITY FOR THE SERIES 2019A BONDS – Outstanding Water System Revenue Obligations – *Interest Rate Swap Agreements*" and with certain outstanding State Loans as described in APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Outstanding Debt," and with any other Parity Debt heretofore or hereafter incurred in accordance with the Indenture. See "SECURITY FOR THE SERIES 2019A BONDS – Outstanding Water System Revenue Obligations," and "– Issuance of Additional Water System Revenue Bonds and Parity Debt; Junior and Subordinate Obligations." As of June 10, 2019, the District had Outstanding \$2,299,805,000 aggregate principal amount of Water System Revenue Bonds. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Outstanding Debt" and "– Variable Rate and Swap Obligations."

The Sixteenth Supplemental Indenture dated as of February 1, 2010 (the "Sixteenth Supplemental Indenture") includes a number of amendments to the Indenture in the manner and effective as of the date described under "AMENDMENTS TO THE INDENTURE."

NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE DISTRICT IS PLEDGED TO THE PAYMENT OF THE SERIES 2019A BONDS OR THE INTEREST THEREON.

Rate Covenant

The District covenants under the Indenture that it will at all times, while any of the Water System Revenue Bonds (including the Series 2019A Bonds) remain Outstanding, fix, prescribe and collect rates, fees and charges in connection with the services and facilities furnished by the Water System so as to yield Water Revenues in each Fiscal Year sufficient so that the Subordinated Water Revenues for such year shall be at least equal to 1.1 times the amount of Debt Service on all Water System Revenue Bonds and Parity Debt for such Fiscal Year. See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Covenants.” See also “CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES.”

Continuing Disclosure

Pursuant to a Continuing Disclosure Agreement, dated the date of delivery of the Series 2019A Bonds, by and between the District and the Trustee, as dissemination agent, the District will covenant and agree for the benefit of the holders and beneficial owners of the Series 2019A Bonds to provide certain financial information and operating data relating to the District and the Water System by not later than December 31 of each year in which the Bonds are outstanding (or if the District’s fiscal year changes, by no later than six months after the end of such Fiscal Year) (the “Annual Report”), commencing with the Annual Report for Fiscal Year 2018-19, and to provide notices of the occurrence of certain specified events. The Annual Report and the notices of specified events will be filed by the Trustee on behalf of the District with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access system (“EMMA”). See “CONTINUING DISCLOSURE.” These covenants have been made in order to assist the Underwriters in complying with Securities and Exchange Commission Rule 15c2-12(b)(5). See also APPENDIX F – “FORM OF CONTINUING DISCLOSURE AGREEMENT.”

As of the date hereof, the District is in compliance in all material respects with its continuing disclosure undertakings for the last five years. Filings through EMMA are linked to a particular issue of obligations by CUSIP number (which is subject to change after the issuance of obligations as a result of various subsequent actions). The District uses its best efforts to confirm that each report filed through EMMA is linked to all the correct 9-digit CUSIP numbers. However, as a technical matter, it has come to the District’s attention that certain filings during the past five years (primarily certain Annual Reports), when made, were not appropriately linked to all applicable CUSIP numbers. The District has since caused the applicable filings to be linked to the additional CUSIPs.

Professionals Involved in the Issue

The Bank of New York Mellon Trust Company, N.A. serves as Trustee under the Indenture. Certain legal matters incident to the authorization, issuance and sale of the Series 2019A Bonds are subject to the approval of Norton Rose Fulbright US LLP, Los Angeles, California, and Curlls Bartling P.C., Oakland, California, Co-Bond Counsel. Certain legal matters will be passed upon for the District by its General Counsel, and for the Underwriters by Orrick, Herrington & Sutcliffe LLP, San Francisco, California, Underwriters’ Counsel. Montague DeRose and Associates, LLC, Walnut Creek, California, is serving as municipal advisor to the District in connection with the issuance of the Series 2019A Bonds.

Summaries Not Definitive

The summaries and references to all documents, statutes, reports and other instruments referred to herein do not purport to be complete, comprehensive or definitive, and each such summary or reference is qualified in its entirety by reference to each such document, statute, report or instrument. The capitalization of any word not conventionally capitalized or otherwise defined herein, indicates that such

word is defined in the Indenture and, as used herein, has the meaning given to it in the Indenture. Unless otherwise indicated, all financial and statistical information herein has been provided by the District.

All references to and summaries of the Indenture and all documents, statutes, reports and other instruments referred to herein are qualified in their entirety by reference to the full Indenture and each such document, statute, report or instrument, respectively, copies of which are available for inspection at the offices of the District in Oakland, California, and will be available from the Trustee upon request and payment of duplication costs. Forward looking statements in this Official Statement are subject to risks and uncertainties. Actual results may vary from forecasts or projections contained herein if events and circumstances do not occur as projected, and such variances may be material.

Additional Information

The District regularly prepares a variety of publicly available reports, including audits, budgets and related documents. Any Series 2019A Bondholder may obtain a copy of any such report, as available, from the Trustee or the District. Additional information regarding this Official Statement may be obtained by contacting the Trustee or Sophia D. Skoda, Director of Finance, East Bay Municipal Utility District, 375 Eleventh Street, Oakland, California 94607, (510) 287-0231.

THE DISTRICT

The District is a municipal utility district, created in 1923 by vote of the electorate in portions of Alameda and Contra Costa Counties in the State of California. The District is formed under the authority of the Municipal Utility District Act. Under the Municipal Utility District Act, municipal utility districts are empowered to acquire, construct, own, operate or control works for supplying the district and public agencies in the district with light, water, power, heat, transportation, telephone service or other means of communications, means for the collection, treatment or disposition of garbage, sewage or refuse matter, and public recreation facilities appurtenant to its reservoirs and may do all things necessary and convenient to the full exercise of powers granted in the Municipal Utility District Act. The District presently exercises only those functions relating to water supply, power generation and recreational facilities through its Water System, and, within an area known as Special District No. 1, sewerage and wastewater interception, treatment and disposal, and power generation through its Wastewater System. Special District No. 1 covers only a portion of the service area of the District. The District presently does not intend to exercise other functions. Such other functions and the related facilities, if exercised, would not constitute part of the Water System or the Wastewater System.

For information on the District, the Water System and its finances and operations, see APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM)” and APPENDIX B – “EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017.”

PLAN OF FINANCE

General

The Series 2019A Bonds are being issued for the primary purpose of providing additional moneys to finance a portion of the costs (or to reimburse the District for such costs) of various improvements to the Water System. Such improvements are being undertaken as a part of the District’s capital improvement program. For additional information regarding the District’s capital improvement program, and a description of the major programs and projects included therein, see APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Capital Improvement Program.”

Series 2019A Bonds Designation as Green Bonds

The District has designated the Series 2019A Bonds as “Green Bonds” to allow investors to invest directly in bonds that finance environmentally beneficial projects. The District considers projects that are designed to meet one or more of the following criteria to be “green” projects: (i) maintain water quality; (ii) improve water use efficiency, including conservation through reduced water loss; (iii) improve biodiversity and ecosystem quality; (iv) protect against flooding; (v) reduce pollution; (vi) improve resilience (adaptation) to climate change; (vii) reduce the combustion of fossil fuels; (viii) reduce greenhouse gas emissions; (ix) implement “reduce, reuse, recycle” practices in preference to raw materials; or (x) adhere to sustainable purchasing guidelines.

District Water System projects that include these attributes generally fall into the following categories:

- **Clean Water and Drinking Water.**

Projects in this category are designed to maintain or improve the quality of drinking water and reduce pollution in the District’s water supply according to State and federal standards. These types of projects primarily include rehabilitation and modernization improvements to water treatment plants such as ozone system upgrades and replacement of filter underdrains and control systems, reservoir improvements, rehabilitation and maintenance, and watershed management activities that protect source water quality.

- **Water Supply and Conservation.**

Projects in this category are designed to improve water supply reliability, preserve current water entitlements, secure additional water supplies or promote water use efficiency. These types of projects may include pipeline replacements and improvements, replacement of polybutylene service laterals, infrastructure renewals, transmission and distribution system upgrades, canal relining, water conservation programs, and groundwater and recycled water projects.

- **Protection against Flooding.**

This category includes projects which prevent an uncontrolled release of reservoir water. These types of projects may include seismic safety evaluations and dam freeboard increases to improve seismic safety, reservoir embankment upgrades and foundation improvements.

- **Renewable Energy and Energy Efficiency.**

This category includes projects designed to reduce greenhouse gas emissions and energy use across District facilities. Projects in this category may include renewable energy facilities, and pressure zone improvements involving replacement or improvement of pumping plants.

- **Sustainable Land Use and Biodiversity Conservation.**

Projects in this category are designed to improve biodiversity and keep natural ecosystems functioning and healthy, including through sensitive species and habitat protection and enhancement measures. These types of projects may include watershed land acquisitions, habitat restoration projects, the purchase and installation of equipment needed to maintain and operate fish hatchery infrastructure, the purchase of equipment to meet the fisheries monitoring and assessment requirements in the Mokelumne River,

additional Endangered Species Act listings, and proposed changes to Sacramento - San Joaquin Delta operations.

Proceeds of the Series 2019A Bonds will be used to reimburse the District for the costs of some or all of such types of green projects. See also APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Capital Improvement Program.”

The District has promoted principles of sustainability for a number of years. The District initially adopted a Sustainability Policy, District Policy 7.05, in 1994. The District’s current Sustainability Policy provides that it is the policy of the District to provide reliable, high-quality drinking water and wastewater service through sustainable operations, maintenance, planning, design, and construction activities that avoid, minimize or mitigate adverse effects to the economy, environment, employees, and the public. The District’s current Sustainability Policy further provides for District staff to annually report to the Board summarizing the status of the District’s sustainability efforts. On April 28, 2015, the District Board approved District Guidance for Issuing Green Bonds (the “District’s Green Bond Guidance”). The District’s Green Bond Guidance identifies the criteria (described above) that the District expects to take into consideration in identifying the types of “green” projects the costs of which may be funded (or reimbursed to the District) from the proceeds of Green Bonds. The District’s Green Bonds Guidance further provides that in identifying potential projects for Green Bond financing, the District’s aim should be towards including projects that best meet one or more of the identified criteria and excluding those projects that appear marginal or that have unresolved sustainability issues.

The proceeds of the Series 2019A Bonds will be deposited into a separately labeled account by the District and allocated to expenditures (or reimbursement of prior expenditures) for capital improvement projects identified by the District as satisfying its criteria for green projects. A list of the particular projects that are considered by the District to be “green” projects, costs of which the District expects to be funded with (or reimbursed from) proceeds of the Series 2019A Bonds, is set forth in APPENDIX G – EXPECTED SERIES 2019A BONDS GREEN BOND PROJECTS. There can be no assurance that the green projects funded with the proceeds of the Series 2019A Bonds will meet an investor’s expectations regarding sustainability performance. It is possible that adverse environmental or social impacts may occur during the design, construction and operation of the green projects.

The terms “Green Bonds” and “green project” are neither defined in nor related to provisions in the Indenture or otherwise defined under State or federal laws. The use of such terms herein is for identification purposes only and is not intended to provide or imply that an owner of the Series 2019A Bonds is entitled to any additional security other than as provided in the Indenture. The purpose of labeling the Series 2019A Bonds as “Green Bonds” is, as noted, to allow owners of the Series 2019A Bonds to invest directly in bonds that are expected to finance environmentally beneficial projects. The repayment obligations of the District with respect to the Series 2019A Bonds are not conditioned on the completion of any particular project or the satisfaction of any certification relating to the status of the Series 2019A Bonds as Green Bonds. The District assumes no obligation to ensure that these projects comply with any legal or other principles of green projects as such principles may evolve over time.

The Series 2019A Bonds will not constitute “exempt facility bonds” issued to finance “qualified green building and sustainable design projects” within the meaning of Section 142(1) of the Code.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds with respect to the Series 2019A Bonds are as follows:

Sources

Principal Amount	\$
Original Issue Premium/Discount	
Total	\$

Uses

Series 2019A Water System Fund ⁽¹⁾	\$
Underwriters' Discount	
Costs of Issuance ⁽²⁾	
Total	\$

⁽¹⁾ Includes previous expenditures to be reimbursed to the District.

⁽²⁾ Includes legal, financing and consulting fees, rating agency fees, printing costs and other miscellaneous expenses.

THE SERIES 2019A BONDS

General Description

The Series 2019A Bonds will be issued in the aggregate principal amounts, will bear interest at the rates and will mature in the years and amounts all as set forth on the inside cover page of this Official Statement. The Series 2019A Bonds will be issued in denominations of \$5,000 principal amount or any integral multiple thereof. The Series 2019A Bonds will be dated, and shall bear interest from, their date of delivery. Interest on the Series 2019A Bonds is payable on each June 1 and December 1, commencing on December 1, 2019, and will be computed on the basis of a 360-day year of twelve 30-day months. The Series 2019A Bonds will be issued as fully registered bonds in book-entry form only and when delivered will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"), which will act as securities depository for the Series 2019A Bonds. So long as DTC, or its nominee, Cede & Co., is the registered owner of the Series 2019A Bonds, all payments of principal or redemption price of, and interest on, the Series 2019A Bonds will be made directly to DTC, which is obligated in turn to remit such principal or redemption price and interest to its DTC participants for subsequent disbursement to the beneficial owners of the Series 2019A Bonds. See APPENDIX E – "DTC AND THE BOOK-ENTRY ONLY SYSTEM."

Redemption

Optional Redemption. The Series 2019A Bonds maturing on or before June 1, 20__ are not subject to optional redemption prior to maturity. The Series 2019A Bonds maturing on and after June 1, 20__ are subject to redemption prior to their respective stated maturities, at the option of the District, from any source of available funds, as a whole or in part on any date (by such maturities as may be specified by the District and by lot within a maturity), on or after _____, at a redemption price equal to the principal amount of Series 2019A Bonds called for redemption, plus accrued interest to the date fixed for redemption, without premium.

Mandatory Redemption. The Series 2019A Bonds maturing on June 1, 20__ are subject to redemption prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments as specified below, commencing on June 1, 20__, at the principal amount of each Series 2019A Bond so redeemed plus accrued interest thereon to but not including the date fixed for redemption, without premium.

Term Series 2019A Bonds due June 1, _____

<i>Mandatory Sinking Account Payment Dates (June 1)</i>	<i>Mandatory Sinking Account Payments</i>
	\$

[†] Final Maturity.

The Series 2019A Bonds maturing on June 1, 20__ are subject to redemption prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments as specified below, commencing on June 1, 20__, at the principal amount of each Series 2019A Bond so redeemed plus accrued interest thereon to but not including the date fixed for redemption, without premium.

Term Series 2019A Bonds due June 1, _____

<i>Mandatory Sinking Account Payment Dates (June 1)</i>	<i>Mandatory Sinking Account Payments</i>
	\$

[†] Final Maturity.

Upon an optional redemption of a portion of any term Series 2019A Bond, the District shall provide the Trustee with a revised schedule of the foregoing Mandatory Sinking Account Payments which shall provide for a reduction in the amount of one or more of the Mandatory Sinking Account Payments coming due on such term Series 2019A Bond after such redemption as specified by the District in such schedule to reflect such redeemed portion.

Notice of Redemption. Notice of redemption of the Series 2019A Bonds shall be given by the Trustee, not less than 20 nor more than 60 days prior to the redemption date, to DTC by electronic means of communication or by first-class mail or, if the book-entry system as described in Appendix E has been discontinued, to the respective Owners of any Series 2019A Bonds designated for redemption at their addresses appearing on the bond registration books of the Trustee by first-class mail, and to EMMA by electronic means of communication, or to such other securities depositories or information services as the District may designate in a Request of the District delivered to the Trustee. Such notice of redemption will state, among other things, the date of issue of the Series 2019A Bonds to which such notice relates, the redemption date, the Redemption Price and in the case of Series 2019A Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed, and shall be given in the form and otherwise in accordance with the terms of the Indenture. Failure by any Owner to receive notice or any defect in any such notice shall not affect the sufficiency of the proceedings for redemption.

In the event of an optional redemption of Series 2019A Bonds, if the District shall not have deposited or otherwise made available to the Trustee the money required for the payment of the

redemption price of the Series 2019A Bonds to be redeemed at the time of the mailing of notice of redemption, such notice of redemption shall state that the redemption is expressly conditioned upon the timely deposit of sufficient funds therefor with the Trustee.

Selection of Bonds for Redemption. Whenever provision is made in the Indenture for the redemption of less than all of the Series 2019A Bonds, the maturities of the Series 2019A Bonds to be redeemed shall be specified by the District. In the case of partial redemption of less than all of the Series 2019A Bonds of any maturity, the Trustee will select the Series 2019A Bonds of such maturity to be redeemed from all Series 2019A Bonds of the respective maturity not previously called for redemption, in authorized denominations, by lot, in any manner which the Trustee in its sole discretion deems appropriate and fair.

Effect of Redemption. If notice of redemption is given as provided in the Indenture, and moneys for payment of the Redemption Price of, together with interest accrued to the redemption date on, the Series 2019A Bonds (or portions thereof) so called for redemption is held by the Trustee, then on the redemption date designated in such notice, the Series 2019A Bonds (or portions thereof) so called for redemption will become due and payable at the Redemption Price specified in the notice of redemption, together with interest accrued thereon to the date fixed for redemption, interest on such Series 2019A Bonds so called for redemption will cease to accrue, the Series 2019A Bonds (or portions thereof) will cease to be entitled to any benefit or security under the Indenture and the owners of the Series 2019A Bonds (or portions thereof) will have no rights in respect thereof except to receive payment of the Redemption Price plus accrued interest.

SECURITY FOR THE SERIES 2019A BONDS

General

Authority for Issuance. The Series 2019A Bonds are authorized for issuance pursuant to the Municipal Utility District Act and laws of the State amendatory thereof or supplemental thereto, including the Revenue Bond Law of 1941, as made applicable by Article 6a of Chapter 6 of Division 6 of the Municipal Utility District Act (collectively, the “Act”), resolutions adopted by the District and the Indenture.

Amendments to the Indenture. The Sixteenth Supplemental Indenture includes a number of amendments to the Indenture in the manner and effective as of the date described under “AMENDMENTS TO THE INDENTURE.” See also APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Pledge of Subordinated Water Revenues

Pursuant to the Indenture, the District has irrevocably pledged to the payment of the principal or redemption price of and interest on the Water System Revenue Bonds, including the Series 2019A Bonds and any Parity Debt, all Subordinated Water Revenues (as hereinafter defined) and amounts held by the Trustee under the Indenture (except for amounts held in the Rebate Fund) subject only to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein.

“Subordinated Water Revenues” is generally defined in the Indenture to mean, for any fiscal period, the sum of (a) all charges received for, and all other income and receipts derived by the District from, the operation of the Water System or arising from the Water System, together with income from the investment of any moneys in any fund or account established under the Senior Water Bond Resolution relating to the District’s Senior Water Bonds or under the Indenture (collectively, the “Water Revenues”)

for such fiscal period, plus (b) the amounts, if any, withdrawn by the District from the Rate Stabilization Fund established under the Senior Water Bond Resolution for treatment as Water Revenues for such fiscal period, less the sum of (c) all Water Operation and Maintenance Costs (as hereinafter defined) for such fiscal period, (d) the amounts, if any, withdrawn by the District from Water Revenues for such fiscal period for deposit in the Rate Stabilization Fund, and (e) all amounts required to be paid under the Senior Water Bond Resolution for principal, interest, reserve fund and any other debt service requirements on the Senior Water Bonds as the same become due and payable. **There are no Senior Water Bonds currently outstanding and the District has covenanted pursuant to the Eighteenth Supplemental Indenture that it will not issue any Senior Water Bonds in the future.** See “– Outstanding Water System Revenue Obligations – *No Senior Water Bonds*” below.

The District may deposit into, or withdraw amounts from time to time held in, the Rate Stabilization Fund within 120 days after the end of the applicable Fiscal Year. Amounts deposited into the Rate Stabilization Fund shall be deducted from Water Revenues for such Fiscal Year. Amounts withdrawn from the Rate Stabilization Fund shall be included in Water Revenues for such Fiscal Year and may be applied for any purposes for which Water Revenues generally are available. All interest and earnings upon deposits in the Rate Stabilization Fund will not be held therein, but will be treated and accounted for as Water Revenues. The amount on deposit in the Rate Stabilization Fund as of June 10, 2019 was \$95,000,000.

“Water Operation and Maintenance Costs” is generally defined in the Indenture to mean the reasonable and necessary costs of maintaining and operating the Water System, calculated on sound accounting principles, including (among other things) the reasonable expenses of management, repair and other expenses necessary to maintain and preserve the Water System in good repair and working order, and reasonable amounts for administration, overhead, insurance, taxes and other similar costs, but excluding in all cases depreciation and obsolescence charges or reserves therefor and amortization of intangibles or other bookkeeping entries of a similar nature, and excluding all costs paid from the proceeds of taxes received by the District.

“Parity Debt” means any indebtedness, installment sale obligation, lease obligation or other obligation of the District for borrowed money or interest rate swap agreement having an equal lien and charge upon the Subordinated Water Revenues and therefore payable on a parity with the Water System Revenue Bonds (whether or not any Water System Revenue Bonds are Outstanding).

The Series 2019A Bonds are not payable from or secured by the revenues of the Wastewater System of the District.

The Series 2019A Bonds are special obligations of the District, payable solely from and secured by a pledge of Subordinated Water Revenues. Neither the full faith and credit nor the taxing power of the District is pledged to the payment of the Series 2019A Bonds or the interest thereon.

Allocation of Subordinated Water Revenues Under the Indenture

In accordance with the Indenture, all Subordinated Water Revenues, when and as received by the District, shall be deposited into a fund to be established and maintained by the District designated as the “Revenue Fund.” So long as any Water System Revenue Bonds are Outstanding, the District will transfer the moneys in the Revenue Fund into the following respective funds (established, maintained and held by the Trustee in trust for the benefit of the Owners of the Water System Revenue Bonds) in the following order of priority; provided, that on a parity with such deposits the Trustee may set aside or transfer amounts with respect to outstanding Parity Debt as provided in the proceedings for such Parity Debt (which deposits shall be proportionate in the event such amounts are insufficient to provide for all

deposits required as of any date to be made with respect to the Water System Revenue Bonds and such Parity Debt):

Interest Fund. The District will transfer to the Trustee to be set aside in the Interest Fund on or before the Business Day prior to each interest payment date an amount equal to the interest becoming due and payable on the Outstanding Water System Revenue Bonds (excluding any interest for which there are moneys on deposit in the Interest Fund from the proceeds of any Series of Water System Revenue Bonds or other source to pay such interest).

Principal Fund; Sinking Accounts. The District shall transfer to the Trustee to be set aside in the Principal Fund on or before the Business Day prior to each principal or sinking account payment date an amount equal to the amount of Bond Obligation (as defined in the Indenture) plus the Mandatory Sinking Account Payments becoming due and payable on such date. All Mandatory Sinking Account Payments shall be made without priority of any payment into any one such sinking account over any other such payment.

Bond Reserve Funds. Upon the occurrence of any deficiency in any bond reserve fund established pursuant to the Indenture for any Series of Water System Revenue Bonds, the District shall transfer to the Trustee and the Trustee shall set aside in such bond reserve fund an amount equal to the aggregate amount of each unreplenished prior withdrawal from such bond reserve fund until there is on deposit in such bond reserve fund an amount equal to the respective reserve requirement for such bond reserve fund. There is no bond reserve fund being established in connection with the Series 2019A Bonds. See “– No Bond Reserve Fund for Series 2019A Bonds” below.

The requirements of each such fund (including the making up of any deficiencies in any such fund resulting from a lack of Subordinated Water Revenues sufficient to make any earlier required deposit) at the time of deposit is to be satisfied before any deposit is made to any other fund subsequent in priority. The Indenture provides that any Subordinated Water Revenues remaining in the Revenue Fund after the foregoing transfers, except as otherwise provided in a Supplemental Indenture, shall be held free and clear of the Indenture by the District. The District may use and apply such Subordinated Water Revenues for any lawful purpose of the District, including the redemption of Water System Revenue Bonds upon the terms and conditions set forth in a Supplemental Indenture relating to such Water System Revenue Bonds and the purchase of Water System Revenue Bonds as and when and at such prices as it may determine.

Under the Indenture the District may enter into an interest rate swap agreement corresponding to the interest rate or rates payable on a Series of Water System Revenue Bonds or any portion thereof and the amounts received by the District or the Trustee, if any, pursuant to such an interest rate swap agreement may be applied to the deposits required under the Indenture. If the District so designates, amounts payable under the interest rate swap agreement shall be secured by Subordinated Water Revenues and other assets pledged under the Indenture to the Water System Revenue Bonds on a parity basis therewith.

For further information regarding the allocation of Subordinated Water Revenues with respect to the Water System Revenue Bonds, see APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Allocation of Subordinated Water Revenues.”

No Bond Reserve Fund for Series 2019A Bonds

There is no bond reserve fund being established in connection with the Series 2019A Bonds and amounts on deposit in any bond reserve fund for any other Series of Water System Revenue Bonds are not available for the payment of, and do not in any manner secure, the Series 2019A Bonds.

Rate Covenant

The District has covenanted under the Indenture that it will, at all times while any of the Water System Revenue Bonds remain Outstanding, fix, prescribe and collect rates, fees and charges in connection with the services and facilities furnished by the Water System so as to yield Water Revenues in each Fiscal Year sufficient so that the Subordinated Water Revenues for such year shall be at least equal to 1.1 times the amount of Debt Service on all Water System Revenue Bonds and Parity Debt for such Fiscal Year. See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Certain Definitions” for the definition of Debt Service under the Indenture. See also “AMENDMENTS TO THE INDENTURE.”

Outstanding Water System Revenue Obligations

No Senior Water Bonds. Pursuant to Resolution No. 30050 adopted by the Board of Directors of the District on January 26, 1982 (as amended and supplemented, the “Senior Water Bond Resolution”), the District authorized the issuance, from time to time, of bonds of the District designated as “East Bay Municipal Utility District Water System Revenue Bonds” (the “Senior Water Bonds”) and secured by a pledge of, and first lien on, the Net Revenues (as defined in the Senior Water Bond Resolution) of the District’s Water System, generally being all of the Water Revenues (adjusted for deposits to and withdrawals from the Rate Stabilization Fund) after payment of Water Operation and Maintenance Costs thereof, all on the terms and conditions set forth in the Senior Water Bond Resolution. At the time of the initial execution and delivery of the Indenture in 1990, the Indenture did not preclude the District from issuing additional Senior Water Bonds pursuant to the Senior Water Bond Resolution. The District last issued Senior Water Bonds in 1986 and all outstanding Senior Water Bonds were retired in 1997. **There are currently no Senior Water Bonds outstanding. Pursuant to the Eighteenth Supplemental Indenture, the District has covenanted and agreed that it will not issue any Senior Water Bonds in the future pursuant to the Senior Water Bond Resolution.**

Outstanding Water System Revenue Bonds and Parity Debt. As of June 10, 2019, the District had Outstanding \$2,299,805,000 aggregate principal amount of Water System Revenue Bonds (collectively, the “Outstanding Water System Revenue Bonds”) issued under and pursuant to the Indenture. The District’s Outstanding Water System Revenue Bonds include fixed rate bonds (a portion of which are “Build America Bonds”) and variable rate demand obligations which are currently in a weekly mode during which the per annum interest rate thereon is re-set weekly (the “Weekly Rate Bonds”). See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Outstanding Debt.”

\$105,250,000 principal amount of the District’s variable rate Outstanding Water System Revenue Bonds are Weekly Rate Bonds. The Weekly Rate Bonds are subject to tender prior to maturity, including optional tender by the owners thereof upon seven days’ notice. The District has entered into liquidity agreements with various banks to provide liquidity facilities for such variable rate Outstanding Water System Revenue Bonds that are Weekly Rate Bonds. The obligation of the District to repay any draws on such liquidity facilities is payable on a parity with the Outstanding Water System Revenue Bonds to the extent such repayment is not thereafter provided from remarketing proceeds of the related Outstanding Water System Revenue Bonds. Unreimbursed draws under liquidity facilities supporting such variable rate Outstanding Water System Revenue Bonds bear interest at a maximum rate that may be substantially in excess of the current interest rate on the related variable rate Outstanding Water System Revenue Bonds. Moreover, in certain circumstances, the failure to reimburse draws on the liquidity facilities may result in the acceleration of the scheduled payment of principal on such variable rate Outstanding Water System Revenue Bonds. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Variable Rate and Swap Obligations” for additional information regarding the liquidity providers, the principal amount of Outstanding Water

System Revenue Bonds covered under each such liquidity facility, the expiration date of each of such liquidity facilities and certain of the terms thereof.

The District's \$400,000,000 fixed rate Outstanding Water System Revenue Bonds, Series 2010B were issued as "Build America Bonds" that are "qualified bonds" under the provisions of the American Recovery and Reinvestment Act of 2009. The interest subsidy payments the District receives as reimbursement for interest on such Build America Bonds pursuant to Section 54AA of the Code (referred to herein as "BABs Interest Subsidy Payments") are currently treated as Water Revenues for purposes of the Indenture. From and after the effective date of the amendments to the Indenture pursuant to the Sixteenth Supplemental Indenture (see "AMENDMENTS TO THE INDENTURE"), for the purpose of calculating Debt Service, Annual Debt Service and Maximum Annual Debt Service under the Indenture (as amended by the Sixteenth Supplemental Indenture), to the extent interest on such Build America Bonds is reasonably anticipated to be reimbursed to the District by the United States of America pursuant to Section 54AA of the Code, or any future similar program, then in making such calculations, interest payments with respect to the Build America Bonds will be reduced by the amount of such interest reasonably anticipated to be paid or reimbursed by the United States of America.

Pursuant to Federal sequestration legislation passed by Congress in 2011 and 2013, Federal subsidy payments for direct-pay bonds, including Build America Bonds, have been reduced (by formula) from the original funding subsidy level of 35% of interest costs on direct-pay bonds, including Build America Bonds. The sequestration reduction rate of the Federal subsidy payment for Build America Bonds is 6.2% for the Federal government's fiscal year 2019 (which began on October 1, 2018 and ends on September 30, 2019), and this means that BABs Interest Subsidy Payments sought by the District for its Build America Bonds will be reduced by this percentage. This reduction will increase the District's net interest cost. The percentage reduction is re-determined for each Federal fiscal year. At present, pursuant to Federal legislation, sequestration will continue through fiscal year 2027. The District can give no assurance regarding the level of subsidy payments or changes in the sequestration rate, if any, in the future, or whether Congress will adopt legislation in the future that will further reduce subsidy payments for direct-pay bonds, including Build America Bonds. Under the Indenture, the District is obligated to make all interest payments on the Water System Revenue Bonds without regard to the receipt of any federal BABs Interest Subsidy Payments by the District.

In addition to the Outstanding Water System Revenue Bonds, the District has outstanding loans with the State of California's State Water Resources Control Board and the Department of Water Resources and certain interest rate swap agreements the scheduled payments under which are payable from Subordinated Water Revenues on a parity with the Water System Revenue Bonds, as described below. See "*Interest Rate Swap Agreements*" and "*Parity State Loans*" below. The Outstanding Water System Revenue Bonds, together with any additional Water System Revenue Bonds issued under the Indenture (including the Series 2019A Bonds), and any Parity Debt heretofore or hereafter issued or incurred in accordance with the Indenture, are on a parity as to the pledge of and lien on Subordinated Water Revenues.

Interest Rate Swap Agreements. As of June 10, 2019, the District had outstanding interest rate swap agreements relating to Outstanding variable rate Water System Revenue Bonds (hereinafter collectively, the "Water Interest Rate Swap Agreements") with various counterparties (collectively, the "Swap Providers") in the aggregate notional amount of \$105,250,000. The Water Interest Rate Swap Agreements were entered into to hedge the interest rate exposure on the related variable rate Water System Revenue Bonds by synthetically converting the variable interest rate payments that the District is obligated to make with respect to the related Water System Revenue Bonds into substantially fixed payments. In general, the terms of the Water Interest Rate Swap Agreements provide that, on a same-day net-payment basis determined by reference to a notional amount, the District will pay a fixed interest rate

on the respective notional amount. In return, the applicable Swap Provider will pay a variable rate of interest (determined as a specified percentage of an interest rate index) on a like notional amount.

There is no guarantee that the floating rate payable to the District pursuant to each of the Water Interest Rate Swap Agreements will match the variable interest rate on the associated Water System Revenue Bonds to which the respective Water Interest Rate Swap Agreement relates at all times or at any time. Since the respective effective dates of the Water Interest Rate Swap Agreements, the floating rates payable to the District pursuant to the Water Interest Rate Swap Agreements have generally not matched the variable interest rates on the associated Water System Revenue Bonds. To the extent that the Swap Providers are obligated to make a payment to the District under their respective Water Interest Rate Swap Agreement that is less than the interest due on the associated Water System Revenue Bonds to which such Water Interest Rate Swap Agreement relates, the District is obligated to pay such insufficiency from Subordinated Water Revenues.

The obligation of the District to make regularly scheduled payments to the Swap Providers under the respective Water Interest Rate Swap Agreements is on a parity with the District's obligation to make payments on the Water System Revenue Bonds, including the Series 2019A Bonds. Under certain circumstances, the Water Interest Rate Swap Agreements may be terminated and the District may be required to make a substantial termination payment to the respective Swap Providers. Pursuant to the Water Interest Rate Swap Agreements, any such termination payment owed by the District would be payable on a basis that is subordinate to the Series 2019A Bonds but prior to the District's Commercial Paper Notes (Water Series) and Extendable Municipal Commercial Paper Notes (Water Series), if any.

Pursuant to the terms of certain of the Water Interest Rate Swap Agreements, the District is required to post collateral in favor of a counterparty to the extent that the District's total exposure for termination payments to that counterparty exceeds the threshold amount specified in the applicable Water Interest Rate Swap Agreement.

See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Variable Rate and Swap Obligations" for additional information regarding the Water Interest Rate Swap Agreements, including the District's collateral posting obligations in connection therewith.

The District may, from time-to-time, enter into additional interest rate swap agreements with security and payment provisions as determined by the District and subject to any conditions contained in the Indenture.

Parity State Loans. The District participates in the Safe Drinking Water State Revolving Fund and Clean Water State Revolving Fund loan programs administered by the State Water Resources Control Board (the "SWRCB"), which were established to provide below-market rate financing for qualified water resource projects in the State. Loan contracts under these programs ("State Loans") are provided on a project-by-project basis. State Loans under the current SWRCB State Loan programs generally provide for up to 30-year amortizing loan terms which commence one year following project completion and an interest rate on each State Loan that is equal to one-half of the interest rate on the most recent issue of State general obligation bonds at the time the State Loan is entered into. Under the terms of the programs, State Loans are generally required to be either senior to or on parity with all future debt of the borrower. The District, from time to time, applies to the SWRCB for State Loans to finance certain capital projects of the District. State Loan program moneys under executed loan contracts with the SWRCB for approved projects are disbursed to the District on a cost-incurred basis pursuant to disbursement requests submitted by the District. Under these programs, as of June 10, 2019, the District had outstanding borrowings under existing State Loans aggregating approximately \$13,006,000. The State Loan commitment amounts under certain of these State Loans not yet disbursed total an additional approximately \$34,728,000. Borrowings

under each of the District's outstanding State Loans are treated by the District as Parity Debt under the Indenture for purposes of calculating debt service coverage ratios. Any future State Loans received by the District would likely constitute Parity Debt under the Indenture. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Parity State Loans" for additional information regarding the terms of the District's outstanding State Loans.

Subordinate Commercial Paper. The District maintains two commercial paper note programs. Under the District's traditional commercial paper program, commercial paper notes may be issued at prevailing interest rates for periods of not more than 270 days from the date of issuance. In connection with its traditional commercial paper program, the District has covenanted to procure and maintain in effect for any series or subseries of commercial paper notes issued thereunder one or more liquidity facilities enabling it to borrow an aggregate amount at least equal to the principal amount of such series or subseries of commercial paper notes. As of June 10, 2019, the District had outstanding \$359,800,000 aggregate principal amount of tax-exempt Commercial Paper Notes (Water Series) issued for the benefit of the Water System under the District's traditional commercial paper program. Under the extendable municipal commercial paper program, commercial paper may be issued at prevailing interest rates for periods of not more than 120 days from the date of issuance with the option by the District to extend the maturity for another 150 days. The extendable municipal commercial paper program is not supported by any liquidity or revolving credit agreement. As of June 10, 2019, the District had outstanding no Extendable Municipal Commercial Paper Notes (Water Series) issued for the benefit of the Water System under the District's extendable municipal commercial paper program. Commercial paper notes issued for the benefit of the Water System under either such program (and the District's repayment obligation for amounts borrowed, if any, under any applicable liquidity facility therefor), are payable from and secured by a pledge of Water Revenues on a basis subordinate to the Water System Revenue Bonds and Parity Debt. See also APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Outstanding Debt" and "– Subordinate Commercial Paper Programs" for additional information regarding the District's authorized commercial paper note programs.

Issuance of Additional Water System Revenue Bonds and Parity Debt; Junior and Subordinate Obligations

The Indenture provides conditions under which additional Series of Water System Revenue Bonds or other Parity Debt payable from Subordinated Water Revenues may be issued on a parity with the Outstanding Water System Revenue Bonds. Among other conditions, the Indenture requires that the District shall have placed on file with the Trustee a certificate of the District certifying that the sum of: (1) the Subordinated Water Revenues for any period of 12 consecutive months during the 18 months immediately preceding the date on which such additional Water System Revenue Bonds or Parity Debt will become Outstanding; plus (2) 90% of the amount by which the District projects Subordinated Water Revenues for such period of 12 months would have been increased had increases in rates, fees and charges during such period of 12 months been in effect throughout such period of 12 months; plus (3) 75% of the amount by which the District projects Subordinated Water Revenues will increase during the period of 12 months commencing on the date of issuance of such additional Series of Water System Revenue Bonds due to improvements to the Water System under construction (financed from any source) or to be financed with the proceeds of such additional Series of Water System Revenue Bonds, shall have been at least equal to 1.1 times the amount of Maximum Annual Debt Service on all Water System Revenue Bonds and Parity Debt then Outstanding and the additional Water System Revenue Bonds or Parity Debt then proposed to be issued. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Certain Definitions" for the definition of Maximum Annual Debt Service and Debt Service under the Indenture. See also "AMENDMENTS TO THE INDENTURE."

Refunding Water System Revenue Bonds may be authorized and issued by the District without compliance with the provisions described above, subject to the terms and conditions of the Indenture, including the condition that Maximum Annual Debt Service on all Water System Revenue Bonds and Parity Debt outstanding following the issuance of such refunding Water System Revenue Bonds is less than or equal to Maximum Annual Debt Service on all Water System Revenue Bonds and Parity Debt outstanding prior to the issuance of such refunding Water System Revenue Bonds. See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Refunding Bonds.”

Pursuant to the Indenture, the District may incur obligations which are junior and subordinate to the payment of the principal, redemption price, interest and reserve fund requirements for the Water System Revenue Bonds and all Parity Debt and which subordinated obligations are payable as to principal, redemption price, interest and reserve fund requirements, if any, only out of Subordinated Water Revenues after the prior payment of all amounts then required to be paid under the Indenture from Subordinated Water Revenues for principal, redemption price, interest and reserve fund requirements for the Water System Revenue Bonds and all Parity Debt, as the same become due and payable and at the times and in the manner as required in the Indenture or the instrument authorizing such Parity Debt, as applicable.

Investment of Moneys in Funds and Accounts Under the Indenture

All moneys held in any of the funds and accounts held by the Trustee and established pursuant to the Indenture shall be invested, as directed by the District, solely in Investment Securities (see APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Certain Definitions” for the definition of Investment Securities under the Indenture). If and to the extent the Trustee does not receive investment instructions from the District with respect to the moneys in such funds and accounts, such moneys shall be invested in a cash sweep or similar account arrangement of or available to the Trustee described in clause (xi) of the definition of Investment Securities.

Unless otherwise provided in a Supplemental Indenture, all interest, profits and other income received from the investment of moneys in any fund or account other than the Rebate Fund shall be transferred to the Revenue Fund when received; provided, however, that an amount of interest received with respect to any Investment Security equal to the amount of accrued interest, if any, paid as part of the purchase price of such Investment Security shall be credited to the fund or account from which such accrued interest was paid.

Limitations on Remedies

The ability of the District to comply with its covenants under the Indenture and to generate Water Revenues sufficient to pay the principal of and interest on the Series 2019A Bonds may be adversely affected by actions and events outside of the control of the District. Furthermore, any remedies available to the owners of the Series 2019A Bonds upon the occurrence of an event of default under the Indenture are in many respects dependent upon judicial actions which are often subject to discretion and delay and could prove both expensive and time consuming to obtain. In addition, enforceability of the rights and remedies of the owners of the Series 2019A Bonds, and the obligations incurred by the District under the Series 2019A Bonds and the Indenture, may become subject to the following: the federal Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws relating to or affecting the enforcement of creditor’s rights generally, now or hereafter in effect; equity principles which may limit the specific enforcement under State law of certain remedies; the exercise by the United States of America of the powers delegated to it by the Constitution; and the reasonable and necessary exercise, in certain exceptional situations, of the police powers inherent in the sovereignty of the State and its governmental bodies in the interest of serving a significant and legitimate public purpose. Bankruptcy proceedings, or the exercise of powers by the federal or State government, if initiated, could subject the

owners of the Series 2019A Bonds to judicial discretion and interpretation of their rights in bankruptcy or otherwise, and consequently may entail risks of delay, limitation, or modification of their rights.

See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Events of Default; Remedies” for additional information regarding events of default under the Indenture and the remedies available to owners of the Bonds pursuant to the terms thereof.

AMENDMENTS TO THE INDENTURE

The Sixteenth Supplemental Indenture includes a number of amendments to the Indenture (as described below) which will become effective upon the earlier to occur of: (i) the first date upon which all of the now Outstanding Series 2008A Bonds have been paid or discharged in accordance with their terms and shall no longer be Outstanding for purposes of the Indenture and all obligations of the District under any interest rate swap agreements and any standby bond purchase agreements or other liquidity facilities relating thereto shall have been discharged and satisfied, or (ii) the first date upon which the District has filed with the Trustee the written consents to the amendments to the Indenture set forth in the Sixteenth Supplemental Indenture of (a) the Owners of a majority in aggregate principal amount of Bond Obligation then Outstanding and (b) the providers of any interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements relating to such Bond Obligation then Outstanding to the extent the consent thereof shall be required by the terms of such interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements.

As modified, the term “Annual Debt Service” shall mean, for any Fiscal Year, the aggregate amount of principal and interest on all Water Bonds, Bonds and Parity Debt becoming due and payable during such Fiscal Year calculated using the principles and assumptions set forth under the definition of Debt Service.

As modified, the term “Assumed Debt Service” shall mean for any Fiscal Year, the aggregate amount of principal and interest which would be payable on all Water Bonds, Bonds and Parity Debt if each Excluded Principal Payment were amortized for a period specified by the District (but no longer than thirty (30) years from the date of the issuance of the Water Bonds, Bonds or Parity Debt to which such Excluded Principal Payment relates) on a substantially level debt service basis or other amortization basis provided by the District, calculated based on a fixed interest rate equal to the rate at which the District could borrow for such period, as certified by a certificate of a financial advisor or investment banker delivered to the Trustee, who may rely conclusively on such certificate, within thirty (30) days of the date of calculation.

As modified, the term “Debt Service” shall mean the amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt provided, however, that for the purpose of computing Debt Service:

(a) Excluded Principal Payments shall be excluded from such calculation and Assumed Debt Service shall be included in such calculation;

(b) if the Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness, the interest rate thereon for periods when the actual interest rate cannot yet be determined shall be assumed to be equal to the average of the SIFMA Municipal Swap Index for the five (5) years preceding such date of calculation (provided, however, that if such index is no longer published, the interest rate on such Water Bonds, Bonds or Parity Debt shall be calculated based upon such similar index as the District shall designate in writing to the Trustee) (the “Assumed SIFMA-based Rate”);

(c) principal and interest payments on Water Bonds, Bonds and Parity Debt shall be excluded to the extent such payments are to be paid from amounts on deposit with the Trustee or another fiduciary in escrow or trust specifically therefor and to the extent that such interest payments are to be paid from the proceeds of Water Bonds, Bonds or Parity Debt held by the Trustee or another fiduciary as capitalized interest;

(d) in determining the principal amount, payment shall (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including any Mandatory Sinking Account Payments or any scheduled redemption or payment of Water Bonds, Bonds or Parity Debt on the basis of Accreted Value, and for such purpose, the redemption payment or payment of Accreted Value shall be deemed a principal payment and interest that is compounded and paid as Accreted Value shall be deemed due on the scheduled redemption or payment date of such Capital Appreciation Indebtedness;

(e) if any interest rate swap agreement is in effect with respect to, and the regularly scheduled payments thereunder are payable on a parity with, the Water Bonds, Bonds or Parity Debt to which it relates, interest deemed to be payable on any such Water Bonds, Bonds or Parity Debt with respect to which an interest rate swap agreement is in effect shall be based on the net economic effect expected by the District to be produced by the terms of such Water Bonds, Bonds or Parity Debt and such interest rate swap agreement, including but not limited to the effects that (i) such Water Bonds, Bonds or Parity Debt would, but for such interest rate swap agreement, be treated as Variable Rate Indebtedness instead shall be treated as Water Bonds, Bonds or Parity Debt bearing interest at a fixed interest rate, and (ii) such Water Bonds, Bonds or Parity Debt would, but for such interest rate swap agreement, be treated as Water Bonds, Bonds or Parity Debt bearing interest at a fixed interest rate instead shall be treated as Variable Rate Indebtedness; and accordingly, the amount of interest deemed to be payable on any Water Bonds, Bonds or Parity Debt with respect to which an interest rate swap agreement is in force shall be an amount equal to the amount of interest that would be payable at the rate or rates stated in such Water Bonds, Bonds or Parity Debt plus the amounts payable by the District under such interest rate swap agreement, minus the amounts receivable by the District under such interest rate swap agreement, and for the purpose of calculating as nearly as practicable such amounts, the following assumptions shall be made:

(1) if an interest rate swap agreement has been entered into by the District with respect to Water Bonds, Bonds or Parity Debt providing for the payment of a net variable interest rate under such interest rate swap agreement with respect to such Water Bonds, Bonds or Parity Debt by the District, the interest rate on such Water Bonds, Bonds or Parity Debt for future periods when the actual interest rate cannot yet be determined shall be assumed (but only during the period the interest rate swap agreement is in effect) to be equal to the sum of (A) the fixed rate or rates stated in such Water Bonds, Bonds or Parity Debt minus (B) the fixed rate paid by the counterparty of such interest rate swap agreement to the District, plus (C) the lesser of (x) the interest rate cap, if any, provided by a counterparty with respect to such interest rate swap agreement (but only during the period that such interest rate cap is in effect) and (y) the applicable variable interest rate calculated in accordance with paragraph (b) above; and

(2) if an interest rate swap agreement has been entered into by the District with respect to Water Bonds, Bonds or Parity Debt providing for the payment of a fixed rate of interest to maturity or for a specific term under such interest rate swap agreement with respect to such Water Bonds, Bonds or Parity Debt by the District, the interest on such Water Bonds, Bonds or Parity Debt shall be included in the calculation of payments

(but only during the period the interest rate swap agreement is in effect) by including for each period of calculation an amount equal to the amount of interest payable at the fixed interest rate pursuant to such interest rate swap agreement.

Notwithstanding any other paragraph of this definition of Debt Service, except as set forth in this paragraph (e), no amounts payable under any interest rate swap agreement (including termination payments) shall be included in the calculation of Debt Service;

(f) if any Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness subject to tender for purchase and funds for the purchase price may be provided by a letter of credit, line of credit, revolving credit agreement, standby bond purchase agreement or other liquidity facility which, if drawn upon, could create a repayment obligation which has a lien on Subordinated Water Revenues on parity with the lien of the Water Bonds, Bonds or Parity Debt, then for purposes of determining the amounts of principal due in any Fiscal Year on such Water Bonds, Bonds or Parity Debt, (i) the options or obligations of the owners of such Water Bonds, Bonds or Parity Debt to tender the same for purchase or payment prior to the stated maturity or maturities shall be ignored and not treated as a principal maturity; and (ii) any repayment obligations of the District to the provider of such letter of credit, line of credit, revolving credit agreement, standby bond purchase agreement or other liquidity facility, other than its obligations on such Water Bonds, Bonds or Parity Debt, shall be treated as Excluded Principal Payments; and

(g) if interest on any Water Bonds, Bonds or Parity Debt is reasonably anticipated to be reimbursed to the District by the United States of America pursuant to Section 54AA of the Code, or any future similar program, then interest payments with respect to such Water Bonds, Bonds or Parity Debt shall be reduced by the amount of such interest reasonably anticipated to be paid or reimbursed by the United States of America.

As modified, the term “Maximum Annual Debt Service” shall mean the greatest amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt in the Fiscal Year in which the calculation is made or any subsequent Fiscal Year calculated using the principles and assumptions set forth under the definition of Debt Service.

The term “SIFMA Municipal Swap Index” means, on any date, a rate determined on the basis of the seven-day high grade market index of tax-exempt variable rate demand obligations, as produced by Municipal Market Data and published or made available by the Securities Industry & Financial Markets Association (formerly the Bond Market Association) (“SIFMA”) or by any Person acting in cooperation with or under the sponsorship of SIFMA and effective from such date.

As modified, the term “Water Revenues” shall mean all charges received for, and all other income and receipts derived by the District from, the operation of the Water System, or arising from the Water System, together with income from the investment of any moneys in any fund or account established under the Senior Water Bond Resolution or the Indenture; provided, however, there shall be excluded therefrom any amounts reimbursed to the District by the United States of America pursuant to Section 54AA of the Code or any future similar program.

CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES

Tax Limitations – Proposition 13

Article XIII A of the State Constitution, known as Proposition 13, was approved by the voters in June 1978. Section 1(a) of Article XIII A limits the maximum *ad valorem* tax on real property to 1% of

“full cash value,” and provides that such tax shall be collected by the counties and apportioned according to State statutes. Section 1(b) of Article XIII A provides that the 1% limitation does not apply to *ad valorem* taxes levied to pay interest or redemption charges on (1) indebtedness approved by the voters prior to July 1, 1978, and (2) any bonded indebtedness for the acquisition or improvement of real property approved on or after July 1, 1978, by two-thirds of the votes cast by the voters voting on the proposition.

Section 2 of Article XIII A defines “full cash value” to mean the county assessor’s valuation of real property as shown on the 1975-76 Fiscal Year tax bill, or, thereafter, the appraised value of real property when purchased, newly constructed, or a change in ownership has occurred. The full cash value may be adjusted annually to reflect inflation at a rate not to exceed 2% per year, or to reflect a reduction in the consumer price index or comparable data for the taxing jurisdiction, or may be reduced in the event of declining property value caused by substantial damage, destruction or other factors. Legislation enacted by the State Legislature to implement Article XIII A provides that, notwithstanding any other law, local agencies may not levy any *ad valorem* property tax except to pay debt service on indebtedness approved by the voters as described above. Such legislation further provides that each county will levy the maximum tax permitted by Article XIII A, which is \$1.00 per \$100 of assessed market value. The legislation further establishes the method for allocating the taxes collected by each county among the taxing agencies in the county. Special districts, such as the District, receive an allocation that is based primarily upon their tax levies in certain years prior to the amendment’s effective date relative to the tax levies of other congruent agencies. The District receives approximately 1.25% of the non-debt service property taxes collected within its jurisdiction from Alameda and Contra Costa counties. See also APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Property Tax Revenues.”

Since its adoption, Article XIII A has been amended a number of times. These amendments have created a number of exceptions to the requirement that property be reassessed when purchased, newly constructed or a change in ownership has occurred. These exceptions include certain transfers of real property between family members, certain purchases of replacement dwellings for persons over age 55 and by property owners whose original property has been destroyed in a declared disaster, and certain improvements to accommodate disabled persons and for seismic upgrades to property. These amendments have resulted in marginal reductions in the property tax revenues of the District.

Increases of assessed valuation resulting from reappraisals of property due to new construction, change in ownership or from the 2% annual adjustment are allocated among the various jurisdictions in the “taxing area” based upon their respective “situation.” Any such allocation made to a local agency continues as part of its allocation in future years.

The effect of Article XIII A on the District’s finances has been to restrict *ad valorem* tax revenues for general purposes to the statutory allocation of the 1% levy while leaving intact the power to levy *ad valorem* taxes in whatever rate or amount may be required to pay debt service on its outstanding general obligation bonds and unissued bonds authorized prior to July 1, 1978. Since Fiscal Year 1978-79 tax revenues for the Water System have consisted exclusively of the District’s allocated share of the 1% county levy.

Both the California State Supreme Court and the United States Supreme Court have upheld the validity of Article XIII A.

For a description of the property tax collection procedure and certain statistical information concerning tax collections and delinquencies, see APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Property Tax Revenues.”

Spending Limitations

At the statewide special election of November 6, 1979, the voters approved an initiative entitled “Limitation of Government Appropriations” which added Article XIII B to the California Constitution. Under Article XIII B, State and local governmental entities have an annual “appropriations limit” which limits the ability to spend certain moneys which are called “appropriations subject to limitation” (consisting of tax revenues, state subventions and certain other funds) in an amount higher than the “appropriations.” Article XIII B does not affect the appropriation of moneys which are excluded from the definition of “appropriations subject to limitation.” Among the exclusions is an “appropriation of any special district which existed on January 1, 1978, and which did not as of the 1977-78 Fiscal Year levy an *ad valorem* tax on property in excess of 12.5 cents per \$100 of assessed value.” In the opinion of the District’s General Counsel, the appropriations of the District are excluded from the limitations of Article XIII B under this clause.

Proposition 62

A statutory initiative (“Proposition 62”) was adopted by the voters voting in the State at the November 4, 1986 General Election which (1) requires that any tax for general governmental purposes imposed by local governmental entities be approved by resolution or ordinance adopted by two-thirds vote of the governmental agency’s legislative body and by a majority of the electorate of the governmental entity, (2) requires that any special tax (defined as taxes levied for other than general governmental purposes) imposed by a local governmental entity be approved by a two-thirds vote of the voters within that jurisdiction, (3) restricts the use of revenues from a special tax to the purposes or for the service for which the special tax was imposed, (4) prohibits the imposition of *ad valorem* taxes on real property by local governmental entities except as permitted by Article XIII A, (5) prohibits the imposition of transaction taxes and sales taxes on the sale of real property by local governmental entities and (6) requires that any tax imposed by a local governmental entity on or after March 1, 1985 be ratified by a majority vote of the electorate within two years of the adoption of the initiative or be terminated by November 15, 1988.

Proposition 218

On November 5, 1996, the voters of the State approved Proposition 218, the so-called “Right to Vote on Taxes Act.” Proposition 218 added Articles XIII C and XIII D to the State Constitution, which contain a number of provisions affecting the ability of local governments to levy and collect both existing and future taxes, assessments, fees and charges.

Article XIII D. Article XIII D established procedural requirements for the imposition of “assessments” subject to its provisions, which are defined as any charge on real property for a special benefit conferred upon the real property. Standby charges are classified as assessments. Procedural requirements include the conducting of a public hearing and an election by mailed ballot, with notice to the record owner of each parcel subject to the assessment. The assessment may not be imposed if a majority of the ballots returned oppose the assessment, with each ballot weighted according to the proportional financial obligation of the affected parcel. The District does not currently impose standby charges or assessments for its Water System.

Article XIII D conditions the imposition or increase of any “fee” or “charge” subject to its provisions upon there being no written majority protest after a required public hearing and, for fees and charges other than for sewer, water or refuse collection services, voter approval. Article XIII D defines “fee” or “charge” to mean levies (other than *ad valorem* or special taxes or assessments) imposed by a local government upon a parcel or upon a person as an incident of the ownership or tenancy of real property, including a user fee or charge for a “property-related service.” One of the requirements of

Article XIID is that before a property-related fee or charge may be imposed or increased, a public hearing upon the proposed fee or charge must be held and notice must be mailed to the record owner of each identified parcel of land upon which the fee or charge is proposed for imposition. In the public hearing if written protests of the proposed fee or charge are presented by a majority of the owners of affected identified parcel(s), an agency may not impose the fee or charge.

The California Supreme Court decisions in *Richmond v. Shasta Community Services District*, 32 Cal. 4th 409 (2004) (“Richmond”), and *Bighorn Desert View Water Agency v. Verjil*, 39 Cal. 4th 206 (2006) (“Bighorn”) have clarified uncertainty surrounding the applicability of Section 6 of Article XIID to service fees and charges. In *Richmond*, the California Supreme Court upheld a Court of Appeal decision that water connection fees (which included a capacity charge for capital improvements to the water system and a fire suppression charge) imposed by the Shasta Community Services District were not property related fees or charges subject to Article XIID because a water connection fee results from the property owner’s voluntary decision to apply for the connection. In both *Richmond* and *Bighorn*, however, the Court stated that a fee for ongoing water service through an existing connection is imposed “as an incident of property ownership” within the meaning of Article XIID, rejecting, in *Bighorn*, the water agency’s argument that consumption based water charges are not imposed “as an incident of property ownership” but as a result of the voluntary decisions of customers as to how much water to use.

The District has followed the notice, hearing and protest procedures in Article XIID in connection with water rate increases since its Fiscal Year 2008 rate increases, and plans to follow such notice, hearing and protest procedures in connection with future rate increases.

In addition to the procedural requirements of Article XIID, under Article XIID all property-related fees and charges, including those which were in existence prior to the passage of Proposition 218 in November 1996, must meet the following substantive standards:

- (1) Revenues derived from the fee or charge cannot exceed the funds required to provide the property-related service.
- (2) Revenues derived from the fee or charge must not be used for any purpose other than that for which the fee or charge was imposed.
- (3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel.
- (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted. Standby charges, whether characterized as charges or assessments, must be classified as assessments and cannot be imposed without compliance with Section 4 of Article XIID (relating to assessments).
- (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services where the service is available to the public at large in substantially the same manner as it is to property owners.

On April 20, 2015, the California Fourth District Court of Appeal issued a decision in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano*, 235 Cal.App.4th 1493 (2015), holding that the City of San Juan Capistrano’s tiered water rates (or inclining block rates) that were in effect from February 1, 2010 through June 30, 2014 violated the requirement of Proposition 218 that a fee or charge for property-related services, such as water delivery, must be proportional to the cost of providing service.

In interpreting Proposition 218, the Court of Appeal emphasized that tiered water rates, or inclining block rates, that go up progressively in relation to usage are compatible with Proposition 218. However, the court concluded that Article XIID requires that each tier must reflect the actual costs of service for property owners falling in each of the tiers. The court further concluded that the city had the burden of proof to demonstrate compliance with Proposition 218 and that the city failed to meet its burden of proof in demonstrating that its tiered water rates corresponded to the actual costs of providing service to each tier. The Court of Appeal rejected the city's argument that the rates for its highest tiers constituted a penalty or a fine, which are excluded from Proposition 218. The court determined that deeming such rates to be penalties or fines would improperly circumvent Proposition 218 in that all an agency would need to do is establish a low base rate for service and then impose penalty rates for usage in excess of the base rate that have no relation to the cost of providing service at the penalty levels. On May 19, 2015, the City of San Juan Capistrano announced that the city and the San Juan Capistrano Taxpayers Association, Inc. had reached a settlement, under the terms of which the city agreed that it would not seek review by the California Supreme Court of the Appellate Court decision. In 2014, the city adopted a new water rate structure, including tiered rates with flatter tiers relative to its prior tiered water structure. The tiered water rates adopted by the city in 2014 were not the subject of the lawsuit. Similar water rate challenges under Proposition 218 have been reported to have been filed against other public agencies in California. The District is unable to predict the outcome of any such ongoing litigation or any future litigation under Proposition 218 that may follow.

It is District policy to conduct periodic cost of service studies and as part of the most recent study, completed in April 2015, the District focused efforts on developing a strong and clear administrative record for its rates and charges. The District believes that its established and proposed rates for water service comply with the substantive standards of Article XIID and do not exceed the proportional cost of providing water service at each given level of usage. However, due to the uncertainties of evolving case law and potential future judicial interpretations of Proposition 218, the District is unable to predict at this time whether Proposition 218 could be interpreted, for example, to further limit fees and charges for water services and/or to require stricter standards for the allocation of costs among customers and customer classes. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Rates and Charges.”

Article XIID further provides that nothing in Proposition 218 shall be construed to affect existing laws relating to the imposition of fees or charges as a condition of property development. The District believes that Proposition 218 does not apply to the District's System Capacity Charge, although there can be no assurance that a court would not determine otherwise. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – System Capacity Charge.”

Article XIIC. Article XIIC provides that the initiative power shall not be prohibited or otherwise limited in matters of reducing or repealing any local tax, assessment, fee or charge and that the power of initiative to affect local taxes, assessments, fees and charges shall be applicable to all local governments. Article XIIC does not define the terms “local tax,” “assessment,” “fee” or “charge.” On July 24, 2006, the California Supreme Court held in *Bighorn-Desert View Water Agency v. Verjil* that the provisions of Article XIIC applied to rates and fees charged for domestic water use. In the decision, the Court noted that the decision did not address whether an initiative to reduce fees and charges could override statutory rate setting obligations. The District and its General Counsel do not believe that Article XIIC grants to the voters within the District the power to repeal or reduce rates and charges in a manner that would be inconsistent with the contractual obligations of the District.

The interpretation and application of Proposition 218 will likely be subject to further judicial determinations, and the District is unable to predict the outcome of such determinations, or what, if any, further implementing legislation will be enacted. No assurance can be given that the courts will not

further interpret Article XIIC and Article XIID to limit the ability of the District to impose, levy, charge and collect increased fees and charges for water services, or the voters of the District will not, in the future, approve initiatives which seek to repeal, reduce or prohibit the future imposition or increase of assessments, fees or charges, including the District's water service fees and charges, which are the source of Subordinated Water Revenues pledged to the payment of debt service on the Series 2019A Bonds.

Proposition 26

Proposition 26, which amended Articles XIII A and XIIC of the California Constitution, was approved by the electorate at the November 2, 2010 election. Proposition 26 imposes a majority voter approval requirement on local governments such as the District with respect to certain fees and charges for general purposes, and a two-thirds voter approval requirement with respect to certain fees and charges for special purposes, unless the fees and charges are expressly excluded. Proposition 26, according to its supporters, was intended to prevent the circumvention of tax limitations imposed by the voters in California Constitution Articles XIII A, XIIC and XIID pursuant to Proposition 13, approved in 1978, Proposition 218, approved in 1996, and other measures. Proposition 26 expressly excludes from its scope "a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the local government of providing the service or product" and "assessments and property-related fees imposed in accordance with the provisions of Article XIID." As described above, the California Supreme Court has stated that fees and charges for ongoing water service through an existing connection are property related fees and charges under Article XIID. See "– Proposition 218" above. The District believes that its fees and charges meet the criteria for exclusion under Proposition 26 and that the initiative is not intended to, and would not, apply to fees for water deliveries and services charged by the District. The District is unable to predict, however, how Proposition 26 will be interpreted by the courts or what its ultimate impact will be.

Other Initiatives

Articles XIII A, XIII B, XIIC and XIID and Propositions 62 and 26 were adopted as measures that qualified for the ballot pursuant to California's initiative process. From time to time other initiatives have been and could be proposed and adopted affecting the District's revenues or ability to increase revenues. Neither the nature and impact of these measures nor the likelihood of qualification for ballot or passage can be anticipated by the District.

CERTAIN RISK FACTORS

This section provides a general overview of certain risk factors which should be considered, in addition to the other matters set forth in this Official Statement, in evaluating an investment in the Series 2019A Bonds. The ability of the District to pay principal of and interest on the Series 2019A Bonds depends primarily upon the District's receipt of Subordinated Water Revenues. Any one or more of the risk factors discussed below, among others, could adversely affect the ability of the District to realize Subordinated Water Revenues in amounts sufficient to satisfy the requirements of the Indenture and make timely payments of principal of or interest on the Series 2019A Bonds and/or lead to a decrease in the market price and/or in the marketability of the Series 2019A Bonds. The order in which this information is presented does not necessarily reflect the relative importance of various risks or the probability of their occurrence. Further, there can be no assurance that other risk factors not discussed herein will not become material and the District has not undertaken to update investors about the emergence of the risk factors in the future. This section is provided for convenience and is not meant to be a comprehensive or definitive discussion of all of the risks associated with an investment in the Series 2019A Bonds. Many of the risk factors identified below are more fully discussed elsewhere in this Official Statement. Potential investors are advised to read the entire Official Statement, including the appendices hereto, to obtain information essential to making an informed investment decision.

Limited Obligations; General

The Series 2019A Bonds are special limited obligations of the District payable solely from and secured solely by a pledge of Subordinated Water Revenues of the District. Neither the full faith and credit nor the taxing power of the District is pledged for the payment of the Series 2019A Bonds or the interest thereon. The Series 2019A Bonds are not secured by a legal or equitable pledge of, or charge, lien or encumbrance upon, any of the District's property or its income, receipts or revenues, except the Subordinated Water Revenues. See "SECURITY FOR THE SERIES 2019A BONDS."

The ability of the District to generate Subordinated Water Revenues in amounts sufficient to pay principal of and interest on the Series 2019A Bonds and all other Outstanding Water System Revenue Bonds and Parity Debt may be adversely affected by actions and events outside the control of the District. Among other matters, water supply and demand, general and local economic conditions and changes in law and government regulations (including initiatives and moratoriums on growth) could adversely affect the amount of Water Revenues that the District receives or significantly increase Water Operation and Maintenance Costs. Further, the realization of future Subordinated Water Revenues by the District is subject to, among other things, the capabilities of management of the District, the ability of the District to provide water to its customers, and the ability of the District to establish, maintain and collect rates and charges sufficient to pay for Water Operation and Maintenance Costs, debt service on Water System Revenue Bonds, and other obligations payable from such Water Revenues. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES."

No Bond Reserve Fund

No bond reserve fund has been established for the Series 2019A Bonds. Amounts on deposit in any bond reserve fund established with respect to any other Series of the District's Water System Revenue Bonds do not secure and are not available for the payment of the Series 2019A Bonds. See "SECURITY FOR THE SERIES 2019A BONDS."

Water Supply and Demand; Drought; Climate Change

The District's water supply and the availability thereof is impacted by, among other things, weather conditions. The State is situated in a semi-arid region and is subject to periodic drought. While the severe drought conditions that occurred in the State from 2012 through 2015 have ended, periodic drought conditions can be expected to occur in the future. The District plans for normal occurrences of drought and has developed long-term and dry-year supplies to maximize its ability to reliably deliver water to its customers and the community. Sustained drought conditions or continued low water levels, however, could adversely affect the District's water supply and impact Water Operation and Maintenance Costs and/or demand for water services from the Water System. If the District delivers less water to its customers, the District would need to increase water rates or charges or Water Revenues from water sales would decline. Similarly, to the extent the District acquires Supplemental Supply (as defined in Appendix A) from outside its normal watershed to deliver water to its customers, the District will be obligated to pay the additional costs associated with such Supplemental Supply, resulting in increased Water Operation and Maintenance Costs. The District has developed a comprehensive approach to drought response planning which includes managing the fiscal challenges posed by multi-year drought conditions. The District's adopted water rates and charges include a system of drought surcharges that may be implemented in the event of ongoing drought conditions. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Drought Management" and "–WATER SYSTEM FINANCES – Drought Surcharges."

One of the factors that may pose a risk to the availability of the District's Water Supply is climate change. Rising temperatures may result in decreased precipitation levels that could amplify the effects of drought conditions on water supply. Rising temperatures may also cause a reduction in Sierra Nevada snowmelt, a major source of water in California and the location of the Mokelumne River watershed, the District's primary water supply source. The District has incorporated climate change into its planning activities. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Climate Change."

Limitations on Rate-Setting

The generation of Subordinated Water Revenues sufficient to satisfy the requirements of the Indenture and to pay the principal of and interest on the Series 2019A Bonds and all other Water System Revenue Bonds and Parity Debt will require the District to periodically raise the water rates and charges payable by its customers. The increase or imposition of retail water rates is subject to various substantive and procedural requirements and limitations, including Proposition 218, which added Article XIII C and XIII D to the State Constitution. Proposition 218 further authorizes the exercise of the initiative power by voters to repeal or reduce water rate and charges. The District's recently adopted retail water rates for Fiscal Years 2020 and 2021 have been imposed in accordance with the notice, hearing and protest procedures provided for under Proposition 218. See "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES" and APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Rates and Charges."

Statutory and Regulatory Compliance

Laws and regulations governing treatment and delivery of drinking water are enacted and promulgated by federal, state and local government agencies. In the event the District were to fail to comply with applicable laws and regulations, significant fines and penalties could be imposed by such agencies. In addition to claims by private parties, changes in the scope and standards for public agency water systems such as the Water System may also lead to administrative orders issued by federal or State regulators. Compliance with new statutory and regulatory requirements or orders concerning matters such as water quality, dam safety, instream fishery flows and endangered species could require significant capital investments and/or increases in Water Operation and Maintenance Costs. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Water Quality and Treatment; Other Regulatory Matters" and "– Water Rights and Related Proceedings."

Costs of Capital Improvement Program; Construction Risks

As described herein, during the Fiscal Years 2020 through 2025, the District's capital improvement program for the Water System is projected to require cash expenditures of approximately \$1.896 billion. The actual cost of acquiring and constructing the various components of the planned capital improvements to the Water System will depend on a variety of factors, including but not limited to potential rising costs or shortages of labor or materials, the discovery of unforeseen subsurface conditions, natural hazards or seismic events encountered during construction, severe weather conditions, access to financial markets or other events outside the control of the District. There can be no assurances that costs for acquisition and construction of capital improvements to the Water System will not significantly exceed the amounts projected by the District. See APPENDIX A – "THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Capital Improvement Program."

Casualty Risks

California is subject to geotechnical and extreme weather conditions which represent potential safety hazards, including expansive soils, wildfires, floods, high winds and areas of potential liquefaction and landslide. Natural disasters, including earthquakes, wildfires, floods, high winds, or man-made disasters or accidents, could cause failure of Water System infrastructure or otherwise interrupt operation of the Water System and thereby impair the ability of the District to generate Water Revenues. The severity and/or frequency of natural disaster occurrences may be exacerbated by the impacts of climate change. The occurrence of such events could also result in liability claims against the District. Under the doctrine of inverse condemnation (a legal concept that entitles property owners to just compensation if their property is damaged by a public use), California courts have imposed liability on utilities in legal actions brought by property holders for damages caused by the utility's infrastructure. Thus, if certain facilities of the District, such as its water storage or conveyance facilities, are determined to be the substantial cause of damage to property from flooding or otherwise, and the doctrine of inverse condemnation applies, the District could be liable for property damages in certain cases without having been found negligent.

The Indenture requires the District to maintain public liability insurance and insurance on the Water System against such risks as and in such amounts as the District deems prudent taking into account insurance coverage for similar utilities but only if it is obtainable at rates deemed reasonable by the District and upon terms and conditions deemed reasonable by the District. The District uses a combination of self-funding/self-insuring and insurance coverage in the District's risk management program; however, the program does not provide coverage for every conceivable risk of loss. The District's insurance program does not currently include earthquake coverage. Further, in the event of material damage to Water System facilities, there can be no assurance that any insurance proceeds will be sufficient to rebuild or replace such facilities.

See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Seismic and Wildfire Matters” and “ – Insurance.”

Cybersecurity; Other Safety and Security Risks

Cybersecurity breaches could damage the District's information and security systems and cause material disruption to its operations. The occurrence of military conflicts and terrorist activities, including cyber terrorism, could also adversely impact the operations of the Water System or the finances of the District. The District maintains active security (including information security) and emergency preparedness programs and has a number of security measures and safeguards in place. However, there can be no assurance that any existing or additional safety and security measures will prove adequate in the event that military conflicts or terrorist activities, including cyber terrorism, or acts of malfeasance are directed against the assets of the Water System or the information technology systems of the District. The costs of security measures or of remedying damage from security breaches could be greater than presently anticipated. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM – Security and Emergency Preparedness; Cybersecurity.”

Uncertainties of Projections, Forecasts and Assumptions

Certain information contained in this Official Statement is based upon assumptions and projections. Projections and assumptions are inherently subject to significant uncertainties. Inevitably, some assumptions will not be realized and unanticipated events and circumstances may occur and actual results are likely to differ, perhaps materially, from those projected. Accordingly, such projections are not necessarily indicative of future performance. See “FORWARD-LOOKING STATEMENTS” on page (b) of the inside cover pages of this Official Statement. See also APPENDIX A – “THE EAST BAY

MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Projected Operating Results.”

Limitations on Remedies

Upon the occurrence and continuance of an Event of Default under the Indenture, the registered owners of not less than a majority in aggregate principal amount of the Water System Revenue Bonds at the time outstanding are entitled to declare the principal of all of such Water System Revenue Bonds and the interest accrued thereon to be immediately due and payable. However, in the event of a default and such acceleration, there can be no assurance that the District will have sufficient Subordinated Water Revenues available for payment of all of the Water System Revenue Bonds. In addition, enforceability of the rights and remedies of the owners of the Series 2019A Bonds, and the obligations incurred by the District under the Series 2019A Bonds and the Indenture, may become subject to the following: the federal Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws relating to or affecting the enforcement of creditor’s rights generally, now or hereafter in effect; equity principles which may limit the specific enforcement under State law of certain remedies; the exercise by the United States of America of the powers delegated to it by the Constitution; and the reasonable and necessary exercise, in certain exceptional situations, of the police powers inherent in the sovereignty of the State and its governmental bodies in the interest of serving a significant and legitimate public purpose.

If the District fails to comply with its covenants under the Indenture or to pay the principal of and interest on the Series 2019A Bonds, there can be no assurance that the available legal remedies will be adequate to protect the interests of the owners of the Series 2019A Bonds. See “SECURITY FOR THE SERIES 2019A BONDS – Limitations on Remedies” and APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Events of Default; Remedies.”

Certain Other Obligations May Be Subject to Acceleration

The District has entered into standby bond purchase facilities to provide liquidity support for its variable rate Water System Revenue Bonds which provide, upon the occurrence of certain events of default, that the providers thereof may declare any outstanding payment obligations thereunder to be immediately due and payable. In addition, the repayment obligations of the District under the outstanding parity State Loans may be accelerated by the State following an uncured breach by the District of a material provision of the State Loan. Interest rate swaps to which the District is a party are, under some circumstances, subject to early termination, upon which a substantial termination payment may become immediately due to the applicable counterparty. Further, the bank credit facilities supporting the District’s subordinate Commercial Paper Notes (Water Series) are subject to termination upon the occurrence of certain events and upon the occurrence of any such termination or certain events of default, any outstanding repayment obligations of the District to the bank thereunder may be subject to acceleration. If any parity or subordinate obligations are accelerated or substantial swap termination payments become due, it may significantly reduce the amount of Subordinated Water Revenues available to pay debt service on the Series 2019A Bonds and other Water System Revenue Bonds. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – WATER SYSTEM FINANCES – Variable Rate and Swap Obligations,” “–Parity State Loans” and “–Subordinate Commercial Paper Programs.”

Green Bonds

The designation of the Series 2019A Bonds as Green Bonds is not based upon the receipt by the District of any third-party certification relating to the status of the Series 2019A Bonds as Green Bonds. The terms “Green Bonds” and “green project” are neither defined in nor related to provisions in the

Indenture or otherwise defined under State or federal laws. The use of such terms herein is for identification purposes only and is not intended to provide or imply that an owner of the Series 2019A Bonds is entitled to any additional security other than as provided in the Indenture. The Series 2019A Bonds are being designated by the District as “Green Bonds” consistent with the District’s Green Bond Guidance approved by the District Board. However, there can be no assurance that the green projects funded with the proceeds of the Series 2019A Bonds will meet an investor’s expectations regarding sustainability performance. The purpose of labeling the Series 2019A Bonds as “Green Bonds” is, as noted, to allow owners of the Series 2019A Bonds to invest directly in bonds that are expected to finance environmentally beneficial projects. The District assumes no obligation to ensure that these projects comply with any legal or other principles of green projects as such principles may evolve over time. See “PLAN OF FINANCE – Series 2019A Bonds Designation as Green Bonds.”

Tax Law Proposals; Risk of Audit

Existing law may change so as to reduce or eliminate the benefit to beneficial owners of the Series 2019A Bonds of the exclusion of interest thereon from gross income for federal income tax purposes. Any proposed legislation or administrative action, whether or not taken, could also affect the value and marketability of the Series 2019A Bonds.

The IRS has initiated an expanded program for the auditing of tax-exempt securities issues, including both random and target audits. It is possible that the Series 2019A Bonds will be selected for audit by the IRS. It is also possible that the market value of the Series 2019A Bonds might be affected as a result of such an audit of the Series 2019A Bonds (or by an audit of similar securities). See “TAX MATTERS.”

CONTINUING DISCLOSURE

Pursuant to a Continuing Disclosure Agreement, dated the date of delivery of the Series 2019A Bonds, by and between the District and the Trustee, as dissemination agent, the District will covenant and agree for the benefit of the holders and beneficial owners of the Series 2019A Bonds to provide in an Annual Report certain financial information and operating data relating to the District by not later than December 31 of each year in which the Series 2019A Bonds are outstanding (or if the District’s fiscal year changes, by no later than six months after the end of such Fiscal Year), commencing with the Annual Report for Fiscal Year 2018-19, and to provide notices of the occurrence of certain specified events. The Annual Report and the notices of specified events will be filed by the Trustee on behalf of the District with the Municipal Securities Rulemaking Board through EMMA. The Municipal Securities Rulemaking Board has made such information available to the public without charge through such internet portal. The specific nature of the information to be contained in the Annual Report and the notices of specified events is set forth in APPENDIX F – “FORM OF CONTINUING DISCLOSURE AGREEMENT.”

As of the date hereof, the District is in compliance in all material respects with its continuing disclosure undertakings for the last five years. Filings through EMMA are linked to a particular issue of obligations by CUSIP number (which is subject to change after the issuance of obligations as a result of various subsequent actions). The District uses its best efforts to confirm that each report filed through EMMA is linked to all the correct 9-digit CUSIP numbers. However, as a technical matter, it has come to the District’s attention that certain filings during the past five years (primarily certain Annual Reports), when made, were not appropriately linked to all applicable CUSIP numbers. The District has since linked the applicable filings to the additional CUSIPs.

LITIGATION

There is no action, suit or proceeding known to be pending or threatened, restraining or enjoining the District in the issuance and delivery of, or in any way contesting or affecting the validity of, the Series 2019A Bonds or the Indenture, or the pledge of Subordinated Water Revenues under the Indenture, or contesting or affecting the power or authority of the District to impose rates and charges for services of the Water System. There is no litigation known to be pending, or to the knowledge of the District, threatened, questioning the existence of the District or the title of the officers of the District to their respective offices.

At any given time, including the present, there are certain other claims and lawsuits against the District that arise in the course of operations of the Water System. Certain of such matters could, if determined adversely to the District, affect expenditures by the District, and in some cases, Water Revenues. The District is also a party to various other legal proceedings affecting the Water System. See APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) – THE WATER SYSTEM” for a discussion of certain of such matters. In the view of the District’s management and General Counsel, there is no litigation pending against the District, or other ongoing legal proceedings to which the District is a party, which if determined adversely to the District, would individually or in the aggregate materially impair the District’s ability to pay debt service on its indebtedness, including the Bonds.

RATINGS

S&P Global Ratings (“S&P”) and Moody’s Investors Service, Inc. (“Moody’s”) have assigned the Series 2019A Bonds the ratings of “AAA” and “Aa1,” respectively. No application has been made to any other rating agency for the purpose of obtaining any additional rating on the Series 2019A Bonds. Any desired explanation of such ratings should be obtained from the rating agency furnishing the same. Generally, rating agencies base their ratings on information and materials furnished to them and on investigations, studies and assumptions by the rating agencies. There is no assurance that any rating will continue for any given period of time or that it will not be revised downward or withdrawn entirely by such rating agency if, in the judgment of such rating agency, circumstances so warrant. Any such change in or withdrawal of such ratings may have an adverse effect on the market price of the Series 2019A Bonds.

TAX MATTERS

Federal Tax-Exemption

In the opinion of Norton Rose Fulbright US LLP, Los Angeles, California, and Curls Bartling P.C., Oakland, California, Co-Bond Counsel to the District, under existing statutes, regulations, rulings and judicial decisions, and assuming compliance by the District with certain covenants in the Indenture and other documents pertaining to the Series 2019A Bonds and requirements of the Internal Revenue Code of 1986, as amended (the “Code”), regarding the use, expenditure and investment of proceeds of the Series 2019A Bonds and the timely payment of certain investment earnings to the United States, interest on the Series 2019A Bonds is not includable in the gross income of the owners of the Series 2019A Bonds for federal income tax purposes. Failure to comply with such covenants and requirements may cause interest on the Series 2019A Bonds to be included in gross income retroactive to the date of issuance of the Series 2019A Bonds.

In the further opinion of Co-Bond Counsel, interest on the Series 2019A Bonds is not treated as an item of tax preference for purposes of the federal alternative minimum tax.

Ownership of, or the receipt of interest on, tax-exempt obligations may result in collateral federal income tax consequences to certain taxpayers, including, without limitation, financial institutions, property and casualty insurance companies, certain foreign corporations doing business in the United States, certain S corporations with excess passive income, individual recipients of Social Security or Railroad Retirement benefits, taxpayers that may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations and taxpayers who may be eligible for the earned income tax credit. Co-Bond Counsel express no opinion with respect to any collateral tax consequences and, accordingly, prospective purchasers of the Series 2019A Bonds should consult their tax advisors as to the applicability of any collateral tax consequences.

Certain requirements and procedures contained or referred to in the Indenture or in other documents pertaining to the Series 2019A Bonds may be changed, and certain actions may be taken or not taken, under the circumstances and subject to the terms and conditions set forth in such documents, upon the advice or with the approving opinion of counsel nationally recognized in the area of tax-exempt obligations. Co-Bond Counsel express no opinion as to the effect of any change to any document pertaining to the Series 2019A Bonds or of any action taken or not taken where such change is made or action is taken or not taken without the approval of Norton Rose Fulbright US LLP and Curlls Bartling P.C., or in reliance upon the advice of counsel other than Norton Rose Fulbright US LLP and Curlls Bartling P.C., with respect to the exclusion from gross income of the interest on the Series 2019A Bonds for federal income tax purposes.

Co-Bond Counsel's opinion is not a guarantee of result, but represents their legal judgment based upon their review of existing statutes, regulations, published rulings and court decisions and the representations and covenants of the District described above. No ruling has been sought from the Internal Revenue Service (the "IRS") with respect to the matters addressed in the opinion of Co-Bond Counsel, and Co-Bond Counsel's opinion is not binding on the IRS. The IRS has an ongoing program of examining the tax-exempt status of the interest on municipal obligations. If an examination of the Series 2019A Bonds is commenced, under current procedures the IRS is likely to treat the District as the "taxpayer," and the owners of the Series 2019A Bonds would have no right to participate in the examination process. In responding to or defending an examination of the tax-exempt status of the interest on the Series 2019A Bonds, the District may have different or conflicting interests from the owners. Additionally, public awareness of any future examination of the Series 2019A Bonds could adversely affect the value and liquidity of the Series 2019A Bonds during the pendency of the examination, regardless of its ultimate outcome.

Tax Accounting Treatment of Bond Premium and Original Issue Discount

Bond Premium. To the extent that a purchaser of a Series 2019A Bond acquires that Series 2019A Bond at a price in excess of the amount payable at maturity, such excess will constitute "bond premium" under the Code. The Code and applicable Treasury Regulations provide generally that bond premium on a tax-exempt obligation is amortized over the remaining term of the obligation (or a shorter period in the case of certain callable obligations) based on the obligation's yield to maturity (or shorter period in the case of certain callable obligations); that the amount of premium so amortized reduces the owner's basis in such obligation for federal income tax purposes, and that such amortized premium is not deductible for federal income tax purposes. Such reduction in basis will increase the amount of any gain (or decrease the amount of any loss) to be recognized for federal income tax purposes upon a sale or other taxable disposition of the obligation.

Original Issue Discount. The excess, if any, of the stated redemption price at maturity of Series 2019A Bonds of a maturity over the initial offering price to the public of the Series 2019A Bonds of that maturity is "original issue discount." Original issue discount accruing on a Series 2019A Bond is treated as interest excluded from the gross income of the owner of such Series 2019A Bond for federal income

tax purposes under the same conditions and limitations as are applicable to interest on such Series 2019A Bond. Original issue discount on any Series 2019A Bond purchased at such initial offering price and pursuant to such initial offering accrues on a semiannual basis over the term of the Series 2019A Bond on the basis of a constant yield and, within each semiannual period, accrues on a ratable daily basis. The amount of original issue discount on such a Series 2019A Bond accruing during each period is added to the adjusted basis of such Series 2019A Bond, which will affect the amount of taxable gain upon disposition (including sale, redemption or payment on maturity) of such Series 2019A Bond. The Code includes certain provisions relating to the accrual of original issue discount in the case of owners of Series 2019A Bonds that have purchased such Series 2019A Bonds other than at the initial offering price and pursuant to the initial offering.

Co-Bond Counsel are not opining on the accounting for or consequence to a Series 2019A Bond purchaser of bond premium or original issue discount on the Series 2019A Bonds. Persons considering the purchase of Series 2019A Bonds with bond premium or original issue discount should consult with their own tax advisors with respect to the determination of bond premium or original issue discount on such Series 2019A Bonds for federal income tax purposes, and with respect to the state and local tax consequences of owning and disposing of such Series 2019A Bonds.

Information Reporting and Backup Withholding

Interest paid on the Series 2019A Bonds will be subject to information reporting in a manner similar to interest paid on taxable obligations. Although such reporting requirement does not, in and of itself, affect the excludability of such interest from gross income for federal income tax purposes, such reporting requirement causes the payment of interest on the Series 2019A Bonds to be subject to backup withholding if such interest is paid to beneficial owners who (a) are not “exempt recipients,” and (b) either fail to provide certain identifying information (such as the beneficial owner’s taxpayer identification number) in the required manner or have been identified by the IRS as having failed to report all interest and dividends required to be shown on their income tax returns. Generally, individuals are not exempt recipients, whereas corporations and certain other entities are exempt recipients. Amounts withheld under the backup withholding rules from a payment to a beneficial owner are allowed as a refund or credit against such beneficial owner’s federal income tax liability so long as the required information is furnished to the IRS.

State Tax Exemption

In the further opinion of Co-Bond Counsel, interest on the Series 2019A Bonds is exempt from personal income taxes imposed by the State of California.

Future Developments

Existing law may change to reduce or eliminate the benefit to bondholders of the exclusion of the interest on the Series 2019A Bonds from gross income for federal income tax purposes or of the exemption of interest on the Series 2019A Bonds from State of California personal income taxation. Any proposed legislation or administrative action, whether or not taken, could also affect the value and marketability of the Series 2019A Bonds. Prospective purchasers of the Series 2019A Bonds should consult with their own tax advisors with respect to any proposed or future change in tax law.

A copy of the form of opinion of Co-Bond Counsel relating to the Series 2019A Bonds is included in APPENDIX D hereto.

UNDERWRITING

The Series 2019A Bonds are being purchased by J.P Morgan Securities LLC, on behalf of itself and as representative of BofA Securities, Inc. and Siebert Cisneros Shank & Co., L.L.C., underwriters for the Series 2019A Bonds (collectively, the “Underwriters”), pursuant to and subject to the conditions set forth in the bond purchase contract between the District and the Underwriters, at a purchase price of \$_____ (equal to the \$_____ aggregate principal amount of the Series 2019A Bonds, [plus/less] original issue [premium/discount] of \$_____, less an Underwriters’ discount of \$_____). The bond purchase contract provides that the Underwriters will purchase all of the Series 2019A Bonds if any are purchased, and that the obligation to make such purchase is subject to certain terms and conditions set forth in the bond purchase contract.

The Underwriters may offer and sell the Series 2019A Bonds to certain dealers (including dealers depositing Series 2019A Bonds into investment trusts) and others at prices lower than the respective public offering prices stated or derived from information stated on the inside cover page hereof. The initial public offering prices may be changed from time to time by the Underwriters.

J.P. Morgan Securities LLC (“JPMS”), one of the Underwriters of the Series 2019A Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement (if applicable to this transaction), each of CS&Co. and LPL will purchase Series 2019A Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Series 2019A Bonds that such firm sells.

BofA Securities, Inc., an Underwriter of the Series 2019A Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Series 2019A Bonds.

CERTAIN RELATIONSHIPS

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

In addition, in the ordinary course of sales, trading, brokerage and financing activities, certain of the Underwriters may at any time hold long or short positions, and may trade or otherwise effect transactions, for their own accounts or the accounts of customers, in debt or equity securities and financial instruments or bank loans, as applicable, of the District and other governmental entities and utilities. In connection with these activities and the provision of other services, certain of the Underwriters may be or become creditors of such entities. In addition, the Underwriters, or their affiliates, currently serve as remarketing agents or providers of credit enhancement or liquidity facilities for variable rate obligations issued by, or as interest rate swap providers to, governmental entities and utilities, including the District.

In January 2013, the District commenced an action against all of the U.S. dollar LIBOR panel banks, including two Bank of America entities (Bank of America Corporation (“BAC”), the parent of BofA Securities, Inc., and Bank of America, N.A.) and JPMorgan Chase & Co., the parent of JPMorgan

Chase Bank, N.A. (collectively “JPMorgan”). J.P. Morgan Securities LLC (a JPMorgan entity), and BofA Securities, Inc. (a BAC entity) are two of the Underwriters of the Series 2019A Bonds. The District alleges that the defendants conspired to suppress U.S. dollar LIBOR by collectively submitting U.S. dollar LIBOR rates to the British Bankers’ Association that were artificially low between August 2007 and March 2011. The District alleges generally that defendants made false or misleading representations in connection with U.S. dollar LIBOR, that the suppression of U.S. dollar LIBOR deprived it of its rightful rate of return on various interest rate swap transactions, and asserts a variety of claims including antitrust claims seeking treble damages. The Court has granted motions to dismiss the action filed by certain plaintiffs, including the District, and this order is currently the subject of a pending appeal.

APPROVAL OF LEGAL PROCEEDINGS

All legal matters incident to the offering of the Series 2019A Bonds are subject to the approval of legality by Norton Rose Fulbright US LLP, Los Angeles, California, and Curls Bartling P.C., Oakland, California, Co-Bond Counsel. Certain legal matters will be passed upon for the District by its General Counsel and for the Underwriters by their counsel, Orrick, Herrington & Sutcliffe LLP, San Francisco, California. The form of approving opinion of Co-Bond Counsel, in connection with the issuance of the Series 2019A Bonds are included as APPENDIX D– “PROPOSED FORM OF CO-BOND COUNSEL OPINIONS” to this Official Statement.

MUNICIPAL ADVISOR

The District has retained Montague DeRose and Associates, LLC, Walnut Creek, California, as municipal advisor (the “Municipal Advisor”) in connection with the issuance and delivery of the Series 2019A Bonds. The Municipal Advisor is not obligated to undertake, and has not undertaken to make, an independent verification or assume responsibility for the accuracy, completeness, or fairness of the information contained in this Official Statement.

INDEPENDENT ACCOUNTANTS

Included as APPENDIX B – “EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017” to this Official Statement are the audited financial statements of the District for the Fiscal Years ended June 30, 2018 and 2017. The District’s financial statements for the Fiscal Years ended June 30, 2018 and 2017, included in APPENDIX B, have been audited by Maze & Associates, certified public accountants. Maze & Associates has not been requested to consent to the inclusion of its report in APPENDIX B and it has not undertaken to update its report or to take any action intended or likely to elicit information concerning the accuracy, completeness or fairness of the statements made in this Official Statement, and no opinion is expressed by Maze & Associates with respect to any event subsequent to the date of its report.

It is District policy to competitively select and retain independent accountants on a periodic basis. Maze & Associates began serving as the District’s independent accountants in Fiscal Year 2005. Most recently, the District extended its then applicable contract with Maze & Associates in November 2016 to serve as independent accountants pursuant to the contract terms for a final additional two-year period for the fiscal years ending June 30, 2017 and 2018. Following a competitive selection process and District Board approval, Lance, Soll & Lunghard, LLP, was selected to serve as independent accountants for the three fiscal years ending June 30, 2019 through 2021.

MISCELLANEOUS

References made herein to certain documents and reports are brief summaries thereof and do not purport to be complete or definitive and reference is hereby made to such documents and reports for a full and complete statement of the contents thereof.

Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the District and the purchasers or registered owners of any of the Series 2019A Bonds. The delivery and distribution of this Official Statement have been duly authorized by the District.

EAST BAY MUNICIPAL UTILITY DISTRICT

By: _____
General Manager

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APPENDIX A

THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM)



The East Bay Municipal Utility District occupies 332 square miles of the San Francisco – Oakland metropolitan region. The Water System serves approximately 1.4 million people, or approximately 51% of the population of Alameda and Contra Costa Counties.

EAST BAY MUNICIPAL UTILITY DISTRICT WATER SYSTEM

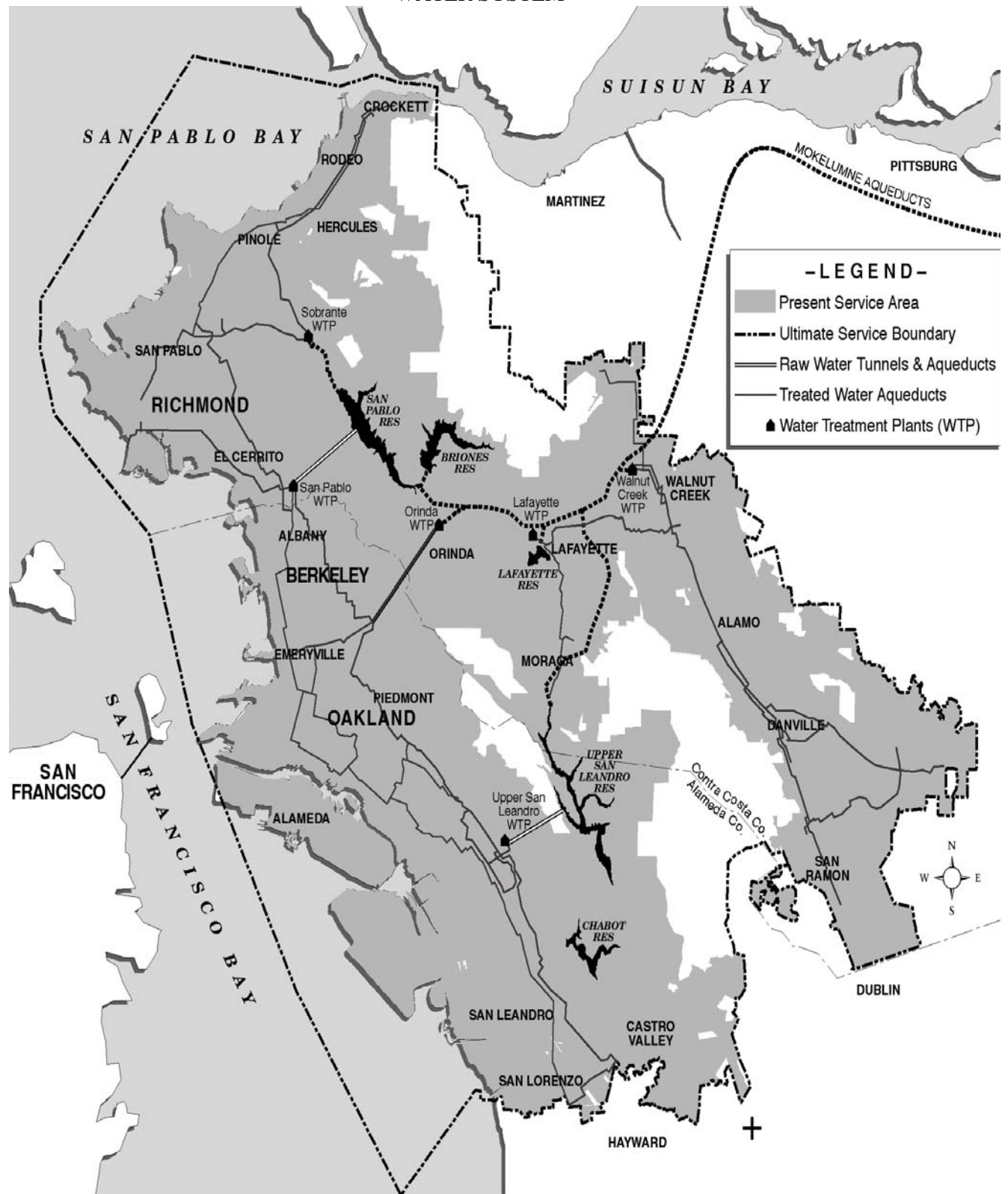


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THE DISTRICT

Organization

In May 1923, voters in cities along the eastern shore of the San Francisco Bay located in portions of Alameda and Contra Costa Counties (known throughout the San Francisco Bay Area as the “East Bay”) elected to create the East Bay Municipal Utility District (the “District”) under the provisions of the Municipal Utility District Act. Under the Municipal Utility District Act, municipal utility districts are empowered to acquire, construct, own, operate or control works for supplying the district and public agencies in the territory of the district with light, water, power, heat, transportation, telephone service or other means of communications, means for the collection, treatment or disposition of garbage, sewage or refuse matter, and public recreation facilities appurtenant to its reservoirs and may do all things necessary and convenient to the full exercise of powers granted in the Municipal Utility District Act. The District presently exercises only those functions relating to water supply, power generation and recreational facilities through its Water System, and sewerage and wastewater interception, treatment and disposal and power generation through its Wastewater System, within an area known as Special District No. 1. Special District No. 1 covers only a portion of the service area of the District. The District presently does not intend to exercise other functions. Such other functions and the related facilities, if exercised, would not constitute part of the Water System or the Wastewater System.

District Board

The District, a public agency, is governed by an elected seven-member Board of Directors (the “Board” or “District Board”) which determines such matters as rates and charges for services, approval of contracts and District policy. Voters elect directors by ward to four-year terms. There are seven wards which together cover the entire service area of the District. Each year, the Board elects from among its members persons to serve as Board officers (*i.e.*, President and Vice President). The current members of the District Board have an average service tenure of approximately 17 years. Each of the multi-term Board members has served one or more years as an officer of the Board and has chaired one or more of the Board’s standing committees that review financial, long-range planning, and legislative matters. The following persons currently serve on the Board:

Marguerite Young was elected to the Board in 2014 and represents Ward 3, which includes the City of Piedmont and a portion of the City of Oakland in Alameda County, and the Contra Costa County city of Orinda, the Town of Moraga, the community of El Sobrante, and portions of Pinole and Richmond. Ms. Young is currently President of the Board. She also serves on the District’s Retirement Board. Ms. Young is currently the Corporate Responsibility Director and Senior Policy Analyst for the Service Employees International Union (SEIU) Capital Stewardship Program. Ms. Young was co-chair of the CALFED Bay-Delta Program’s Water Quality Committee, which instigated regional cooperation among water agencies to address drinking water quality issues related to Bay-Delta water supplies. As California Director of Clean Water Action, her work also included service as an appointed member of California’s Source Water Assessment Advisory Committee, the United States Environmental Protection Agency (“USEPA”) Federal Advisory Committee on the Multiple Disinfection By-product Rule, and California’s Recycled Water Task Force. She co-founded the League of Conservation Voters-East Bay and is a former board member of Friends of the River. Ms. Young has a Bachelor of Science degree in Natural Resource Economics from the University of California, Berkeley. Her current term expires on December 31, 2022.

Doug A. Linney has served on the Board since 2000 and represents Ward 5, which includes the Alameda County cities of Alameda and San Lorenzo, the West Oakland and Oakland Airport Area, and a portion of San Leandro. Mr. Linney is currently Vice President of the Board. He is

active in a number of community and environmental organizations, including the California League of Conservation Voters and the California Interfaith Power and Light. Mr. Linney is employed as President of The Next Generation, a public relations firm providing services that emphasize achieving environmental protection. Mr. Linney has a Bachelor of Science degree in Environmental Science and Public Policy from the University of California, Davis. His current term expires on December 31, 2020.

John A. Coleman has served on the Board since 1990 and represents Ward 2, which includes the Contra Costa County cities of Alamo, Lafayette and Walnut Creek, the Town of Danville, the communities of Blackhawk and Diablo, and portions of Pleasant Hill and San Ramon. Mr. Coleman represents the District on the governing boards of the DSRSD/EBMUD Recycled Water Authority (DERWA) and the Upper Mokelumne River Watershed Authority (for each of which he currently serves as Chair), as well as the Freeport Regional Water Authority. Mr. Coleman also serves as a board member of Contra Costa Leadership Council and as a member of the San Francisco Bay Restoration Authority Advisory Committee. He is also a past president of the Association of California Water Agencies (“ACWA”) board of directors and the California Association of Sanitation Agencies, a past Chair of ACWA’s Federal Affairs Committee, and a past Chair of ACWA’s California Finance Water Task Force. Mr. Coleman is employed as the Chief Executive Officer of the Bay Planning Coalition, which represents maritime and shoreline interests and issues in northern California. He has a Bachelor of Science degree in Natural Resources from the University of California, Berkeley and a certificate in management from the University of Pacific School of Business and Public Administration. His current term expires on December 31, 2022.

Andy Katz has served on the Board since 2006 and represents Ward 4, which includes Albany, Berkeley, Emeryville and North Oakland in Alameda County, and El Cerrito and Kensington in Contra Costa County. Mr. Katz is employed as an environmental and workers’ rights attorney and public health advocate for Breathe California, and is a former Chair of Sierra Club California. Prior to his election to the District Board, he served for five years as a member of the City of Berkeley Zoning Adjustments Board. Mr. Katz has a Bachelor of Arts degree and a Master of City Planning degree from the University of California, Berkeley, and a law degree from Santa Clara University. His current term expires on December 31, 2022.

Lesia R. McIntosh has served on the Board since 1999 and represents Ward 1, which includes the Contra Costa County cities of Crockett, Hercules, Rodeo and San Pablo; portions of Richmond and Pinole, and the communities of North Richmond and Selby. Ms. McIntosh represents the District at the Special Districts Association of Contra Costa County and is a member of the Contra Costa County Bar Association, the Charles Houston Bar Association, NAACP – Richmond Chapter, Black Women Lawyers of Northern California, and Black Women Organized for Political Action. Ms. McIntosh is an attorney with over 30 years of experience. She has a Bachelor of Science degree in Political Science from the University of California, Berkeley and a law degree from John F. Kennedy University. Ms. McIntosh’s current term expires on December 31, 2020.

Frank G. Mellon has served on the Board since 1994 and represents Ward 7, which includes the areas of Castro Valley, communities of Cherryland and Fairview; portions of San Leandro and Hayward in Alameda County, and a portion of San Ramon in Contra Costa County. Mr. Mellon also serves on the District’s Retirement Board. He represents the District on the governing board of the DSRSD/EBMUD Recycled Water Authority (DERWA) and on the Special Districts Association of Alameda County. Mr. Mellon is also currently serving as an elected member of the ACWA Region 5 board. Mr. Mellon is currently a consultant specializing in human resources and labor relations and has taught labor law in the California State University East Bay Human

Resources Certificate Program. Mr. Mellon has a Bachelor of Arts degree in Management from the University of Hawaii and a Master's Degree in Business Administration from St. Mary's College in Moraga. His current term expires on December 31, 2022.

William B. Patterson has served on the Board since 1997 and represents Ward 6, which includes portions of Oakland, including East Oakland and the area south of Park Boulevard/5th Avenue to the San Leandro city boundary, in Alameda County. Mr. Patterson represents the District on the boards for the Upper Mokelumne River Watershed Authority and the Freeport Regional Water Authority. He also serves as a representative for the Business Forum and the Oakland Chamber of Commerce. Mr. Patterson has served on the Oakland Public Ethics and Parks and Recreation Commissions as a member of the Oakland Workforce Investment Board. He retired several years ago, after working for many years as the City of Oakland Manager of Parks and Recreation. Mr. Patterson has Bachelor's and Master's degrees from San Francisco State University and a Social Services Certificate from the University of California, Berkeley. His current term expires on December 31, 2020.

District Management

Alexander R. Coate joined the District in 1993 and was appointed General Manager in 2011. Mr. Coate has over 30 years of experience with public agencies, engineering consulting firms, research and law. Prior to his appointment as General Manager, he was Director of Water and Natural Resources, responsible for water supply planning, water rights, and watershed management including recreation and fisheries. Mr. Coate is a member of the American Water Works Association and ACWA. He currently serves on the boards of the California Urban Water Agencies, the California WaterReuse Association, and the Water Research Foundation. Mr. Coate has a Bachelor's degree in Neurobiology and a Master's degree in Civil Engineering, both from the University of California, Berkeley.

Craig S. Spencer joined the District in 1995 and was appointed General Counsel in 2015. Previous to his current appointment, Mr. Spencer was Assistant General Counsel at the District and previously served as Chief Trial Attorney. Before joining the District, he was a partner at the law firm of Hassard Bonnington in San Francisco. Mr. Spencer has over 25 years of experience in public law. He has a Bachelor's degree in Economics from the University of California, Santa Barbara and a law degree from Southern Methodist University.

Sophia D. Skoda joined the District in 2006 and was appointed Director of Finance in 2015. Prior to her appointment as Director of Finance, Ms. Skoda served as Treasury Manager. In addition, Ms. Skoda has previously served as a Senior Civil Engineer for the District. Before joining the District, Ms. Skoda provided a range of financial consulting services to water and wastewater utility clients throughout California. She has a Bachelor of Science degree in Civil Engineering from Stanford University and a Master's degree in Civil Engineering from the University of California, Berkeley.

Xavier J. Irias joined the District in 1986 and was appointed Director of Engineering and Construction in 2006. Prior to that appointment, he held progressively more responsible positions managing engineering design and engineering services, and he has over 30 years of experience in the engineering field. Mr. Irias has a Bachelor of Science degree in Civil Engineering from the University of California, Berkeley.

Michael T. Tognolini joined the District in 1996 and was appointed Director of Water and Natural Resources in 2018. Mr. Tognolini is responsible for managing divisions that develop and administer programs to protect existing water resources, develop additional water supplies and

manage 50,000 acres of water, watershed lands and related facilities. During his tenure with the District, Mr. Tognolini has held a number of engineering and management positions in drought planning and water supply development in the Water and Natural Resources Department. He has over 29 years of experience in the water industry. Mr. Tognolini has a Bachelor's degree and a Master's degree in Civil Engineering from Stanford University.

Clifford C. Chan joined the District in 1997 and was appointed Director of Operations and Maintenance in 2018. In his current role, Mr. Chan is responsible for over 950 employees tasked with operating and maintaining the District's water system, and managing a \$177 million operating budget. Prior to his current appointment, Mr. Chan held engineering and management positions in the District's Operations and Maintenance Department, including serving as Manager of Maintenance and Construction. Mr. Chan has over 21 years of water industry related experience. He has a Bachelor of Science degree and a Master's degree in Civil Engineering from the University of California, Berkeley and is a licensed Civil Engineer in California.

Eileen M. White joined the District in 1987 and was appointed Director of Wastewater in 2017. Prior to that appointment, she held progressively more responsible positions managing the operations of the water system and managing engineering design and construction projects in the Wastewater and Water Departments. Prior to joining the District, Ms. White worked as a design engineer for Pacific Gas and Electric Company. She has over 30 years of experience in the engineering field. Ms. White has a Bachelor of Science degree in Civil Engineering from the University of California, Berkeley and is a licensed Civil Engineer in California.

Rischa S. Cole joined the District in 1997 and was appointed Secretary of the District in 2017. Ms. Cole has served in a variety of lead administrative roles during her career at the District including Executive Assistant II in the Office of the Secretary and, prior to her appointment as Secretary, as Assistant to the General Manager. Ms. Cole received her Bachelor of Science degree in Business Administration from California State University, East Bay. She is a Member of the International Institute of Municipal Clerks and is pursuing her credentials as a Certified Municipal Clerk.

D. Scott Klein joined the District in 1992 and was appointed Controller in 2003. He has over 33 years of experience in the accounting field. Prior to his appointment, he held progressively more responsible positions in the District's Accounting division. He also chairs the State Controller's Office of California seven-member Advisory Committee on Financial Reporting. Mr. Klein has a Bachelor of Science degree in Industrial Relations and a Bachelor of Arts degree in Accounting from San Francisco State University, a Master's degree in Finance from California State University, Hayward, and holds an active accreditation as a Certified Management Accountant.

Robert L. Hannay joined the District in 2018 as Treasury Manager. Prior to this appointment, Mr. Hannay worked in consulting, at a rating agency, at a financial advisory firm, and in public finance investment banking. As a Director and public finance credit analyst with Standard & Poor's Ratings Services, Mr. Hannay covered water and wastewater utilities, transportation entities and other local governments in California and throughout the United States. Mr. Hannay has a Bachelor of Science degree in Civil Engineering from Texas A&M University and Master's degrees in Civil Engineering and City Planning from the University of California, Berkeley. He is also a Chartered Financial Analyst (CFA) charterholder.

Employees and Employee Relations

As of January 1, 2019, the District had 1,632 (full-time equivalent) employees in the Water System and 251 (full-time equivalent) employees in the Wastewater System.

The District has four unions representing approximately 1,742 workers out of a total full-time equivalent workforce of 1,883 employees: Local 2019 of the American Federation of State, County and Municipal Employees (“AFSCME”) represents white collar workers including professionals; Local 444 of AFSCME represents blue collar workers; Local 21, International Federation of Professional and Technical Engineers represents supervisory employees; and Local 39, International Union of Operating Engineers represents water treatment/distribution workers.

Locals 2019, 444, 21 and 39 are each operating under a Memorandum of Understanding (collectively, “MOUs”), approved by the District Board in 2018. Each of the current MOUs will expire on April 25, 2021. The MOUs are comprehensive in scope and provide for binding arbitration for the resolution of grievances. The District has not had a strike or work stoppage since 1985.

For a discussion of the District Employees’ Retirement System, see “WATER SYSTEM FINANCES – Employees’ Retirement System.”

Geographic Area and Services

Originally formed to include nine cities covering 92.6 square miles, the District has grown by more than 450 separate annexations to a present area of 332 square miles in 20 incorporated and 15 unincorporated communities in both Alameda and Contra Costa Counties. It covers the eastern shore of San Francisco Bay from Carquinez Strait on the north to and including San Lorenzo on the south and it extends approximately 20 miles east, beyond the Oakland-Berkeley hills, into Contra Costa County.

The District’s Water System serves this entire area, reaching approximately 51% of the combined population of Alameda County and Contra Costa County. Approximately two-thirds of the population within the District’s service area resides in the cities of Alameda, Berkeley, Oakland, San Leandro, Richmond and Walnut Creek.

The land area between the present service area boundary and the ultimate service area boundary, approximately 69 square miles, includes some areas of potential development. However, a large part of this land area is parklands and other undeveloped lands that are not anticipated to be developed in the foreseeable future. Another 81 square miles within the ultimate service area boundary outside the District’s present service area boundary is under the waters of the San Francisco and San Pablo Bays. The ultimate service area boundary is limited on the west and north by the shorelines of the San Francisco and San Pablo Bays. The ultimate service area boundary is limited on the south and northeast by adjoining water agencies which have sources of supply independent of the District. There is limited potential for new development at the southern end of the San Ramon Valley, now in the early stages of land use planning and environmental documentation, which is located just outside the ultimate service area boundary. The District’s service area population, currently 1.4 million, is projected to grow by 2035 to a population of 1.65 million, with much of that growth expected to come from infill development within the urbanized parts of the service area.

The Municipal Utility District Act was amended in 1941 to enable formation of special districts for wastewater service provision. In 1944, voters elected to form the District’s Special District No. 1 to treat wastewater released into the San Francisco Bay. The District’s Wastewater System presently serves approximately 685,000 people in an 88-square-mile area of the two counties along the east shore of the San Francisco Bay, extending from Richmond on the north, southward to Oakland’s border with San Leandro. Domestic, commercial and industrial wastewater is treated for the six participating cities of Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont, and for the Stege Sanitary District (which includes El Cerrito, Kensington and part of Richmond). Each of these participating agencies operates a sewer collection system that discharges into the District’s intercepting sewers. In addition to treating waste received from the participating agencies’ sewer collection systems, the District accepts

high-organic waste streams delivered in trucks. The wastes include domestic waste from septic tanks, fat, oil and grease from restaurants, and other food and drink wastes. The District's trucked-waste program continues to expand in the scope of wastes accepted. The District anaerobically digests the high-organic wastes with municipal solids to create renewable energy. This energy is used to power the wastewater treatment facility, with excess energy sold to the Port of Oakland under a power purchase agreement.

Taxation of the District

All property of the District within the District's boundaries generally is exempt from property taxation. District-owned land outside of the District's boundaries is taxable, but improvements constructed on that land by the District are not taxable. As a public agency, the District is exempt from the payment of State of California (the "State") income taxes and federal income taxes.

THE WATER SYSTEM

Service Area

The District supplies water for major parts of Alameda and Contra Costa Counties. Approximately 1.4 million people are served by the District's Water System in an approximately 332 square-mile area extending from Crockett on the north, southward to and including San Lorenzo, encompassing the major cities of Oakland and Berkeley, and eastward from San Francisco Bay to Walnut Creek.

The District's Water System currently serves the incorporated communities of Alameda, Albany, Berkeley, Danville, El Cerrito, Emeryville, part of Hayward, Hercules, Lafayette, Moraga, Oakland, Orinda, Piedmont, Pinole, part of Pleasant Hill, Richmond, San Leandro, San Pablo, San Ramon, and part of Walnut Creek, and the unincorporated communities of Alamo, Ashland, Blackhawk, Castro Valley, Cherryland, Crockett, Diablo, El Sobrante, Fairview, Kensington, North Richmond, Olmsted, Rodeo, San Lorenzo and Selby.

Table 1 shows the population trends for the six largest cities in the District, Alameda and Contra Costa Counties and the State for the five years 2014 to 2018.

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Table 1
SIX LARGEST DISTRICT CITIES
ALAMEDA, CONTRA COSTA COUNTIES AND CALIFORNIA
Population Trends⁽¹⁾

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Oakland	411,636	420,269	424,471	427,503	428,827
Berkeley	117,498	118,543	119,435	120,700	121,874
Richmond	107,735	108,480	109,794	110,114	110,967
San Leandro	86,554	86,893	86,961	87,376	87,598
Alameda	76,058	76,489	77,969	78,575	78,863
Walnut Creek	<u>67,039</u>	<u>68,128</u>	<u>69,736</u>	<u>70,558</u>	<u>70,667</u>
Total Six Cities	866,520	878,802	888,366	894,826	898,796
Alameda County	1,588,576	1,611,770	1,629,738	1,646,405	1,660,202
Contra Costa County	1,098,018	1,112,328	1,127,279	1,139,313	1,149,363
California	38,568,628	38,912,464	39,179,627	39,500,973	39,809,693

⁽¹⁾ As of January 1 of each year.

Source: State of California, Department of Finance, *E-4 Population Estimates for Cities, Counties and the State, 2011-2018, with 2010 Census Benchmark*. Sacramento, California, May 2018.

The total civilian labor force in Alameda and Contra Costa Counties, representing all people who work or are seeking work, totaled 1,412,400 in 2017 (the most recent full year information available). In 2017, the unemployment rate approximated 3.6% in Alameda County and 3.8% in Contra Costa County. In comparison, the unemployment rate averaged 4.8% in the State of California and 4.4% in the nation as a whole for the same period.

Table 2 shows the labor force and employment trends for Alameda and Contra Costa Counties, the State and the United States for the five years 2013 to 2017.

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Table 2
ALAMEDA COUNTY AND CONTRA COSTA COUNTY
Labor Force and Employment
Calendar Years 2013 through 2017

Year and Area	Civilian Labor Force⁽¹⁾	Employment	Unemployment	Unemployment Rate
2013				
Alameda County	802,800	744,800	58,000	7.2%
Contra Costa County	538,000	497,700	40,300	7.5
California	18,625,000	16,958,400	1,666,600	8.9
United States	155,389,000	143,929,000	11,460,000	7.4
2014				
Alameda County	810,000	762,900	47,100	5.8%
Contra Costa County	540,900	507,500	33,400	6.2
California	18,758,400	17,351,300	1,407,100	7.5
United States	155,922,000	146,305,000	9,617,000	6.2
2015				
Alameda County	823,100	784,200	38,900	4.7%
Contra Costa County	547,500	520,000	27,500	5.0
California	18,896,500	17,724,800	1,171,700	6.2
United States	157,130,000	148,834,000	8,296,000	5.3
2016				
Alameda County	837,600	801,800	35,800	4.3%
Contra Costa County	557,000	532,200	24,800	4.5
California	19,093,700	18,048,800	1,044,800	5.5
United States	159,187,000	151,436,000	7,751,000	4.9
2017				
Alameda County	848,500	817,600	30,900	3.6%
Contra Costa County	563,900	542,500	21,400	3.8
California	19,312,000	18,393,100	918,900	4.8
United States	160,320,000	153,337,000	6,982,000	4.4

⁽¹⁾ Total of Employment and Unemployment figures for any year and area may not add to corresponding Civilian Labor Force number due to rounding.

Sources: For State and County information, State of California Employment Development Department, California Labor Market Division. For U.S. information, U.S. Department of Labor, Bureau of Labor Statistics.

Median household income in Alameda and Contra Costa Counties exceeded \$95,000 in 2017 (the most recent calendar year information available). This compares to a median household income in 2017 of approximately \$71,800 in California and just over \$60,000 in the United States.

Table 3 shows the median household income for Alameda and Contra Costa Counties, the State and the United States for the five years 2013 to 2017.

Table 3
ALAMEDA COUNTY AND CONTRA COSTA COUNTY
Median Household Income
Calendar Years 2013 through 2017

	Year and Area	Median Household Income⁽¹⁾
2013	Alameda County	\$72,399
	Contra Costa County	79,100
	California	60,190
	United States	52,250
2014	Alameda County	\$77,214
	Contra Costa County	80,361
	California	61,933
	United States	53,657
2015	Alameda County	\$80,361
	Contra Costa County	81,717
	California	83,104
	United States	64,500
2016	Alameda County	\$55,775
	Contra Costa County	57,617
	California	67,739
	United States	91,045
2017	Alameda County	\$89,979
	Contra Costa County	95,339
	California	71,805
	United States	60,336

⁽¹⁾ Income amounts for each year are in inflation adjusted dollars for such year.

Source: U.S. Census Bureau, 1-Year American Community Surveys.

Water Supply

General. The amount of water available to the District from its water supply sources for delivery to customers of the Water System can be constrained by hydrology, physical facilities, and operational considerations, including required releases for environmental protection. See “– Water Rights and Related Proceedings.” While the District has ample stable resources to meet demands in most years, stored water in District reservoirs is a critical component of the District’s annual water supply and year-to-year operations. See “– Water Supply Operations.” Storage capacity provides the Water System with year-to-year water supply carry-over capability and a mechanism to assist the District in assuring consistent water supply reliability within its service area notwithstanding fluctuations in available supply.

The District began Water Year 2019 with full carryover storage (651,000 acre-feet), representing 84% of capacity or 114% of average. (A Water Year begins on October 1 and ends on the following

September 30). See also “– Current Water Conditions.” While Water Year 2018 was a slightly below average year for precipitation, with demand still relatively low, the resulting runoff was sufficient to reach this result. In addition, Water Year 2017 was a very wet period and produced the highest runoff year on record in the Mokelumne watershed, the primary source of the District’s water supply. Hydrology in California can be highly variable from year to year. While Water Year 2016 produced near normal runoff with above average precipitation in the Mokelumne watershed, the prior four years, the drought period of 2012 through 2015, represented one of the driest sequences in the hydrologic record in California. Such variability in hydrology may become more extreme in the future due to the effects of climate change. See “– Climate Change.”

Through its multi-year strategic planning efforts, the District has developed long-term and dry-year water supplies that are designed to maximize the District’s ability to reliably deliver water supply and responsive service to its customers and the community, while also achieving its environmental stewardship goals and obligations. See “– Long-Term Water Supply Planning” and “– Drought Management.”

During wet and normal rainfall years, the District’s water supply is obtained from three sources: the 627-square mile Mokelumne River watershed in the Sierra Nevada, runoff from streams within the District’s service area, and recycled water produced at various locations within the service area. During drought times, the District has access to substantial additional supplies from the Sacramento River via the Freeport Regional Water Project, and has secured and may seek to secure additional supplemental water supply under contractual arrangements such as water transfers. The District also plans to utilize water stored within various aquifers. Each of these supply sources is more fully described below.

Mokelumne River Watershed. The District holds permits and licenses issued by the State Water Resources Control Board (the “SWRCB”) which enable the District to utilize waters of the Mokelumne River as the primary source of the water supply for the District’s service area. The average annual runoff of the Mokelumne River is about 745,000 acre-feet. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 326,000 gallons, which represents the needs of two average families in and around the home for one year.) As described below, the District’s water rights permit the total diversion of approximately 364,000 acre-feet per year from the Mokelumne River, subject to certain prior water rights. In the last ten fiscal years, annual water production in the District to serve its customers has been below 210,000 acre-feet. Annual water production in the District to serve its customers has not previously exceeded 252,000 acre-feet. Water production includes the total water produced at the District’s water treatment plants and water moved through the distribution system that was delivered to customers, as well as water lost through leaks in the transmission system, water used in the treatment process, evaporation, and water used for fighting fires and other miscellaneous causes.

Annual water production in the District since Fiscal Year 2008 is shown in Table 4.

Table 4
WATER PRODUCTION BY FISCAL YEAR⁽¹⁾

<i>Fiscal Year</i>	<i>Annual Production (Acre-Feet)</i>	<i>Annual Production (Thousands of Ccf)</i>	<i>Annual Production (Million Gallons)</i>	<i>Average Production Per Day (Million Gallons per Day)</i>
2008	230,363	100,346	75,059	205
2009	203,423	88,611	66,281	182
2010	195,158	85,011	63,588	174
2011	194,642	84,786	63,420	174
2012	200,220	87,216	65,242	178
2013	205,889	89,685	67,089	184
2014	209,467	91,244	68,255	184
2015	174,411	75,974	56,832	156
2016	162,562	70,812	52,971	145
2017	173,641	75,638	56,581	155
2018	185,790	80,930	60,540	166

⁽¹⁾ Water production includes water lost through leaks in the transmission system, used in the treatment process, evaporation, fighting fires and other miscellaneous causes, which approximates 10.0% of gross production.

Source: The District.

Water production, as reflected in the table above, in the last ten fiscal years has been approximately 10% to 29% lower than Fiscal Year 2008 levels due to factors that include increased water conservation, reduced consumption during drought and post-drought periods and the effects of State and local economic conditions.

See also “– Water Supply Operations.”

Runoff is water that enters the District’s reservoir system from precipitation within the watershed. Each of the District’s reservoirs receives runoff, and the runoff is broadly categorized as Mokelumne River runoff or terminal reservoir runoff. In an average year, the Mokelumne River runoff represents approximately 95% of the total runoff. Runoff provides the water storage that is used for water production. During the ten-year period from 2009 to 2018, the annual Mokelumne River runoff has ranged from a low of approximately 222,000 acre-feet in Water Year 2015 to a high of 1.94 million acre-feet in Water Year 2017. In 1977, the lowest year of record since records have been kept, the annual runoff from the Mokelumne River was 129,000 acre-feet. Faced with fluctuating runoff volumes and periodic drought conditions, the District has developed a comprehensive approach to ensuring a reliable water supply. The District’s Water Supply Management Plan utilizes demand management and multiple supply options to meet long-term water needs. The plan is discussed under “– Long-Term Water Supply Planning.”

The Mokelumne River watershed also serves municipal, industrial and agricultural water needs in three Sierra Nevada foothill counties (Amador, Calaveras and San Joaquin), in addition to the municipal and industrial needs of the District’s service area. The agencies and individual diverters on the Mokelumne River each operate and divert water under separate entitlements, permits and licenses, along with a number of contracts and agreements among various agencies and under certain court decrees.

In the Mokelumne River watershed there are entities with water rights that are junior and senior to those of the District as illustrated on the graphic below. The most senior water rights are those of riparian landowners and senior appropriators who diverted water prior to 1914, including Amador County and Woodbridge Irrigation District (“Woodbridge”), or rights issued by court decree as with the City of Lodi. Amador Water Agency (“AWA”) and Jackson Valley Irrigation District divert water appropriated by Amador County up to 20,000 acre-feet per year; Woodbridge diverts 60,000 acre-feet in normal and

wet years and 39,000 acre-feet in dry years in San Joaquin County. Woodbridge has the right to divert water above 60,000 acre-feet if certain conditions are met and if the water is available in the Mokelumne River at the Woodbridge dam. The City of Lodi has a prior right to 3,600 acre-feet if certain conditions under the Lodi Decree are met. Calaveras County Water District and Calaveras Public Utility District (“CPUD”) may divert up to a total of 27,000 acre-feet per year in Calaveras County. Pacific Gas and Electric Company (“PG&E”) also has water rights which it uses to operate its hydropower facilities. Because those rights are non-consumptive, they are not depicted in the graphic on the next page.

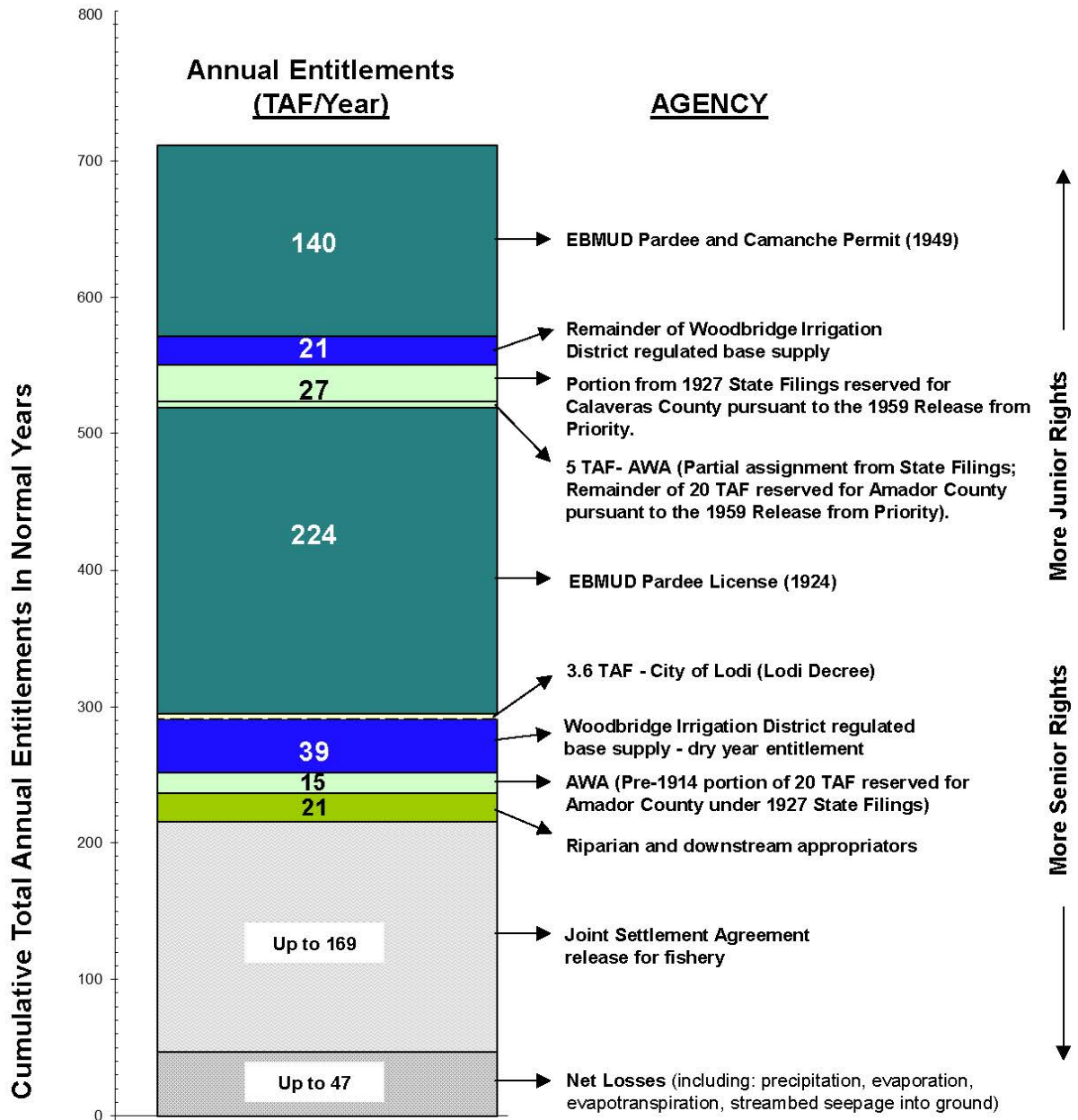
Releases by the District for Woodbridge are made pursuant to a series of agreements between the agencies. The District maintains that the parties’ longstanding interpretation of the agreements defines the District’s obligation to release water for Woodbridge at the 60,000 and 39,000 acre-feet levels described above. In January 2018 Woodbridge filed a declaratory relief action against the District seeking a new and different interpretation of the longstanding agreements. Woodbridge contends that the District must release additional water for Woodbridge. The District believes the action is without merit. Were Woodbridge to prevail, the consequences could adversely affect the yield under the District’s water rights. The action is currently in discovery. No trial date has yet been set.

Additionally, for a discussion of potential effects of projected increased use of senior water rights holders on District water supplies and the District’s efforts to increase future supply through multiple water supply projects, see “– Long-Term Water Supply Planning.” The District’s water rights from the State for the Camanche Reservoir, including the District’s obligations under a 1998 Joint Settlement Agreement incorporated therein (the “1998 Joint Settlement Agreement”), among the District, the U.S. Fish and Wildlife Service and the California Department of Fish and Game (now the California Department of Fish and Wildlife (“CDFW”)), also require that minimum releases be made from Camanche Reservoir for the protection of downstream fisheries before the District can exercise its water rights. Pursuant to the 1998 Joint Settlement Agreement, the District’s required minimum releases from Camanche Dam are adjusted to reflect the time of year and type of Water Year (*e.g.*, “normal/above normal,” “below normal,” “dry,” and “critically dry”). In critically dry and dry years, a minimum release of from 25,000 to 67,000 acre-feet per year must be released downstream by the District to satisfy its obligations for the protection of fisheries resources in addition to all other release requirements. In wet years, a minimum of 169,000 acre-feet must be released. See also “– Water Rights and Related Proceedings.”

The following graphic summarizes the priorities of Mokelumne River water rights and other flow commitments with respect to the Mokelumne River water supply in a normal Water Year. “TAF” as used in the graphic refers to thousand acre-feet.

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Hierarchy Of Mokelumne River Water Rights And Other Flow Commitments



Note: Total does not include storage rights or power rights which are non-consumptive (e.g. PG&E).

Local Runoff. In normal Water Years, District reservoirs in the East Bay receive an additional 30,000 acre-feet of water from local watershed runoff. Much of the local runoff is stored in the East Bay reservoirs for system use. In dry years, evaporation and other reservoir losses can total more than the runoff. Thus, little to no yield occurs from local watersheds in drier years.

Supplemental Supply–United States Bureau of Reclamation Central Valley Project Contract. In December 1970, the District entered into its original Central Valley Project Contract (“CVP Contract”) with the United States Bureau of Reclamation (the “Bureau”), entitling the District to take up to a specified quantity of American River water from the Folsom-South Canal Unit of the Bureau’s Central Valley Project (“CVP”) annually. The CVP Contract was superseded on July 20, 2001 by an Amendatory Contract, which, in turn, was superseded on April 10, 2006 by a Long-Term Renewal Contract (the “Long-Term Renewal CVP Contract”). The Long-Term Renewal CVP Contract has a term of 40 years, with a right of renewal for an additional 40 years available to the District.

The Long-Term Renewal CVP Contract provides the District with a supplemental supply source which helps meet projected drought year needs. Under the Long-Term Renewal CVP Contract, the District is entitled to receive deliveries of up to 133,000 acre-feet per year (119 million gallons per day (“MGD”)) of CVP water in a single dry year, and no more than 165,000 acre-feet over the course of any three consecutive dry-years.

The Central Valley Project Improvement Act (the “CVPIA”), which was enacted by Congress in 1992, mandated changes in management of the CVP, particularly for the protection, restoration, and enhancement of fish and wildlife. The CVPIA added water for the environment as one of the stated purposes of the project, requiring the dedication of 800,000 acre-feet of CVP water towards the restoration of fisheries as well as firm supplies for wildlife refuges. The CVPIA requires that all CVP contracts contain provisions consistent with the CVPIA, including provisions for conservation and tiered pricing. The District’s executed Long-Term Renewal CVP Contract is consistent with the CVPIA provisions. Similar to other CVP contractors, the maximum quantity of water made available to the District in any dry year pursuant to this contractual entitlement is subject to shortages in CVP supply and potential reductions in allocations by the Bureau as required to meet the environmental requirements of the CVPIA.

On May 24, 2018, the District notified the Bureau of its interest to convert the District’s Long-Term Renewal CVP Contract to a permanent repayment contract as authorized under the Water Infrastructure Improvement for the Nation (WIIN) Act. As a condition of conversion to a repayment contract, the District must pay the outstanding construction costs allocated to the District, estimated to be about \$2,989,450 at the time the repayment contract is issued. On March 28, 2019, the District paid \$2,984,450 to the Bureau, leaving the remainder of \$5,000 to be paid at the effective date of the contract conversion, which is expected to occur in Fiscal Year 2020. Negotiations with the Bureau began in late May 2019. The permanent repayment contract, if issued, will maintain all existing contract terms except for the financial terms that will reflect the allocation of costs for new construction. Conversion to a permanent repayment contract now will protect the District’s CVP supplemental supply from the uncertainty of regulatory requirements that may exist in 2046, when the term of the current Long-Term Renewal CVP Contract is scheduled to expire.

Historically, the District did not have permanent infrastructure in place to receive CVP water. The Freeport Regional Water Project (hereinafter, the “FRWP”), which was placed into operation on November 15, 2011, provides the permanent infrastructure to allow the District to receive water deliveries pursuant to the Long-Term Renewal CVP Contract. Water can also be delivered through the FRWP from other supplies such as water transfers (any such supplemental supply water delivered from sources outside the District’s normal watershed being hereinafter referred to as “Supplemental Supply”). When the FRWP is not being used by the District, the facilities can also be made available to other water providers to

“wheel” water through the FRWP/FSCC (as hereafter defined) system to interties with neighboring agencies. See “– Water Facilities – *Freeport Regional Water Project*” for a description of the FRWP.

In 2014 and 2015, the District was entitled to receive an allocation of CVP water under its Long-Term Renewal CVP Contract to provide a source of Supplemental Supply to meet the water demands of its service area since the District’s projected total system storage at the end of each of these Water Years was less than 500,000 acre-feet as a result of ongoing drought conditions. As noted above, all CVP contractors are subject to shortages in CVP supply and potentially reduced allocations during dry years. Due to the severity of the ongoing drought and reduced levels of storage in federal reservoirs, the Bureau reduced allocations of CVP water in 2014 and 2015.

Under 2014 allocations of CVP water by the Bureau, the District was entitled to receive up to 50% of its dry year entitlement (*i.e.*, up to 66,500 acre-feet) at any time during the federal water year contract period of March 1, 2014 through February 28, 2015 under its Long-Term Renewal CVP Contract. In 2014, the District requested and received 18,641 acre-feet of CVP supplies through the FRWP. The District also purchased 5,000 acre-feet of transfer water from other sources (described below).

Under 2015 allocations of CVP water by the Bureau, the District was entitled to receive up to 25% of its dry year entitlement (*i.e.*, up to 33,250 acre-feet) under its Long-Term Renewal CVP Contract at any time during the federal water year contract period of March 1, 2015 through February 29, 2016. The District sought a public health and safety adjustment from the Bureau in an effort to increase its allocation but was denied. In 2015, the District received 33,250 acre-feet of CVP supplies through the FRWP and purchased an additional 25,000 acre-feet of transfer water from other sources.

Even though California’s drought continued in 2016, there was sufficient runoff in the Mokelumne River and local watersheds that the District’s projected total system storage at the end of the Water Year was more than 500,000 acre-feet. The District was therefore not entitled to exercise its entitlement to CVP supplies. Further, Supplemental Supply was not needed for the District to meet the water demands of its service area in 2016. Substantially wetter hydrologic conditions returned in Water Year 2017, and the condition for utilization of CVP water under the District’s Long-Term Renewal CVP Contract has not subsequently been triggered since 2015. See also “–Water Supply Operations.”

Supplemental Supply–Water Transfers and Other Arrangements. As contemplated by its Water Supply Management Plan, the District seeks to identify and secure other sources of Supplemental Supply that may be purchased in dry years through water transfers. In 2013, the District executed a memorandum of understanding with the Placer County Water Agency (“PCWA”) to develop the terms of a potential long-term water transfer agreement under which the District would purchase 10,000 to 47,000 acre-feet of water released from PCWA reservoirs to the lower American River under certain conditions during dry years pursuant to PCWA’s obligations under the Sacramento-area Water Forum Agreement to which PCWA is a party. The water purchased would be diverted to the District at the FRWP intake on the Sacramento River. The memorandum of understanding also guides short-term (annual) water transfers in the interim period until the long-term agreement is executed. The District utilized the memorandum of understanding with PCWA in Water Years 2014 and 2015 to provide an additional source of Supplemental Supply through one-year water purchase agreements. Work is currently ongoing to complete the environmental reviews and permitting needed to implement the long-term agreement with PCWA. The District has developed a number of other transfer partners who either have senior water rights on the Sacramento River or have sufficient water supplies and water storage to provide dry year water to the District if needed. The District purchased transfer water in 2015 from two of these entities, Reclamation District 1004 and the Sycamore Mutual Water Company. In 2018, the District signed a memorandum of agreement with Sycamore Mutual Water Company to conduct a feasibility study of a long-term (potentially 10 years) water transfer project that, if implemented, would be expected to yield

approximately 5,000 to 7,000 acre-feet of water annually through a rolling crop-idling program. The feasibility study is expected to be completed in 2019. Depending on the results of the study, the District expects to determine whether it will proceed with the implementation of the water project in 2020. The next steps of the project would include developing a water transfer agreement with Sycamore Mutual Water Company, conducting the necessary environmental reviews and securing permits from appropriate State and federal agencies. Also in 2018, the District signed a memorandum of agreement with Yuba County Water Agency (“YCWA”) to complete an environmental review of a potential five-year water transfer project that, if implemented, would be expected to deliver 10,000 acre-feet per year during dry years. The environmental review is scheduled to be completed in 2020 and will form the basis for seeking a contract with the Bureau to allow for transportation of the purchased water (as required by federal law). After securing the Bureau contract, the District and YCWA may proceed with development of a water transfer agreement to implement the proposed project.

Bayside Groundwater Project. The Bayside Groundwater Project, a local supplemental supply project, consists of facilities designed to store treated drinking water in a deep aquifer during wet years for future recovery, re-treatment and distribution to customers during times of drought. Implementation of the project is planned in two phases. The District completed Phase 1 of the Bayside Groundwater Project in December 2009. The Bayside Groundwater Project Phase 1 provides a modest, locally available supplemental water supply that helps reduce the need for rationing in the event of a prolonged drought. Phase 1 is used to store an annual average of one MGD (1,120 acre-feet per year) of water within a deep aquifer that extends beneath the community of San Lorenzo. Primary Phase 1 facilities include an injection/extraction well (and pump), a treatment plant, a groundwater monitoring network and instruments used to measure minute changes (if any) in ground surface elevation (subsidence) during Phase 1 operations. Storage operations take place when water can be made available. Injection into the basin is regulated under a Statewide General National Pollutant Discharge Elimination System (“NPDES”) Permit for Drinking Water System Discharges. The timing and availability of water for injection is limited to wetter years which is a function of permit requirements, availability of pre-1914 water derived from San Leandro Creek, and concurrent operation of the Upper San Leandro Treatment Water Plant. The District first stored (injected) water for an eight week period beginning on June 2, 2011 and ending at the end of July 2011. The estimated volume of water stored is in the range of 30 to 40 million gallons (92-123 acre-feet). Due to the drought, no additional water was stored from 2012 through 2016. In 2017, hydrologic conditions allowed the District to resume injections. From 2017 through 2018, over nine million gallons of water (28 acre-feet) was injected into the deep aquifer. The District intends to continue to operate Phase 1 facilities in either a storage mode or possibly an extraction mode (based on water supply available for storage and/or drought conditions coupled with the need for water). The District is working with the SWRCB to acquire the permit needed to operate the facility in the extraction mode. For extraction, the facility is designed to produce up to 2 MGD over a six month period, or 1 MGD annual average. Information gathered from Phase 1 operations will be used in part to determine the feasibility, timing, and scope of Phase 2 (which could provide an additional 9 MGD of supply) and will also help inform the development of a Groundwater Sustainability Plan for the basin, to be developed by the District and the City of Hayward (“Hayward”), as required by the Sustainable Groundwater Management Act. Significant planning activities for Phase 2 are not expected to begin for at least five years.

Water Recycling. The District has undertaken a Water Recycling Program to develop and implement projects that reduce demands on potable water supplies. Recycled water has been used for landscape irrigation, cooling, equipment washdown and construction purposes at the District’s Main Wastewater Treatment Plant since the early 1970s, as well as at a number of golf courses in the District’s service area, beginning in 1984. Since 1993, the District has implemented various other recycled water projects that are designed to produce in the aggregate 9.3 MGD of additional supply. The District’s Water Recycling Program currently includes five operating recycled water projects.

The District's Nonpotable Water Policy was adopted by the District Board on April 9, 1996. The Nonpotable Water Policy requires customers of the District to use nonpotable water (recycled water and other nonpotable water sources) for nondomestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health, and not injurious to plant life, fish and wildlife. In February 2019, the District completed an Updated Recycled Water Master Plan, in which the District confirmed its long-term water recycling goal of 20 MGD by the year 2040. In furtherance of this goal, the District has undertaken, or will undertake in the future, several water recycling project expansions. See also "– Long-Term Water Supply Planning."

The District's largest recycled water project in terms of numbers of customers served is a joint project with the Dublin San Ramon Services District ("DSRSD"). The DSRSD/EBMUD Recycled Water Authority ("DERWA"), a joint exercise of powers agency formed by the District and DSRSD, was created to implement a program, known as the San Ramon Valley Recycled Water Program (the "SRVRWP"), to produce and deliver recycled water to the District and DSRSD for distribution within portions of their existing and future service areas. The SRVRWP is being implemented in several phases within the two districts' existing service areas. As part of the SRVRWP, DERWA constructed and operates, through a contract with DSRSD, the Jeffrey G. Hansen Water Recycling Facility ("WRF"). The WRF was originally constructed with an initial treatment capacity of 9.7 MGD (peak). A planned Phase 2 expansion of the WRF to 16.2 MGD (peak) has been constructed and is expected to be operational by the end of 2019. The WRF is located in the City of Pleasanton and processes secondary treated wastewater received from the City of Dublin, and portions of the cities of San Ramon and Pleasanton. Wastewater for treatment at the WRF will also be provided, commencing in the summer of 2019, under a temporary wastewater diversion agreement with Central Contra Costa Sanitary District ("CCCSD") to order to produce sufficient recycled water to meet peak summer demand days. It is anticipated that DERWA's current recycled water supply will be insufficient to meet irrigation demands on peak summer days, and securing supplemental supplies, such as CCCSD's wastewater, will help to meet peak summer demands in the near term while efforts for long-term supplies and demand management are underway.

The WRF began deliveries in 2006 and currently serves 57 irrigation customers in the District's service area in the San Ramon Valley. With the completion of Phase 2, the WRF is expected to provide approximately 1.2 MGD of recycled water for delivery to District customers.

If implemented, future phases of the program beyond Phase 2 could extend the recycled water system to the northern portions of San Ramon, the town of Danville and community of Blackhawk. In early 2019, the DERWA Board approved a demand management program requesting the member agencies to implement a connection moratorium beyond EBMUD's Phase 2 connections and also implement other additional demand management practices to curtail the use of recycled water. The timing of future phases will depend on demand and availability of sufficient supplies of treated wastewater to the WRF for processing, and costs and availability of funding resources. At full implementation, the SRVRWP is expected to provide approximately 2.5 MGD of recycled water for delivery to District customers.

The District and DSRSD entered into an agreement for the sale of recycled water by DERWA to the District and DSRSD pursuant to which each of the District and DSRSD are responsible for paying their respective share of the costs incurred by DERWA in implementing the SRVRWP (including among other things, administrative costs, construction costs, operation and maintenance costs and costs of debt service on any obligations issued or incurred by DERWA for the purposes of the recycled water program). A portion of the costs of the SRVRWP have been financed by DERWA from State loans and grant funds (in the form of a principal forgiveness loan) obtained by DERWA. Payments made and to be made by the District under such recycled water sales agreement for the purchase of recycled water are payable as a Water Operation and Maintenance Cost of the District regardless of whether any recycled water is made available to the District from such facilities. The District's aggregate annual payment

obligation to DERWA in connection with the DERWA recycled water program is currently approximately \$2.5 million per year.

The largest single user of recycled water in the District's service area is the Chevron Oil Refinery in Richmond. The District's recycled water project serving the Chevron Oil Refinery comprises two distinct projects. Each of these projects receives secondary-treated wastewater from nearby West County Wastewater District and treats it to a higher standard (tertiary recycled water) in order to supply refinery uses. The first project was the North Richmond Recycled Water Project, which provides approximately 4 MGD of recycled water to three cooling towers located at Chevron's Richmond refinery. Service from this project began in 1996. An additional project, the Richmond Advanced Recycled Expansion ("RARE") Water Project, became operational in 2011. The RARE Water Project consists of a high-purity recycled water treatment plant at the refinery, an influent pump station, flow equalization and a standby generator. The RARE Water Project provides 3.5 MGD of recycled water for boiler feedwater at the refinery. Chevron reimbursed the District approximately \$55 million in the aggregate for capital costs of the RARE Water Project.

Another recycled water project of the District is the East Bayshore Recycled Water Project. The East Bayshore Recycled Water Project became operational in 2008. The project currently serves 26 commercial and governmental customers in the Oakland area, providing approximately 0.2 MGD of recycled water to such customers. The District continues to expand this system to serve additional customers. When fully implemented, the East Bayshore Recycled Water Project is designed to provide up to 2.6 MGD of recycled water for delivery to customers.

Current Water Conditions

The District began Water Year 2019, which commenced on October 1, 2018, with a provisional estimate of 651,000 acre-feet in total system storage (*i.e.*, Pardee, Camanche and East Bay terminal reservoirs), representing 84% of capacity or 114% of average. The District monitors precipitation and reservoir levels daily. As of June 1, 2019, the District had 692,870 acre-feet of water stored in all of its reservoirs combined. As of such date, the District's reservoirs were approximately 90% of capacity, or approximately 107% of average (based on 10-year average from 2001-2011). Season-to-date precipitation in the Mokelumne basin was 65.96 inches, or approximately 139% of average (based on 60-year average from 1952-2012). Additionally, the water content in the 2019 snowpack as of June 1, 2019 was approximately three times the average.

Table 5 sets forth the capacity and water storage levels at the District's water reservoirs as of June 1, 2019.

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Table 5
DISTRICT WATER RESERVOIRS
Current Capacity and Storage Levels

Data as of June 1, 2019	Capacity (acre-feet)	Current Storage (acre-feet)	% of Capacity	% of Average⁽¹⁾
Mokelumne				
Pardee	203,795	206,400	101%	104%
Camanche	<u>417,120</u>	<u>346,590</u>	83	110
Total Mokelumne	620,915	552,990	89	108
Terminal Reservoirs				
Briones	58,960	55,720	95	98
Upper San Leandro	38,905	37,380	96	111
San Pablo	37,915	34,020	90	101
Chabot	10,350	9,600	93	104
Lafayette	<u>4,250</u>	<u>3,160</u>	74	83
Total Terminal Reservoirs	<u>150,380</u>	<u>139,880</u>	93	102
Total System Storage	771,295	692,870	90	107

⁽¹⁾ Based on 10-year average from 2001-2011.

Source: District Water Operations Department.

For a description of the District's reservoirs and other Water System facilities, see "– Water Facilities." See also "– Dam Licensing and Safety Issues" and "–Water Supply Operations."

Water Rights and Related Proceedings

The District's appropriate rights to its Mokelumne River water supply include a license, which has a priority date of 1924, entitling the District to divert up to 200 MGD (approximately 224,000 acre-feet per year) to its service area from the Mokelumne River, and a permit, which has a 1949 priority date, entitling the District to divert up to an additional 125 MGD (approximately 140,000 acre-feet per year) of Mokelumne River water to the service area. The District's license and permit for its Mokelumne River water rights are issued by the SWRCB. In August 2016, the District's Mokelumne River permit was extended to 2040, enabling the District with additional time to demonstrate buildout demand prior to perfecting the right through permanent licensure.

In addition to the water rights described above, the District also has a series of rights for the production of hydroelectric power at Pardee and Camanche Dams, and holds rights associated with its local reservoirs.

As previously noted, the State has placed conditions on operations in the District's Mokelumne River water rights requiring that minimum releases be made from Camanche Reservoir for the protection of anadromous fisheries. The District has entered into a series of agreements with State and federal agencies which are incorporated into its water rights and implemented through the annual Water System operations plan. Notably, the 1998 Joint Settlement Agreement is a multi-party agreement that provides for mitigation of the impact of the construction of Camanche Dam and Reservoir on historical spawning grounds for anadromous fish. Pursuant to the 1998 Joint Settlement Agreement, the District's required minimum releases from Camanche Dam are adjusted to reflect the time of year and type of Water Year. In critically dry and dry years, flow releases from 25,000 to 67,000 acre-feet per year must be released downstream by the District to satisfy its obligations for the protection of fisheries resources. In wet years,

a minimum of 169,000 acre-feet must be released. Through prudent and adaptive management, the Mokelumne River experienced a record return for Fall Run Chinook Salmon in 2017, reaching the salmon doubling goal set by the CVPIA. See “– Water Supply – *Mokelumne River Watershed*.”

The Mokelumne River is a small a tributary to the Sacramento-San Joaquin Delta. As the agency responsible for setting water quality standards and administering water rights throughout California, the SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can impose restrictions on water rights holders. These include the Water Quality Control Plan (“WQCP”) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

The WQCP gets reviewed periodically. The last review was completed in 2006, and the current review has been ongoing since approximately 2010. The District is a party to this proceeding. In 2010, as required by the Sacramento-San Joaquin Delta Reform Act of 2009, the SWRCB adopted its Delta Flow Criteria Report for the Sacramento-San Joaquin Delta, defining the timing and volume of water that will be required for a healthy Sacramento-San Joaquin Delta ecosystem. The report suggested that recent record levels of water diversions are unsustainable and that protecting the Sacramento-San Joaquin Delta’s fisheries will require flows that more closely approximate the natural hydrograph. On December 12, 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the environmental documents to support the new flow standards for San Joaquin River tributaries, while encouraging the parties to continue developing voluntary agreements. The purpose of the voluntary agreements is to facilitate implementation of the SWRCB’s WQCP with the objective of improving the health of the Sacramento-San Joaquin Delta using flow and non-flow measures while balancing the needs of water users.

In partnership with other water users, the District is working on a voluntary agreement specific to the Mokelumne River. This agreement would be considered by the SWRCB in Phase 2 of the proceedings, which also includes Sacramento River tributaries. Over the last year, the Mokelumne River parties (*i.e.*, the District, AWA, Calaveras County Water District, CPUD, San Joaquin County, the North San Joaquin Water Conservation District (“NSJWCD”) and Woodbridge) have been negotiating with CDFW, building upon the successful implementation of the 1998 Joint Settlement Agreement over the last 20 years to enhance the protection of lower Mokelumne River fishery resources (discussed above). Although the District cannot predict the ultimate outcome of such negotiations or the WQCP proceedings, the District will continue to actively participate in reaching a voluntary agreement that would minimize significant changes in operations or significant impacts to its water rights as a result of the proceedings.

Long-Term Water Supply Planning

In 2012, the District updated its long range planning with its Water Supply Management Plan, extending the planning horizon from 2020 to 2040 (“WSMP 2040”). WSMP 2040 serves as the plan to ensure an adequate supply of water through the year 2040 for District customers. The primary objectives of WSMP 2040 are to maintain and improve the District’s water supply reliability to its customers and help meet the growing need for water in the future. WSMP 2040 also guides adaptation of the District’s water planning approach to circumstances that have changed since its prior Water Supply Management Plan (WSMP 2020) was adopted, such as competing and changing demands for water, the availability of water from the completed FRWP and Bayside Groundwater Project Phase 1, and long-term climate change. Further, the goal of the WSMP 2040 continues to be to examine what the District has done historically and what it can do in the future to ensure optimal use of the District’s water resources.

WSMP 2040 assesses the supplemental supplies that are expected to be needed to serve a projected increase in water demand in the District's service area of approximately 0.8% per year between 2010 and 2040 (an additional 60 MGD from 2010 to 2040). WSMP 2040 provides for sufficient water supply reliability by making the conservative assumption that all senior water rights holders along the Mokelumne River are using their full allotment of water. Current use is far below that full allotment.

WSMP 2040 provides for the District to meet its future drought year needs for water through 2040 by:

- (1) achieving a water conservation target of 62 MGD by the year 2040;
- (2) increasing water recycling to 20 MGD;
- (3) continued rationing during times of drought by up to 15%; and
- (4) securing an additional 115,000 acre-feet (35 MGD annual average) of supplemental water supplies for use during extended droughts. Potential supplemental supplies identified include water transfers, additional surface water storage facilities, development of groundwater banking projects, and development of a desalination project.

WSMP 2040 addresses the uncertainties posed by future climate change through its multi-element approach of demand management and a wide array of potential future supply options. In 2008, the District incorporated climate change into its Strategic Plan. The District's Strategic Plan is reviewed and updated every two years. The District has also prepared a climate change monitoring and response plan and is in the process of developing a Climate Action Policy and Climate Adaptation Plan to help guide decision making related to preparing for the impacts of climate change. An interdisciplinary staff committee reviews the evolving science of climate change, assessing potential water supply impacts and vulnerabilities, and developing strategies for adaptation and mitigation. This information will continuously inform the implementation process for projects and programs under WSMP 2040. See also "– Climate Change."

The District's water supply planning efforts are revisited and documented in the District's Urban Water Management Plan ("UWMP"), which is updated every five years in compliance with State regulatory requirements. The UWMP update provides an opportunity to assess progress made on the Water Supply Management Plan. The most recent UWMP update, the UWMP 2015, also included an update of WSMP 2040's analysis of the potential impacts of climate change on long-term water supply reliability.

As contemplated by WSMP 2040 and described in the UWMP, the District is undertaking efforts to identify and secure sources of supplemental water supply. Certain of these activities are further discussed below:

Water Transfer Agreements. As a part of the District's supplemental supply efforts, the District has pursued opportunities to develop additional dry-year supplies through water transfer agreements and other collaborative arrangements with other agencies. These efforts are primarily focused on opportunities with various entities within Northern California, and specifically within the Sacramento River watershed, with a view toward utilizing the FRWP to move supplies as secured via water transfers. See "– Water Supply – Supplemental Supply–Water Transfers and Other Arrangements." Future supplemental water supply initiatives expected to be undertaken by the District include pursuing similar long-term arrangements with additional sellers that can provide certainty and flexibility to purchase transfer water during drought periods.

Potential Storage Sharing Arrangement. As part of WSMP 2040, the District identified a possible contractual relationship and/or partnership opportunity with Contra Costa Water District, an adjacent

water agency, to secure from 20,000 to 30,000 acre-feet of storage in Contra Costa Water District's Los Vaqueros Reservoir (the expansion of which was completed in 2012 to increase its total storage from 100,000 acre-feet to 160,000 acre-feet). In 2016, the District approved principles of agreement with Contra Costa Water District for the potential use of Los Vaqueros Reservoir; later that year, the District signed a cost sharing agreement with Contra Costa Water District to support planning efforts related to expanding the reservoir from 160,000 to 275,000 acre feet. The District supported Contra Costa Water District in its successful application for State grant funding for the project. In April 2019, the District joined Contra Costa Water District and nine other agencies in executing a multi-party cost sharing agreement to cover ongoing planning and preliminary design activities. The District is currently conducting planning studies and evaluating the costs, benefits, risks, and operational issues associated with the project in order to determine whether to participate.

Regional Groundwater Banking Options. The District has been exploring groundwater resource development in San Joaquin County. The overdrafted aquifer within San Joaquin County, which is traversed by the Mokelumne River and the District's Mokelumne aqueducts, presented an opportunity for a joint project of mutual benefit. In 2013, a memorandum of agreement was developed and executed by San Joaquin County and the District outlining the roles and responsibilities of the two agencies in connection with implementation of a groundwater banking demonstration project. In 2014, the parties entered into a cost sharing agreement to share the expenses associated with the preliminary engineering, planning and environmental review of the demonstration project. Environmental documentation was completed in 2017. In February 2017, the San Joaquin County Advisory Water Commission voted unanimously to recommend the project to the San Joaquin County Board of Supervisors who approved a groundwater export permit for the project in April 2017. In October 2017, the District executed funding and operations agreements with San Joaquin County and the NSJWCD for the Demonstration Recharge, Extraction, and Aquifer Management ("DREAM") project, wherein the District would release up to 1,000 acre-feet of Mokelumne River water to the NSJWCD, and in exchange receive up to 500 acre-feet of pumped groundwater during droughts. Operation of the demonstration project will enable potential project proponents and participants (which may include NSJWCD, San Joaquin County and/or other local water agencies) to evaluate the feasibility of a permanent banking project in San Joaquin County. The District made its first release to the NSJWCD as part of the DREAM project in 2018. Currently, the District is working on the design of facilities to allow it to pump groundwater into its aqueducts for delivery to the District's service area. The District expects the design of these facilities to be completed in Fiscal Year 2019, with construction to begin in Fiscal Year 2020.

Bay Area Regional Reliability Partnership. Over the last several years, the District has been working with a number of other Bay Area water agencies on a regional water supply effort to evaluate alternative opportunities to improve regional water supply reliability. Specifically, the group of water agencies, which has expanded to include, in addition to the District, the San Francisco Public Utilities Commission ("SFPUC"), the Contra Costa Water District, the Santa Clara Valley Water District, the Alameda County Flood Control and Water Conservation District, Zone 7, the Alameda County Water District, the Marin Municipal Water District and the Bay Area Water Supply and Conservation Agency, have joined forces to advance the concept of Bay Area Regional Reliability ("BARR"). In the late spring of 2014, all eight agencies adopted a Principles document outlining their interest in furthering the BARR concept, which was followed by the execution of a Memorandum of Agreement in 2015. In 2015, the eight agencies secured federal funding to support the development of a Bay Area Regional Drought Contingency Plan. The plan, funded in part by a \$200,000 grant from the Bureau, was completed in 2017. It analyzed regional water supply vulnerabilities and recommended a suite of projects that could help to improve regional water supply reliability and drought resilience. The BARR partners are moving forward with one of these projects, the development of a Bay Area Regional Water Market Program. With an additional \$400,000 grant from the Bureau, over the next three years, the Bay Area Regional Water Market Program will identify a portfolio of transfers and exchanges that could improve regional water supply reliability and may involve one or more pilot projects.

Water Conservation

The District has developed a Water Conservation Master Plan, most recently updated in 2011 (the “WCMP”), and integrated into the UWMP 2015, which directs the District’s comprehensive water conservation strategies and initiatives to promote water efficiency and conservation toward long-term water supply reliability. The WCMP serves as a blueprint for implementation strategies, goals and objectives for achieving additional water savings consistent with the targets identified in the District’s 2015 UWMP. The District provides educational, technical and financial assistance to encourage customers to use water efficiently to help assure an adequate water supply. The District advises customers on water-efficient technology, best management practices, and water-saving opportunities. Water conservation services include water use surveys, landscape water budgets, home and business water reports, new services plan check reviews, incentives for high-efficiency plumbing fixtures, appliances, process equipment, landscaping and irrigation systems, and free distribution of conservation self-survey kits and water efficient devices (*i.e.*, showerhead, faucet aerators, hose nozzles) that save water. The District is also very active in new water conservation technology research and the development of education and demonstration projects.

The WCMP incorporates elements of the State Water Conservation Act of 2009 (Senate Bill 7x 7) and the State Long-Term Water Conservation Framework (Senate Bill 555; Senate Bill 606; Assembly Bill 1668) toward statewide water efficiency goals in urban per capita water use reductions. All urban water agencies in the State are required to report annually on per capita water use, water use objectives and water supply assessments in their UWMP. The UWMP Act of 1983, as amended, is a planning document that provides water utilities with an approach to assess their water resource needs and supplies by requiring that each urban water supplier providing more than 3,000 acre-feet of municipal water, or supplying water directly or indirectly to more than 3,000 customers annually, shall prepare, update, and adopt an UWMP at least once every five years. The planning for the 2020 UWMP is underway to provide the public with a report on District progress in implementing conservation and water recycling programs, along with efforts to secure supplemental water supply sources. The District continues to meet its per capita water use reduction goals and is on track for meeting its 2020 and long-term conservation water use objectives.

Even though most of California saw far higher than normal precipitation in Water Year 2017, following the most recent extended drought period of 2012 through 2015 then Governor Jerry Brown and the SWRCB maintained in place the declaration of a drought state of emergency until April 2017. On April 7, 2017, Governor Brown signed Executive Order B-40-17 which ended, for most of California, the drought state of emergency. Under Executive Order B-40-17, however, water reporting requirements and prohibitions on wasteful practices, such as watering during or right after rainfall, were retained. The primary objective of this directive is to ensure that California continues the water saving behaviors undertaken in response to the drought. Pursuant to Executive Order B-40-17, the SWRCB is expected to maintain many of the conservation actions mandated during the drought as new conservation standards to remain in place at all times. The SWRCB and the California Department of Water Resources (“CDWR”) are in the process of developing individual water use objectives for utilities within the State, which will need to be met beginning in 2023. The District’s early adoption and investment in water conservation and water recycling programs and strong customer response in reducing water use overall and during times of drought have positioned the District well to meet the mandated State water use objectives.

Drought Management

Droughts are common in California and have occurred several times in the last few decades including 1976-1977, 1987-1992, 2007-2008, and most recently, 2012-2015. In dry periods, the District will generally meet demands through a combination of voluntary water conservation efforts, utilization of available storage (not below certain threshold levels) and Supplemental Supply resources, including its

Long-Term Renewal CVP Contract, and when appropriate, implementation of mandatory use restrictions. See also “–Water Supply Operations.”

Historically, the District plans for and implements drought response in accordance with its Water Shortage Contingency Plan (“WSCP”), which includes Drought Management Program (“DMP”) Guidelines, as outlined in the District’s UWMP. The District’s declarations of drought have been typically driven by local conditions, relying on the District’s “projected total system storage at the end of a Water Year.” Under a drought scenario, declaration of a drought and its associated severity, or drought stage, is tied to the District’s projected total system storage at the end of the Water Year. As the District’s projected total system storage at the end of the Water Year decreases, the severity of the drought increases, with a corresponding “ramp up” in drought actions, including the acquisition of supplemental water supplies and increasing levels of customer demand reduction.

The District updated its DMP Guidelines twice during and in response to the most recent drought: (i) in 2015, to reflect the District’s successful experiences using the FRWP facilities and to incorporate a new drought rate structure (see “WATER SYSTEM FINANCES – Rates and Charges” and “– Drought Surcharges”); and (ii) in 2016, to allow flexibility in the first year of a drought to account for customer demand reduction levels, availability of CVP water, and mandatory conservation requirements then imposed by the SWRCB through adoption of an emergency regulation in response to statewide drought conditions.

The DMP Guidelines are designed to be used by District staff in evaluating the District’s annual water supply as part of the Water Supply Availability and Deficiency Report prepared by staff for presentation to the Board each Spring. The DMP Guidelines, as revised, provide established parameters for the level of rationing the District may consider and the amount of Supplemental Supply that the District may require based on the District’s projected total system storage at the end of a Water Year. The revised DMP Guidelines incorporate a four-stage system for classifying the level of drought severity, consistent with the rate design structure adopted by the Board in 2015.

The District adopted its updated WSCP on June 28, 2016. The WSCP, as updated, provides the District with additional flexibility to consider earlier drought actions and to address potential scenarios in which State-mandated water use reduction requirements exceed water use reductions that would otherwise be called for based upon the District’s end-of-September total system storage. The WSCP defines an orderly process for collecting information on water supply availability, assessing conditions, determining fiscal actions, allocating resources, enforcing regulatory water use restrictions, monitoring customer response, and planning and implementing drought communications. The WSCP describes the District’s actions to implement and enforce regulations and restrictions for managing a water shortage when it declares a water shortage emergency under the authority of the Water Code. It also describes the District’s planned actions to manage supply and demand before and during a water shortage to ensure a reliable water supply. The WSCP identifies the types of programs and actions that the District might undertake at each stage of drought (and the targeted level of voluntary or mandatory water use reduction to be applied) for the applicable total system storage scenario. Such programs and actions include, among other things, customer outreach and public information campaigns, distribution of water saving devices, water use restrictions, and imposition of corresponding drought surcharges and excess use penalties.

The District has been undertaking capital investment and planning activities for decades in order to position itself to manage through droughts. The District’s investments in conservation, recycling and the construction of the FRWP facilities to deliver water from the Sacramento River to the East Bay were key components of the District’s successful management of its water supply through the most recent drought, the driest four year period in the history of the District.

The District's comprehensive approach to drought response planning also includes managing the fiscal challenges posed by multi-year drought conditions. As discussed herein, the FRWP (together with certain integrated District facilities) is utilized by the District during dry years when the District's contractual right to CVP water is made available. The FRWP system also provides a means of transport to allow the District to take deliveries of other sources of Supplemental Supply from outside the District's normal watershed when secured by the District during dry years through negotiated contractual arrangements such as water transfers. Operation of the FRWP results in additional costs of water supply to the District as compared to water from the District's Mokelumne River supply. These costs include: (i) the purchase cost of the water, payable to the Bureau for CVP water or to another party in connection with any water transfer or other contractual arrangement for Supplemental Supply that may be secured by the District; (ii) the costs to convey the water from the FRWP intake to the District's Water System, which include operations costs and energy for pumping; and (iii) additional treatment costs as this supply is typically treated at the District's full conventional treatment plants which are more expensive to operate than the District's largest direct filtration plants.

In June 2015, the District's Board adopted a staged system of drought rates. The specific drought surcharges were adopted along with the District's regular rates and charges in 2015, following a process which complied with the requirements of Proposition 218 and other applicable laws. The drought surcharge raises funds necessary to cover the District's water-shortage related costs noted above, as well as increased conservation and public outreach messaging, increased customer account management services, and revenue loss due to conservation. The District also maintains significant reserves in its Rate Stabilization Fund that may be drawn upon as a funding source for drought response costs.

See "WATER SYSTEM FINANCES – Drought Surcharges" and "– Financial Management Policies."

Water Facilities

As described herein, the District captures rain and melted snow within the 627-square mile protected watershed of the Mokelumne River and collects it at Pardee Reservoir, just over 90 miles east of the Bay Area. Downstream from Pardee Reservoir, Camanche Reservoir stores water to meet the needs of fisheries, riparian habitat and downstream water-rights holders, and provides flood control. Raw or untreated water is transported from Pardee Reservoir west via three parallel aqueducts to East Bay water treatment plants or terminal reservoirs, and from there to 170 local reservoirs and 4,200 miles of distribution pipeline. The District also has its Long-Term Renewal CVP Contract with the Bureau for a supplemental water supply from the Sacramento River in dry years. When needed, the water is conveyed through the FRWP jointly owned by the District and Sacramento County. Each of the primary facilities of the District's water delivery system are more fully described below. See also "– Seismic and Wildfire Matters – *Seismic Considerations*" for a discussion of seismic improvements made by the District to enhance the reliability of its water delivery system.

Pardee Reservoir. The District's Mokelumne River water is collected and stored at Pardee Reservoir, located in the Sierra Nevada foothills approximately 90 miles east of the District and 38 miles northeast of Stockton. Pardee Reservoir has a storage capacity of 203,795 acre-feet.

Camanche Reservoir. Camanche Reservoir is located ten miles below Pardee Reservoir on the Mokelumne River. Camanche Reservoir has a capacity of 417,120 acre-feet.

Although only Camanche Reservoir is designated to provide flood control (and regulated via the U.S. Army Corps of Engineers), in practice, elevations in both Pardee and Camanche Reservoirs are managed to provide necessary flood control storage. As described herein, operations of both of these District facilities are regulated through reservoir elevations and river flow requirements for a variety of

purposes besides water supply for the District, including meeting the supply needs of other legal users of water downstream, temperature control, recreation and power generation.

Terminal Reservoirs. Five terminal reservoirs located within the District's service area combine for a storage capacity of approximately 150,380 acre-feet: San Pablo (with a capacity of 37,915 acre-feet), Briones (with a capacity of 58,960 acre-feet), Lafayette (with a capacity of 4,250 acre-feet), Upper San Leandro (with a capacity of 38,905 acre-feet) and Chabot (with a capacity of 10,350 acre-feet).

Aqueducts. Raw untreated water is transported 91.5 miles from Pardee Reservoir, through the Pardee Tunnel, the Mokelumne Aqueducts and the Lafayette Aqueducts, to the District's service area, where it is stored in terminal reservoirs or delivered directly to treatment plants prior to distribution. The Pardee Tunnel is an 8-foot high horseshoe structure 2.2 miles long. The three Mokelumne Aqueducts have a combined capacity of 200 MGD under gravity flow, and approximately 325 MGD with existing pumping facilities. The first Mokelumne Aqueduct is 5-feet, 5-inches in diameter, the second is 5-feet, 7-inches in diameter, and the third is 7-feet, 3-inches in diameter. All are steel pipelines extending 81 miles from the Pardee Tunnel to the east end of the two Lafayette Aqueducts in Walnut Creek. Approximately nine miles of pipeline is above-ground and the balance is below-ground.

Lafayette Aqueduct No. 1 is a 9-foot in diameter circular concrete pipe and three tunnels that extend 7.1 miles from Walnut Creek to the Orinda Filter Plant. Lafayette Aqueduct No. 2 is a 9-foot in diameter concrete pipe with seven tunnels extending 7.3 miles from the Walnut Creek Water Treatment Plant to the Briones Diversion Works near Orinda. The supply is then pumped (or diverted) through the 7-foot, 6-inch diameter steel Briones Aqueduct into Briones Reservoir, discharged into San Pablo Reservoir, or diverted through the 7-foot, 6-inch diameter steel Orinda Raw Water Line to Orinda Filter Plant. Either or both Lafayette Aqueducts can be used to divert Mokelumne River water from Pardee directly or indirectly to all of the District's water treatment plants.

The Mokelumne Aqueducts cross the Sacramento-San Joaquin Delta for about fifteen miles and are protected by 57 miles of levees maintained by five reclamation districts governing Lower Roberts, Woodward Island, Orwood and Palm, Jones Tract, and Sargent-Barnhart Tract. The District has established a multi-pronged approach to protect the aqueducts from flooding and to recover from failures. These strategies include levee strengthening, aqueduct interconnections, and standby materials and supplies to respond to an emergency.

The District worked with the five reclamation districts to obtain \$33.5 million in funding for levee strengthening and to purchase emergency supplies, with the District providing the \$6 million local cost share. This funding was used to bring 41 miles of levees, adjacent to the Mokelumne Aqueducts, up to the U.S. Army Corps of Engineers' standards and to purchase materials and supplies to facilitate emergency response. These levee improvements substantially improve the stability of the levees and help protect the District's water supply and the region's agriculture, cultural, and historical resources, as well as the ecosystems in the Delta.

The District has also constructed interconnections to the three Mokelumne Aqueducts on each side of the Delta. These interconnections are designed to allow the District to restore 77% of the raw water system capacity with only one pipe in operation across the Delta. The District has six months of storage locally to serve its customers during an outage of the raw water system resulting from a failure in the Delta. This will bolster the resilience of the District's water supply system by enabling a rapid return to service after a failure, with sufficient capacity to meet customer needs and begin to recover local storage.

Freeport Regional Water Project. The FRWP is a regional water supply project undertaken by the District in partnership with the Sacramento County Water Agency ("SCWA"). In February 2002, with

the support of the Bureau, the District and SCWA formed the Freeport Regional Water Authority (hereinafter, “FRWA”) under a joint powers agreement to develop the FRWP. As described herein, the FRWP provides the permanent infrastructure to allow the District to receive water deliveries pursuant to its Long-Term Renewal CVP Contract at a new point of diversion along the Sacramento River. See “–Water Supply–Supplemental Supply–United States Bureau of Reclamation Central Valley Project Contract. The capacity of the FRWP is designed to provide up to 100 MGD (112,000 acre-feet per year) of supplemental water supplies to the District in dry years and up to 85 MGD to SCWA in all years. The combined FRWP system was placed into commercial operation in November 2011.

The District has entered into a Dedicated Capacity Purchase Agreement, dated as of May 1, 2007 (the “Dedicated Capacity Purchase Agreement”), by and between FRWA and the District, relating to the FRWP. Pursuant to the Dedicated Capacity Purchase Agreement, FRWA sells to the District and the District acquires 100 MGD of capacity in the FRWP (“Dedicated Capacity”) in accordance with the Second Amended Joint Exercise of Powers Agreement Concerning the Freeport Regional Water Authority dated as of November 20, 2006 (the “FRWA JPA Agreement”). The purchase price of the Dedicated Capacity has been paid by the District as a portion of the District’s capital cost of the FRWP in accordance with the FRWA JPA Agreement. In the event of future capital improvements to the FRWP, the District may be required to make additional capital contributions for its share of such costs pursuant to the FRWA JPA Agreement.

The FRWP diverts water from the Sacramento River near the community of Freeport and conveys this water through a pipeline to a turnout serving SCWA’s Vineyard Water Treatment Plant. Beyond this turnout, the pipeline extends to the Folsom South Canal (“FSC”) as a District-only asset. Water can also be delivered to the District through the FRWP from other Supplemental Supply such as water transfers. CVP or transfer water received by the District is treated at existing District treatment facilities prior to delivery to customers. Short-term storage, if needed, is provided at the District’s terminal reservoirs, including its San Pablo, Upper San Leandro and Briones Reservoirs.

The FRWP includes a number of significant components. Chiefly, the components consist of an intake and pumping plant, approximately 18 miles of pipeline, various easements and rights-of-way, and a communications system. The capacity of the intake and pumping plant is 185 MGD. The pipeline includes a 7-foot diameter segment which runs from the intake to the SCWA turnout, and a 5-foot, 6-inch diameter pipeline segment which supplies SCWA’s Water Treatment Plant. A 6-foot diameter pipeline segment owned by the District continues for another four miles and discharges to the FSC. Fiber optic and radio systems link project facilities and key outside agencies. Downstream of the FSC, which is owned by the Bureau, District facilities convey water derived from the FRWP to the District’s Mokelumne Aqueducts via two pump stations (Clay Pump Station and Camanche Pump Station) and an additional 19 miles of pipeline. The southern system (known as the FSC Connection or the “FSCC”) is a District-only element, and includes two 100 MGD pumping plants (an intake and a pumping plant at the terminus of the FSC and a high head pumping plant near Camanche Reservoir).

Raw Water Pumping Plants. The majority of the District’s Water System is gravity-supplied, with seasonal pumping when demand is high enough. Walnut Creek No. 1, No. 2 and No. 3 Pumping Plants increase the capacities of the Mokelumne Aqueducts. When operating, these three pumping plants increase the combined capacity of the aqueducts to approximately 325 MGD. The Moraga Pumping Plant and Aqueduct supply water from the Lafayette Aqueducts to Upper San Leandro Reservoir. The plant’s four pumps have a combined delivery capacity of 105 MGD; however, the configuration of the existing outlet limits delivery to a maximum rate of 58 MGD. The Moraga Aqueduct is six miles of 5.5-foot, 5-foot and 4-foot diameter steel and concrete pipe between Lafayette and the Upper San Leandro Reservoir near Moraga. The Briones Pumping Plant and Aqueduct were placed in service following completion of Briones Reservoir. These facilities supply Briones Reservoir with Mokelumne River water. The four pumps in the Briones No. 2 Pumping Plant can deliver up to a total of 60 MGD.

Tunnels. Untreated water from San Pablo Reservoir is delivered to Sobrante Treatment Plant through a 5-foot, 6-inch diameter steel pipe; water from the Upper San Leandro Reservoir is delivered to the Upper San Leandro Treatment Plant through a 1.35 mile, 6-foot, 6-inch diameter horseshoe tunnel. The San Pablo Tunnel is 5-feet in diameter and can carry water 2.57 miles from the San Pablo Reservoir to the standby San Pablo Water Treatment Plant.

Treatment Plants. Water delivered to the District's customers is first treated at one of six treatment plants. The six water treatment plants in the District's Water System are capable of filtering and processing a combined total of approximately 390 MGD. The water treatment plants are Upper San Leandro in Oakland, San Pablo in Kensington (standby only), Sobrante in El Sobrante, and plants located in and named for Orinda, Lafayette and Walnut Creek. Orinda Water Treatment Plant is the largest, with a peak capacity of 200 MGD.

Distribution Facilities. From the Orinda Water Treatment Plant treated water is carried 3.41 miles through the Claremont Tunnel, a 9-foot diameter horseshoe bore to three distribution aqueducts. The water distribution network includes over 4,200 miles of pipe, 128 pumping plants and 165 neighborhood reservoirs (including approximately 143 above-ground concrete or steel reservoirs), having an operating capacity of 636 million gallons. The District's service area is divided into 124 pressure zones, ranging in elevation from sea level to 1,450 feet. About 60% of treated water is distributed to customers by gravity flow.

Pardee and Camanche Power Plants. The District operates hydropower plants at Pardee and Camanche Reservoirs pursuant to a Federal Energy Regulatory Commission ("FERC") license. The District's Pardee and Camanche hydropower plants are licensed as one project, the Lower Mokelumne River Project No. 2916. The current FERC license for these hydropower plants expires on March 31, 2031. These plants generate 185 million kilowatt hours of electricity in normal rainfall years. Other than a small amount of power being used at the District facilities at Pardee and Camanche, the power produced is currently being sold by the District to Marin Clean Energy ("MCE"), under a 10-year power purchase agreement which expires on June 30, 2025. See "WATER SYSTEM FINANCES – Power Sales Revenues."

Regional Intertie. In 2007, the District, Hayward and SFPUC completed an intertie to allow for 30 MGD of water to be conveyed between the District and SFPUC water systems via Hayward's distribution system. This project, which was funded by the participating agencies and the State through a Proposition 50 grant, provides the District and neighboring agencies increased flexibility to provide water throughout the region during an emergency. The intertie allows sharing of water among the parties during emergencies or planned critical work on facilities that would be difficult to remove from service without an alternative water source. The project consisted primarily of improvements within Hayward's water system, although there were associated minor improvements in the District and SFPUC systems.

See also "– Capital Improvement Program" for a discussion of the District's current five-year capital plan for the maintenance and improvement of its infrastructure and facilities.

Water Supply Operations

General. As described above, the District's water supply system consists of an integrated network of reservoirs, aqueducts, raw water pumping plants, treatment plants, and distribution facilities that extend from its principal water source, the Mokelumne River watershed basin in the Sierra Nevada range, across the San Francisco Bay/Sacramento-San Joaquin Delta, to the East San Francisco Bay Area. Set forth on the following page is a location map depicting the District's water supply system facilities.

Streamflow from the Mokelumne River is collected and stored in the District's Pardee and Camanche Reservoirs, located in the Sierra foothills. Raw water from Pardee Reservoir is transported to the East Bay terminal reservoirs and treatment plants through the Pardee Tunnel, the three Mokelumne Aqueducts, and the Lafayette Aqueducts. The raw water is treated at one of the District's treatment plants before being delivered to customers.

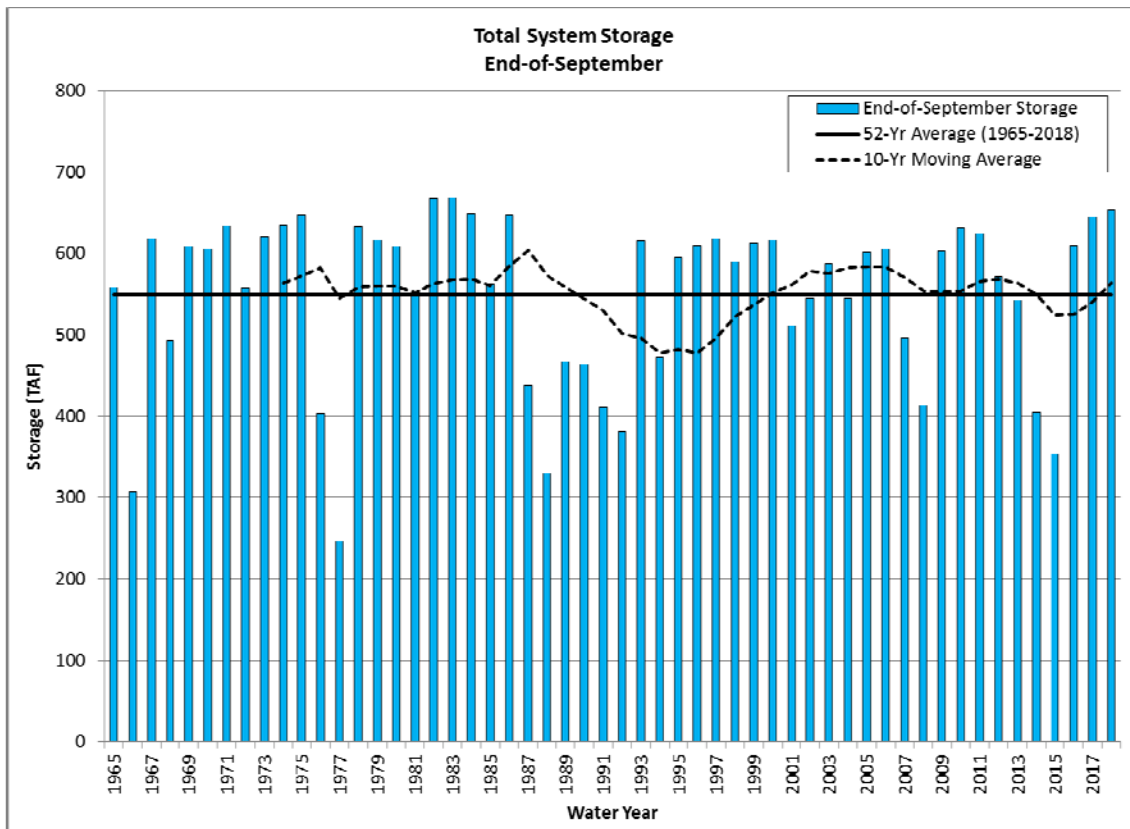
The District operates the Water System to achieve multiple objectives. These objectives are to provide municipal water supply benefits, stream flow regulation, fishery/public trust interests, flood control, recreation, temperature management and obligations to downstream diverters. All of the components of the system, including Pardee and Camanche Reservoirs, the Mokelumne Aqueducts, and the East Bay terminal reservoirs are interdependent; for this reason, the District develops an annual operations plan for the entire water supply system. The annual water supply operations plan includes scheduled operations from April through September and identifies all District requirements.

The District plans its operations according to three projections: the CDWR April 1st Water Supply Forecast, the District's End-of-September (the end of the Water Year) projected total system storage, and the District's projected November 5th combined storage for Pardee and Camanche Reservoirs. Reservoir storage levels are required to be reduced by November 5th of each year to maintain the minimum level of available space necessary for flood control purposes. The projected November 5th combined storage for Pardee and Camanche is also utilized in determining the required releases for fish flows for the October through March period each year. The District monitors projections throughout the year and adjusts reservoir operations, as conditions change, to meet its goals, objectives and requirements.

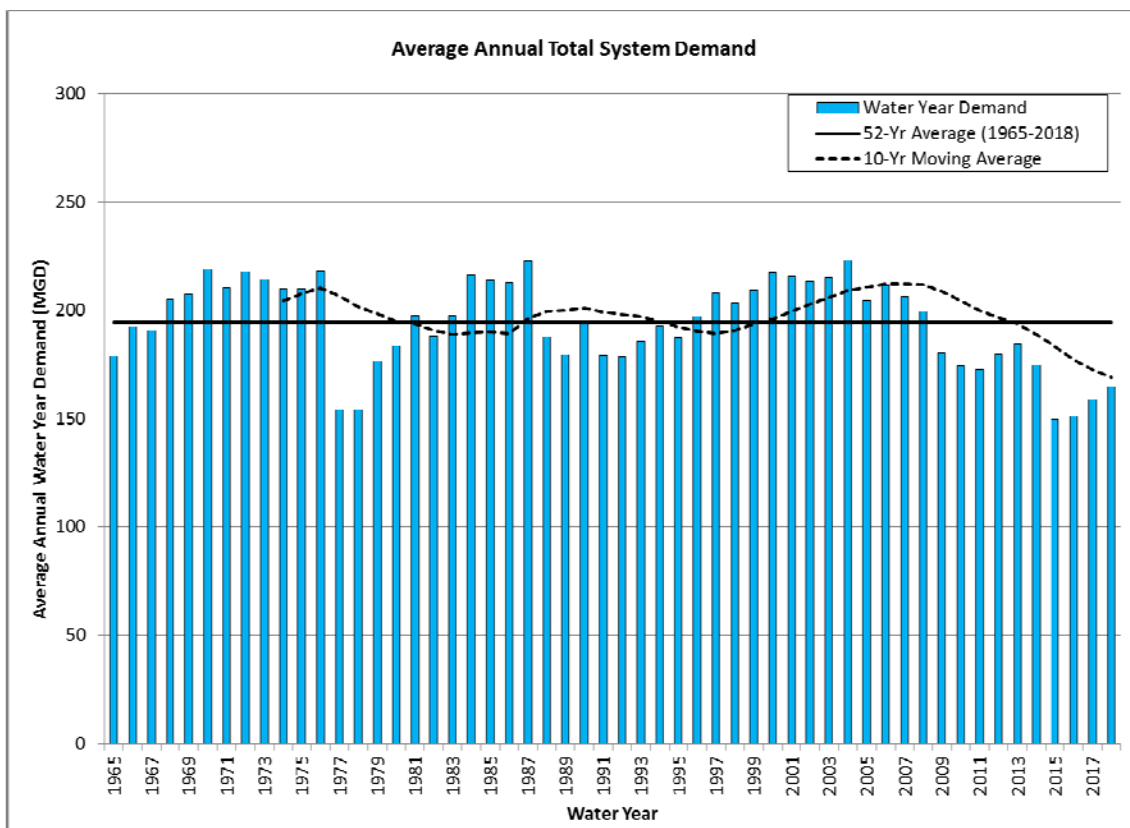
The District begins the Water Year by committing to provide the required minimum fish flows, associated with the projected November 5th storage levels for Pardee and Camanche Reservoirs, for the period October through March. Through fall and winter, the District continues to track rainfall, runoff, storage and demand to reassess reservoir operations as needed.

On April 1st of each year, CDWR releases its snow survey water supply forecast of runoff for the Mokelumne River. The District uses the forecast to develop its Annual Water Supply Operations Plan, in which it schedules operations to meet all requirements according to the forecast for the period April through September. Scheduled operations include Camanche Reservoir releases in accordance with the prescribed flow requirements. Certain obligations are not triggered if projected storage elevations for End-of-September and November 5 in Pardee and Camanche Reservoir storage are too low. As required by the District's Water Supply Availability and Deficiency Policy, the District Board is informed of the forecasted water supply condition for the end of the Water Year on September 30th. The September 30th storage forecast is used to determine if drought management measures will need to be implemented to reduce demand to ensure sufficient carryover storage for the following year. If dry year conditions exist (*i.e.*, projected total system storage on September 30th is less than 500,000 acre-feet), the Board will typically consider implementing demand management measures for the rest of the Water Year if the projected storage is significantly below 500,000 acre-feet. Projected End-of-September storage is required to be less than 500,000 acre-feet for the District to be able to utilize the Supplemental Supply made available under the Long-Term Renewal CVP Contract.

The graph on the following page shows historical End-of-September storage from 1965 to 2018. The driest period for the District during such time period was 1976 to 1977. The longest dry period during such time frame was the extended drought from 1987 to 1992.



Set forth below is a graph depicting the average annual total Water System demand for each Water Year from 1965 to 2018.



The District was able to provide water to its customers during the extended five-year drought from 1987 to 1992, without Supplemental Supply, by relying on available storage. During the 1976 to 1977 drought, the District utilized 25,000 acre-feet of CVP water from the Delta via a temporary pump station on Middle River. As described herein, the completion of the FRWP facilities in 2011 provides the District with a Supplemental Supply during dry periods of up to 165,000 acre-feet of water under its Long-Term Renewal CVP Contract over a three-year period. In 2014 and 2015, the District was entitled to receive an allocation of CVP water under its Long-Term Renewal CVP Contract as a result of ongoing drought conditions. The District supplemented its available CVP allocation for such years with negotiated water transfer arrangements as needed. See “– Water Supply – *Supplemental Supply–United States Bureau of Reclamation Central Valley Project Contract.*” In dry periods, the District will generally meet demands through a combination of voluntary water conservation efforts, utilization of available storage (not below certain threshold levels), available Supplemental Supply resources, including FRWP, and, when appropriate, implementation of mandatory use restrictions. See also “– Drought Management.”

Water Quality and Treatment; Other Regulatory Matters

Federal and State regulatory agencies continually monitor and establish new water quality standards. New water quality standards could affect availability of water and impose compliance costs on the District. The federal Safe Drinking Water Act establishes drinking water quality standards, monitoring, public notification and enforcement requirements for public water systems. To achieve these objectives, the USEPA, as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The Division of Drinking Water (“DDW”) within the SWRCB has lead authority over California water agencies.

Currently, the State and the federal government regulate over 100 contaminants. Because the District’s water supply comes primarily from a remote, semi-protected watershed, the raw water requires minimal treatment to meet or surpass all health and aesthetic standards. The District’s drinking water is sampled and tested on an ongoing basis from all parts of the Water System to ensure that it meets or surpasses all primary (health related) and secondary (aesthetic) regulatory standards established by the USEPA and the SWRCB. Test results on the District’s water consistently show that regulated constituents of drinking water either are not detected at all, or they are present in amounts far below limits permitted by State and federal drinking water standards.

The District is actively involved with professional organizations at the federal and State levels related to water quality, including the American Water Works Association, the Association of California Water Agencies and the Association of Metropolitan Water Agencies. The District serves on technical advisory committees that interact with the USEPA during regulatory development or alteration. In addition to working with the USEPA, the District has developed its own water quality initiatives, including developing State and federal legislation to limit lead levels in household plumbing fixtures. The District also sits on national standards organizations which set standards for all aspects of water quality. The District was a founding member of the Water Research Foundation (“WRF”) and actively participates in research projects; with the WRF, the District participates on numerous project advisory committees and carries out funded research.

In addition to meeting the regulatory requirements, the District is a member of the Partnership for Safe Water (the “Safe Water Partnership”). The Safe Water Partnership is a voluntary effort between six drinking water organizations and more than 300 water utilities. The goal of the Safe Water Partnership is to improve performance beyond current regulatory requirements. The program is centered on gathering, analyzing, and reporting plant performance data, and on optimizing treatment plant performance. The Safe Water Partnership program uses standardized tools to assess the performance of treatment plants and

benchmark against the highest industry standards. Safe Water Partnership utilities have demonstrated their commitment to production and delivery of superior quality water.

As part of routine operations and maintenance activities of the Water System, the District may discharge some treated water to the environment. Public water system discharges to State and federal waters are regulated under a Statewide General NPDES Permit for Drinking Water System Discharges. The statewide permit is administered by the SWRCB and enforced by the San Francisco and Central Valley Regional Water Quality Control Boards (the respective “Regional Board”) for parts of the system in the San Francisco Bay Area and Central Valley, respectively. This permit imposes discharge limitations, monitoring, reporting, notification requirements, and application of Best Management Practices to mitigate any potential impacts to the environment. The permit was issued in 2014, the District applied for coverage in June 2015, and received notice from the SWRCB of coverage under the statewide permit in October 2015. The permit is scheduled to be updated in 2020.

The District is generally operating and maintaining the Water System treatment, distribution, and transmission facilities in compliance with the NPDES permit requirements. In October 2015, November 2015, and May 2016, the District experienced unplanned emergency potable water discharges associated with water main breaks. Despite rapid staff response and deployment of industry best management practices to the maximum extent practicable to minimize impacts, the potable water releases from these main breaks reached local waterways and resulted in fish kills. The District negotiated a settlement agreement and administrative civil liability order with the San Francisco Regional Board and CDFW in connection with these incidents. The agreement imposed an administrative civil liability totaling \$893,190 to resolve the alleged violations. A portion of the settlement amount (\$382,095) was suspended pending successful completion of an Enhanced Compliance Action (“ECA”). The ECA involves installation of approximately 970 leak detection loggers at 485 locations near creeks and providing quarterly reports to the Regional Board for three years. Implementation of the ECA is ongoing. In September 2017, the District reported to the San Francisco Regional Board an exceedance of the limit for residual chlorine in the filter backwash discharge at the Orinda Water Treatment Plant. Approximately 230,000 gallons of water containing 0.22 mg/L of chlorine or less was discharged to San Pablo Creek (the permit limit is less than 0.1 mg/L total chlorine residual). The event was identified when staff analyzed a sample of the discharged water which indicated the presence of chlorine. The online instrumentation did not indicate chlorine in the discharge. No environmental impacts to the creek were observed. The District negotiated a settlement agreement with the San Francisco Regional Board and has implemented corrective actions. Under the settlement agreement, the District paid \$60,050 in penalties and another \$60,050 towards an ECA project to install two new chlorine analyzers in the distribution system.

As described herein, the operation of the Water System is subject to a variety of federal and State statutory and regulatory requirements concerning matters such as water quality, dam safety, instream fishery flows, discharges and endangered species. The District’s failure to comply with applicable laws and regulations could result in significant fines and penalties. In addition to claims by private parties, changes in the scope and standards for public agency water systems such as the Water System may also lead to administrative orders issued by federal or State regulators. Future compliance with such orders could also impose substantial additional operating costs on the Water System.

Statewide Water Issues

Over the last 20 years, there has been ongoing attention at the State and federal level on restoring the Bay-Delta. In 2006, multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (“BDCP”). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit

authorizations from fish and wildlife regulatory agencies. The BDCP would have included water conveyance infrastructure and extensive habitat restoration in the Bay-Delta.

In 2015, the State and federal lead agencies abandoned the concept of a comprehensive BDCP and instead proposed an alternative strategy to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed “California WaterFix” and “California EcoRestore,” respectively. California WaterFix is a proposal for new water conveyance that would be built to divert Sacramento River water into a tunnel system that would bypass the Bay-Delta, through twin tunnels (in the project configuration as approved by CDWR) following a fairly direct alignment between several intake facilities on the Sacramento River and south to the Clifton Court Forebay, a reservoir on the Bay-Delta in Contra Costa County, approximately 17 miles southwest of Stockton. California EcoRestore is an assortment of ecosystem restoration measures to improve habitat and ecosystem function to benefit fish and wildlife.

The Mokelumne River, the District’s primary source of water supply, is a small Delta tributary that originates in the Sierra Nevada mountains. Although the District does not deliver Bay-Delta water to customers, approximately 15 miles of the District’s aqueducts cross the Bay-Delta. See also “– Water Facilities” and “– Water Supply Operations.” The District’s water rights were not directly affected by the California WaterFix proceedings because the SWRCB would only be granting permits under existing water rights held by the Bureau and CDWR, and the SWRCB had explicitly indicated that other water rights holders were not intended to be harmed by any permits granted to California WaterFix. However, the District filed a lawsuit challenging the project’s environmental impact report and also filed a protest against the WaterFix’s water rights change petition, which sought to allow the California WaterFix to divert water from new intakes on the Sacramento River. The District’s suit and protest were based on the following:

- the District’s fishery restoration efforts on the Mokelumne could be impacted by operation of the California WaterFix;
- the California WaterFix tunnels would intersect the District’s aqueduct alignment and potential future District tunnel alignment through property owned by the District, and any construction impacts would need to be mitigated; and
- operation of the California WaterFix could result in degraded water quality at the Freeport Intake by increasing the frequency of reverse flows at that location, thereby impacting the District’s use of that facility.

In February 2019, the newly elected Governor of California presented a conceptual proposal at the State of the State address supporting a single-tunnel configuration for California WaterFix, rather than the approved two-tunnel configuration. As a result, on May 2, 2019, CDWR and the Bureau withdrew their joint water right change petition for the California WaterFix. Following the petitioners’ withdrawal of the California WaterFix petition, the SWRCB ended the WaterFix water right hearing on May 16, 2019. It is unclear at the present time what the impacts of the now contemplated single tunnel project will be. The District will continue to monitor developments to assure its interests in the Delta are not adversely impacted by the reconfigured Delta conveyance project or any related projects, and to assess what the operational and financial impacts of any proposed project may be.

Climate Change

Global climate change is expected to create greater uncertainty in water supplies and demands in the future. The District has developed mitigation and adaptation strategies to deal with the changing climate and its effect on water resources. In 2008, the District incorporated climate change into its Strategic Plan, and developed an adaptable and flexible plan that considers many uncertainties, including

climate change, in its Water Supply Management Plan. The District also prepared a climate change monitoring and response plan to inform future water supply, water quality, and infrastructure planning.

The District's response to climate change focuses on:

- keeping current with science and assessing potential effects of climate change in the Mokelumne and East Bay watersheds;
- determining water supply and infrastructure vulnerabilities;
- monitoring and reducing greenhouse gas emissions caused by the District's operations;
- integrating climate change in strategic planning and budgeting decisions;
- advocating for new legislation and regulations that help water and wastewater agencies better respond to climate change; and
- developing adaptation and mitigation strategies as part of a water supply management program, including an ongoing emphasis on water use efficiency on both the supply-side and the demand-side.

In 2013, the District adopted aggressive greenhouse gas reduction emissions goals with a goal to reduce indirect emissions (those related to electricity use) to zero by 2040 and to reduce direct emissions (those from District facilities and equipment) by 50% compared to 2000 levels by 2040. In 2017, the District met its interim targets for such year for direct, indirect and total emissions. Total emissions in 2017 were 54% less than the year 2000 levels.

Seismic and Wildfire Matters

Seismic Considerations. The District's service area is in a seismically active region of the State. The Hayward Fault runs through the entire western portion of the District and the Calaveras Fault runs through the southeastern portion of the District's service area. The Concord and Mt. Diablo Thrust Faults are located close to the east side of the District's service area and the San Andreas Fault is located to the west. The Pardee and Camanche Dams, and the District's three aqueducts that carry raw water from Pardee Reservoir to the District's service area, are in other active earthquake fault areas. Even though the District has not experienced significant earthquake-related damage to its facilities, the District's Water System and/or its water supply could be adversely affected by a major local earthquake causing damage to the District's water treatment and distribution system, the Pardee or the Camanche Dams, or the aqueducts delivering raw water to the District's service area.

In the next 30 years, there is a high probability of an earthquake occurring in the San Francisco Bay Area that is greater than magnitude 6.7, according to the United States Geological Survey. A 1994 seismic study prepared for the District examined the likely effects of earthquakes on the Hayward Fault, the Calaveras Fault and the Concord Fault at that time on the District's Water System. The study concluded that a magnitude 7.0 earthquake on the Hayward Fault would likely cause major damage to the water transmission tunnels, substantial damage to distribution pipes, damage to potable water reservoirs and operational disruptions of the District's pumping plants, rate control stations and water treatment plants. The study also indicated that the District could also experience significant damage as a result of lesser magnitude earthquakes on the Hayward Fault or earthquakes on the Calaveras or Concord Faults. If damage to the Claremont tunnel made it unusable, severe water rationing would be required in the western portion of the District's service area during an estimated 26-week repair period. Further, the study found that repair efforts on the District's Mokelumne Aqueducts after severe damage could take up to one year before water could be transported again to the District's terminal reservoirs. This would require stringent customer conservation, as the District's terminal reservoirs store roughly six months'

supply under normal consumption patterns. A major earthquake could also have a severe adverse impact on the economy of the District's service area.

In response to the 1994 seismic study, the District initiated a multi-year Water System seismic improvement program. By 2007, the District had completed its Seismic Improvement Program (the "SIP"), a \$200 million investment which focused on improving seismic performance of the distribution system and facilities, thereby increasing the reliability of water service post-earthquake. The SIP included upgrades to 70 reservoirs, 130 pumping plants, six water treatment plants, three maintenance yards, the Administration Building, and various electrical equipment anchorages throughout the District. It also included completion of an alternate transmission pipeline, the Southern Loop; completion of a fault-line by-pass for the primary transmission tunnel, the Claremont Tunnel; and seismic upgrades of Mokelumne Aqueduct No. 3, which is the aqueduct most relied on by the District to carry water across 15 miles of the Sacramento-San Joaquin Delta.

Since the completion of the SIP improvements, the District continues to enhance seismic safety as part of its comprehensive capital improvement project planning process. See "– Capital Improvement Program." That process includes the integration of seismic upgrades into ongoing facility renewal work, as well as the completion of, and additional planned, major seismic upgrades. A \$76 million seismic upgrade to the San Pablo Reservoir dam, the largest of the local water storage reservoirs, was completed in 2010. Evaluations and/or safety reviews have also been completed at all of the District's dams. Seismic upgrades at Chabot Dam and Upper San Leandro, both in Alameda County, were completed in 2018. Retrofits to the Chabot, Upper San Leandro and San Pablo reservoir towers have also been completed. A previous seismic evaluation of the Pardee reservoir tower found no retrofits to that tower to be necessary. As part of the current five-year capital plan, the seismic retrofit of two additional reservoir towers (Briones and Lafayette) is anticipated. A new cycle of seismic reviews is also beginning to account for accumulated changes in seismic evaluation standards and safety requirements. Among other things, seismic studies are scheduled to commence for Pardee Dam.

Despite the completed and continuing seismic work, in the event of significant earthquake damage to the Water System and/or the District's service area, there can be no assurance that Subordinated Water Revenues would be sufficient to pay the principal of and interest on any outstanding Water System Revenue Bonds.

Wildfire Considerations. The Mokelumne River watershed and the District's watershed lands in the East Bay are in areas with an elevated risk of wildfires. Catastrophic wildfire in these watershed areas could severely damage water quality, and could adversely impact other resources, including soils, fish, wildlife, air quality, carbon capture, and recreation resources. The District has an active program to manage fire risk and vegetation on its District-owned properties both in the Mokelumne River watershed and in the East Bay. Within approximately 575 square miles of watershed above Pardee Reservoir, the District works with partner agencies including the United States Forest Service, local counties, and local water agencies to identify forest lands in need of rehabilitation. The District, along with five other water agencies (AWA, Calaveras County Water District, CPUD, Jackson Valley Irrigation District and Alpine County Water Agency), and the counties of Amador, Calaveras and Alpine, are members of a California joint powers agency known as the Upper Mokelumne River Watershed Authority. Through the Upper Mokelumne River Watershed Authority, the District is participating in the implementation of a 14,000-acre forest rehabilitation program. The District annually devotes resources in the Sierra Nevada foothills to the reduction of fuel loading through grazing, prescribed burns, and tree and brush removal.

Dam Licensing and Safety Issues

As part of its Water System facilities, the District manages a number of dams. These include Pardee Reservoir in the Mokelumne River watershed, its main source of water supply, Camanche

Reservoir, which stores water south of Pardee Reservoir and operates to meet regulatory and environmental obligations, including flood control and for downstream users, the District's five local water supply reservoirs, and more than 20 open-cut reservoirs that hold treated water. The dams range from 8 feet to 345 feet tall and were built from the late 1800s to 1990.

Most of the District's dams are under the jurisdiction of CDWR's Division of Safety of Dams ("DSOD"). Pardee and Camanche Dams are also under the jurisdiction of FERC because they produce hydropower. These regulatory agencies perform independent annual dam inspections, which are the basis of annual recertification that allows continued operation of the dams. The regulators also review plans and specifications for the enlargement, alteration, repair or removal of existing dams under their respective jurisdiction. DSOD and FERC also conduct investigations of selected dams and direct the owners to do additional investigations and detailed safety evaluations when necessary.

The District has a comprehensive Dam Safety Program guided by the District's Dam Safety Program policy ("Policy 9.07"). Policy 9.07 requires management of District-owned dams and accompanying facilities to assure dam safety, structural integrity and operational safety for the protection of life, property and the environment. Engineers monitor dams using instruments, and perform monthly visual inspections and periodic reviews to ensure the safety of dams. If any areas of concern arise, repairs are planned and completed. Operations are adjusted if necessary to maintain public safety (*e.g.*, reducing the water level to provide additional space in the reservoir or reduce water loads). In addition, the safety of each dam is reevaluated with advances in geotechnical, structural and earthquake engineering, and also if there is evidence of seepage, ongoing ground movement or other deficiency. Based on the findings of dam safety studies, over the past several decades the District has proactively made, and has ongoing and planned, a number of capital improvements to its dams to ensure their ongoing safety. Major capital improvement projects include: seismic upgrades at San Pablo and Chabot dams; spillway upgrades, modifications or restoration work at Pardee, Chabot and Upper San Leandro dams; relief wells and drainage improvements at Camanche dam; GPS systems at Camanche and Pardee dams; concrete lining repairs at Lafayette dam; and various open-cut dam reservoir replacements and improvements. See also "– Seismic and Wildfire Matters – *Seismic Considerations*" and "– Capital Improvement Program."

Historically, the District's dam safety program has provided for the continual, safe operation of all of the District's dams, with annual recertification received from the regulatory agencies without interruption.

Security and Emergency Preparedness; Cybersecurity

The District has implemented a security program to provide a secure work place; maintain safe and reliable water supply and wastewater services; and to prevent or mitigate potential damage or loss of assets from internal and external threats. The District's Security Office manages the security program which includes assessment, capital, operational and coordination elements. These efforts are guided by the Security Vulnerability Assessment (SVA), water/wastewater industry experience, actual experience at District facilities, and industry standards/guidelines. The program's systems, procedures, and personnel are designed to deter, detect, delay and assess potential criminal actions.

The District has a Security Operations Control Center (the "SOCC") that is staffed seven days a week, 24 hours a day. The SOCC houses a proprietary centralized security system to monitor access controls, video cameras and recorders, and security alarms. The dispatchers at the SOCC monitor alarms, assess conditions using the security system, and dispatch security and law enforcement response as needed for alarms and reports of suspicious circumstances or crimes at District facilities. The security system maintains access controls for water and wastewater treatment, administrative and maintenance facilities, its storage yards and service centers, and the reservoirs and pumping plants in its water

distribution system. District security includes an internal security staff and security contractors. Contract security officers are also used to supplement automated access controls at certain key facilities.

The District maintains an active emergency preparedness program that includes an Emergency Operations Plan to help manage the District's critical operations during any emergency and protect people, property, and the environment. The District also maintains a Business Continuity Program Plan to minimize impacts to critical business functions and enhance its capability to recover operations expediently and successfully following a disruptive incident. Pursuant to State law, District employees are sworn disaster service workers, and staff is trained to use California's Standardized Emergency Management System (referred to as SEMS) and the National Incident Management System (referred to as NIMS) in response to emergencies and security incidents. As part of its Emergency Operations Plan, the District maintains two strategically located emergency operations centers and a mobile emergency command center, and has in place an emergency operations team to lead emergency response activities. The District also has adopted business continuity plans for individual work units to ensure the District's ability to respond to, and recover from, any emergency or other event that disrupts its normal business functions.

The District, like many other large public and private entities, relies on an extensive and complex technology environment to conduct its operations, and faces multiple cybersecurity threats including, but not limited to, hacking, phishing, executive impersonation, denial of service, viruses, malware, and other attacks on its computing and other digital networks and systems. Cybersecurity incidents could result from unintentional events or from deliberate attacks by unauthorized entities or individuals attempting to gain access to the District's systems for the purposes of misappropriating assets or information or causing operational disruption and damage.

The District's cybersecurity program leverages a defense-in-depth approach to maintain the confidentiality, integrity, and availability of the District's business information systems, data, and water and wastewater control systems. There are dedicated IT Security staff who perform a variety of functions, including intrusion detection and prevention, incident response, monitoring for malware, vulnerabilities, and anomalous network traffic, promoting cybersecurity awareness to District staff, and auditing the environment to ensure that configurations remain consistent with security objectives as well as implementing new security controls as needed to stay ahead of continually evolving security threats. Third-party audits and vulnerability assessments are also utilized to identify any potential areas of improvement for the overall cybersecurity program. The District maintains a backup data center to facilitate recovery of critical business systems after a disaster.

Insurance

The District uses a combination of self-funding/self-insuring and insurance coverage in the District's risk management program. The program provides protection for the District's buildings and facilities, including their contents and equipment, from fire, explosion and related perils, including flood. The District's insurance program does not currently include earthquake coverage. The District's reserves, self-insured retentions, deductibles, and insurance are described below.

The District maintains a reserve of approximately \$10 million that is earmarked to pay both liability and workers' compensation claims that may arise from the District's water and wastewater systems' operations. See also "WATER SYSTEM FINANCES – Financial Management Policies."

Selected insurance coverages include the following:

- \$90 million of commercial general and automobile liability insurance, subject to a \$10 million per occurrence self-insured retention for both the Water System and the Wastewater System;
- Statutory limits of excess workers’ compensation coverage, subject to a \$5 million self-insured retention for both the Water System and the Wastewater System;
- \$200 million in coverage for “all risk” property insurance, subject to a \$500,000 deductible, with exclusions including, but not limited to, earthquake, dams, reservoirs, under- and above-ground pipes, and aqueducts;
- \$25 million per occurrence/annual aggregate in coverage for flood perils, subject to a \$1.5 million minimum deductible per occurrence/annual aggregate, with the same exclusions as under the “all risk” policy described above other than above-ground aqueducts for which \$2.5 million in coverage is provided; the policy also provides a flood sub-limit of \$10 million per occurrence/annual aggregate for losses wholly or partially within the areas of 100-year flooding as defined by FEMA with a deductible of 5% of the total insurable property values at the time of the loss at each location involved in the loss or a minimum deductible of \$1.5 million;
- \$25 million in coverage for boiler and machinery insurance, subject to a \$25,000 deductible; and
- \$10 million in coverage for crime insurance for protection against fraudulent acts of employees, subject to a \$25,000 deductible.

Capital Improvement Program

Since Fiscal Year 2002, the District has implemented a biennial budget. In the spring of odd-numbered years, a budget is presented to the Board for consideration for the two ensuing Fiscal Years. The biennial budget planning process includes a review of projected long-term (10 years) facilities needs and the development of a capital expenditure forecast for the ensuing five fiscal years. A series of master plans document the identified facilities needs by asset classes (*e.g.*, pipelines, reservoirs and other assets) and include assessments of key facilities, taking into consideration condition assessments, operational performance and maintenance histories. Facilities in need of rehabilitation or replacement are identified and prioritized. Project scopes are also defined (for example, replacement of aging mechanical or electrical equipment, seismic upgrades, or other defined scopes).

The master plans are considered during the biennial update to the Capital Improvement Program (the “CIP”). The previous CIP was updated in 2017 in connection with developing the biennial budget for Fiscal Years 2018 and 2019 and included a five-year capital expenditure forecast for Fiscal Years 2018 through 2022. Based upon this CIP forecast, cash expenditures for capital improvements to the Water System for Fiscal Years 2018 through 2022 were estimated to aggregate approximately \$1.502 billion.

An updated forecast of CIP expenditures has been developed in connection with the biennial budget for Fiscal Years 2020 and 2021. The proposed biennial budget, including the five-year capital expenditure forecast for Fiscal Years 2020 through 2024, was presented to the Board on March 26, 2019. The biennial budget for Fiscal Years 2020 and 2021 was approved by the Board on June 11, 2019.

In the Fiscal Year 2020 through 2024 CIP, the District is continuing its focus on investments in infrastructure rehabilitation, repair and replacement. The five-year CIP cash expenditures are projected to aggregate approximately \$1.896 billion, a 26% increase over the current CIP. The increase is primarily related to the District’s programs for replacing aging water distribution pipelines, service laterals and large diameter pipelines, and continuing to retrofit the anchors on one of the Mokelumne Aqueducts. This

strategy is reflected in the substantial portion of the CIP expenditure forecast dedicated to maintaining infrastructure. In the area of water quality, the CIP forecast also includes new projects related to water treatment plant upgrades.

Table 6 summarizes the District's projected CIP cash expenditures for Fiscal Years 2020 through 2024 by major category as forecast in the biennial budget for Fiscal Years 2020 and 2021.

Table 6
Fiscal Years 2020-2024
Capital Improvement Program
FY 2020 and FY 2021 Biennial Budget
Forecast – Cash Expenditures⁽¹⁾
(Thousands)

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>Total⁽³⁾</u>	<u>% of Total</u>
Maintaining Infrastructure	\$155,508	\$166,610	\$172,105	\$178,327	\$175,426	\$ 847,978	44.7%
Extensions/Improvements	47,555	38,676	36,501	23,763	71,717	218,211	11.5
Facilities, Services & Equipment	37,033	34,556	19,676	12,207	10,090	113,562	6.0
Regulatory Compliance	11,875	25,020	11,036	7,861	5,851	61,642	3.3
Water Supply	26,647	35,766	54,863	48,399	42,946	208,621	11.0
Resource Management	2,802	3,171	3,681	793	1,017	11,462	0.6
Water Quality	16,329	41,701	60,546	71,147	36,741	226,463	11.9
Admin. & General Expense ⁽²⁾	<u>40,000</u>	<u>40,000</u>	<u>41,300</u>	<u>42,642</u>	<u>44,028</u>	<u>207,970</u>	<u>11.0</u>
Total ⁽³⁾	\$337,748	\$385,500	\$399,707	\$385,138	\$387,816	\$1,895,900	100.0%

⁽¹⁾ Cash expenditures include spending for projects appropriated in earlier Fiscal Years.

⁽²⁾ Includes overhead, construction management and other administrative costs which are allocated to individual projects upon their completion.

⁽³⁾ Totals may not add due to rounding.

Source: The District.

The cost estimates are subject to revision in connection with the subsequent five-year CIP forecast prepared as part of the biennial budget planning process. See also “– *Construction-Related Risks*” below.

Included in the five-year CIP for Fiscal Years 2020 through 2024 as reflected in the biennial budget for Fiscal Years 2020 and 2021 are the major programs and projects described below:

Maintaining Infrastructure. Projects for maintaining infrastructure further the District's objectives to improve, rehabilitate and replace aging infrastructure in a cost effective manner to ensure the sustainable delivery of reliable, high quality water service now and in the future. Work in this category focuses on pipeline projects to improve system reliability, improvements to reservoirs and pumping plants, and installing new services.

The Pipelines/Appurtenances program is designed to maintain efficient pipeline operations by replacing appurtenances such as valves, hydrants and meters at the end of their useful life. The New Service Installations project covers installation of services for new customers and includes taps on the main, laterals, and meter sets. The need for new services is expected to increase as housing development continues to rise. To comply with measures associated with California Senate Bill 555, a new Water Loss Control project was created to improve the accuracy of the District's water audit and reduce water losses in the distribution system.

The Pipeline Infrastructure Renewals project is an ongoing project to replace deteriorating water distribution pipelines, identified primarily through the evaluation of maintenance histories. Planned work includes replacing 17.5 miles of pipelines in Fiscal Year 2020, ramping up to 22.5 miles per year by Fiscal Year 2023 in conjunction with the Pipeline Rebuild program which is aimed at implementing more efficient replacement processes and installation methods. The Large Diameter Pipelines project is similarly an ongoing project to replace the large transmission pipes that form the backbone of the distribution system.

The Pipeline System Extensions program is focused on service to new customers. The workload is estimated from projections of land development activity and recent trends in water service estimates in the District's New Business Office.

The Polybutylene Lateral Replacement program previously focused on the replacement of defective polybutylene service laterals, but has been restructured to include replacing corroding copper laterals. Crews will continue the practice of replacing laterals within areas that have suffered high failure rates (planned replacements) at roughly 400 replacements per year.

In Fiscal Years 2020 through 2024, work in the Maintaining Infrastructure category also includes planning, design and construction at 27 of the District's 128 distribution pumping plants; the rehabilitation of three to four steel or concrete reservoirs per year; and the rehabilitation of open-cut reservoirs. Reservoir work may also include replacement or demolition to improve water quality and enhance worker safety.

System Extensions and Improvements. System Extensions and Improvements projects further the District's objectives to improve the infrastructure to ensure reliable, high quality service, and update and enhance the District's system modeling capabilities. Work under this category focuses on making improvements to various components of pressure zones by first studying individual pressure zones and compiling the studies into the Distribution System Master Plan. Improvements include upgrading or replacing reservoirs, pumping plants and transmission systems to optimize storage capacity and improve water quality for existing customers, and to provide service to new customers.

Pressure zone work is scheduled to take place at Almond/Fire Trail in Castro Valley; Encinal Cascade in Orinda; Leland in Lafayette/Walnut Creek; Maloney in El Sobrante/Pinole/Crockett; Wildcat in Berkeley/El Cerrito; and Fontaine in Oakland. Additional work includes a new Happy Valley Pumping Plant in Orinda; replacing the Fay Hill Pumping Plant in Moraga; and a new Ardith Reservoir and Donald Pumping Plant in Orinda.

Facilities, Services & Equipment. Facilities, Services and Equipment projects further the District's objectives to ensure the security of the water supply and the water system; to evaluate facilities and implement corrective maintenance programs; to implement changes in technology; and to maintain a safe, well-equipped workplace. Work in this category includes making security improvements at various facilities, implementing new computer systems, and replacing vehicles and equipment as needed.

The Area Service Center/Building program is comprised of various projects that improve and upgrade District buildings. The focus during Fiscal Years 2020 through 2024 will be on the Oakland Administration Building HVAC improvements to increase energy efficiency, overhauling the elevators, new roofing for the terraces, upgrading electrical equipment and installing new security cameras. Other work includes completing the conversion of a property purchased in Walnut Creek into the new Fleet Maintenance East facility, replacing the Oakport warehouse roof and developing additional storage space, making various improvements at the Adeline Maintenance Center, and upgrading facilities at Walnut Creek Pumping Plant, Bixler Maintenance Center and Stockton Center to meet ADA requirements.

The Communications program comprises projects that replace and upgrade computer and communication systems. The Materials Management Information System that is used for purchasing and accounting purposes will be replaced along with the Financial Information System and the Budget System. These systems share data and are required to be integrated. Various modules of the Human Resources Information System are also scheduled to be replaced, along with various Work Management Systems such as general work orders, and concrete and paving orders.

The Vehicle Replacements project is ongoing and involves the periodic replacement of vehicles and construction equipment as needed. In Fiscal Years 2020 and 2021, the necessary equipment will be purchased to outfit additional staff and decrease the reliance on fully manned and operated contracts. Also, improvements will be made to the District's fueling facilities.

Regulatory Compliance. Regulatory Compliance projects further the District's objectives to operate and maintain facilities to meet all air, land and water discharge requirements; implement preventative and corrective maintenance programs; and improve the infrastructure to ensure delivery of reliable, high quality service. The work in this category focuses on upgrades to dams, reservoir outlet towers, clearwells and spillways to meet flood and earthquake safety requirements.

Evaluations and/or safety reviews have been completed at all of the District's dams. Upgrades at Camanche Dam are planned to begin in Fiscal Year 2022. In addition, the seismic retrofit of two reservoir towers (Briones and Lafayette) is scheduled to be undertaken through Fiscal Year 2023. Updated seismic reviews using current engineering standards are also planned for Fiscal Year 2021 at two District reservoirs.

Trench spoils material is generated from pipeline installations and repairs, and is stockpiled at three disposal sites for future reuse or disposal. The sites are managed in accordance with regulatory requirements, the spoils are removed periodically, and soils reduction and disposal alternatives are being evaluated. The project also includes evaluating and potentially purchasing a property for additional trench soils purposes as soils production is expected to increase as more miles of pipe are replaced under the Pipeline Rebuild Program.

Water Supply. Water supply projects further the District's objectives to ensure a reliable, high quality water supply for the future; to preserve current entitlements and augment the District's water supply; and to reduce the demand for potable water through conservation and recycling. The near-term focus of work in this category is on maintaining the raw water aqueducts and water recycling projects.

The Aqueducts program consists of evaluating and improving the raw water system. Various portions of Mokelumne Aqueduct No. 1 will be recoated to provide protection from the corrosive Bay-Delta environment. The program also includes replacing the deteriorated cement lining in the Mokelumne Aqueducts that protect the steel pipeline from internal corrosion. Work includes studying lining technologies and pilot testing lining materials; inspecting the interior of Mokelumne Aqueduct 2 and above-ground section of Mokelumne Aqueduct 3; followed by design and construction of the aqueduct relining. In addition, the District will continue to retrofit the temperature anchors and base isolators on the Mokelumne Aqueducts, and upgrade the Briones Center and the Moraga Raw Water Pumping Plant.

The Water Supply Management program guides decisions for providing a reliable, high quality water supply to meet the growth in demand through the year 2040, while offsetting the demand for potable water through water conservation and recycled water.

The SRVRWP is a joint project with DSRSD to supply recycled water to portions of San Ramon, Danville, Blackhawk and surrounding areas. Expansion of the tertiary treatment facilities from 9.7 MGD to 16.5 MGD has been completed to allow additional customers to be connected, and a pump station

between San Ramon and Danville is expected to be completed in Fiscal Year 2024. See “– Water Supply – Water Recycling.”

Resource Management. Resource Management projects further the District’s objectives to manage the Mokelumne and East Bay watersheds to ensure a high quality water supply; protect natural resources; and provide public access and recreational opportunities compatible with water quality and natural resource protection. Work under this strategy focuses on making improvements to recreational facilities at Camanche, Pardee and East Bay Reservoirs.

Projects include replacing the piping and delivery equipment between the fuel tanks and floating fuel dock at Camanche North Shore, and replacing the Pardee Recreation Area coffee shop and store. Projects at the San Pablo and Lafayette Recreation Areas include picnic area, playground and restroom improvements; visitor center and cafe upgrades; marina and dock improvements; water and sewer system upgrades; repaving primary roadways; and replacing rental boats. Watershed projects include trail staging area upgrades; habitat and pond restoration; hazardous tree removal; and replacing fire pumps, boundary fence and patrol boats. Work at the Mokelumne Watershed Headquarters includes a new fuel station and construction of a modular warehouse/shop building.

Water Quality. Water quality projects further the District’s objectives to operate and maintain facilities to surpass federal and State drinking water regulations, and to make system improvements that meet or surpass regulatory requirements. Work in this category is focused on making improvements to water treatment plants to improve water quality and reliability. In Fiscal Years 2020 through 2024, work is planned at five water treatment plants and includes the rehabilitation and renovation of systems such as filters, chemicals, air scours, solids handling and removal, wash water reclamation, oxygenation/mixing, controls, and ozone pre-treatment.

Other Potential Projects. The District also appropriates funds to meet unanticipated capital needs and for projects that are seeking grant funding. Such needs include replacement or repairs to facilities and equipment as a result of failures or safety deficiencies, and new projects or the acceleration of planned projects requiring funding before the next budget cycle. Funds are also available for grant funded projects that normally require the District to advance the costs and then apply for reimbursements. The District also has contingency funds in its capital budget for costs related to building two large scale photovoltaic projects, and costs related to developing additional office and warehouse space at the Oakport facility in Oakland.

The District’s estimated funding sources for its CIP for Fiscal Years 2020 through 2024 as reflected in the biennial budget for Fiscal Years 2020 and 2021 are set forth in Table 7:

Table 7
Fiscal Years 2020-2024
FY 2020 and FY 2021 Biennial Budget
Sources of Funds for Capital
Improvement Program Expenditures

<i>Funding Sources</i>	<i>(Millions)</i>	<i>% of Total</i>
Revenues	\$ 796.7	42.0%
Bond Proceeds	937.4	49.5
Reimbursements ⁽¹⁾	<u>161.8</u>	<u>8.5</u>
Total	<u>\$1,895.9</u>	<u>100.0%</u>

⁽¹⁾ Includes capital projects in the Water system performed at the request of other agencies for which the District is reimbursed. Also includes work to expand the distribution system to meet new connections not covered by the system capacity charge that is paid for directly by the applicants.

Construction-Related Risks. Construction projects for the Water System are subject to ordinary construction risks and delays applicable to projects of their kind, including but not limited to: (i) inclement weather affecting contractor performance and timeliness of completion, which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; (ii) contractor claims or nonperformance; (iii) failure of contractors to execute within contract price; (iv) work stoppages or slowdowns; (v) failure of contractors to meet schedule terms; (vi) errors or omissions in contract documents requiring change orders; (vii) the occurrence of a major seismic event; or (viii) unanticipated project site conditions, including the discovery of hazardous materials on the site or other issues regarding compliance with applicable environmental standards, and other natural hazards or seismic events encountered during construction. In addition, Water System construction projects may require scheduling system shutdowns to avoid impacting water deliveries and many shutdown windows are inflexible. Increased construction costs or delays could impact the Water System's financial condition in general and the implementation of its CIP in particular. Construction bids may also be higher than anticipated for budgeting purposes.

WATER SYSTEM FINANCES

Basis of Accounting

The District reports operations on a Fiscal Year basis (currently July 1 through June 30). Enterprise funds are used to account for operations that are financed and operated in a manner similar to private business enterprises, where the costs of providing goods and services to the general public are financed or recovered primarily through user charges. Enterprise funds are accounted for using the accrual basis of accounting. The accounting policies of the District conform to generally accepted accounting principles for municipal water and wastewater utilities. The accounts are maintained substantially in accordance with the Uniform System of Accounts prescribed for investor-owned and major municipally-owned water and wastewater utilities.

Sources of Funds

The Water System's principal source of revenues is water sales. In Fiscal Year 2018, approximately 76% of the Water System's \$632.2 million in total sources of funds was provided from water sales. Sources of funds other than water sales include taxes, income from the sale of energy from the District's hydroelectric power plants, investment income, system capacity charges, grants and other capital contributions. In Fiscal Year 2018, the District's share of the countywide 1% *ad valorem* property tax levy contributed approximately 5.5%, or \$34.7 million of the total sources of funds. In Fiscal Year 2018, the Water System's hydroelectric power plants produced power revenues of approximately \$6.4 million and the District's income on investments was approximately \$7.9 million. Capital contributions totaled \$87.6 million, including \$69.3 million of system capacity charges collected during such year, \$15.5 million of contributions for facility relocations, main extensions and service installations (referred to as "earned contributions on construction"), and \$2.8 million of grants and other reimbursements.

Table 8 sets forth the District's Water System sources of funds for the five most recent Fiscal Years ended June 30, 2018. The sources of funds in the table below include certain funds which do not constitute Subordinated Water Revenues for purposes of funds pledged under the Indenture. Subordinated Water Revenues include all charges received for, and all other income and receipts derived by the District from, the operation of the Water System or arising from the Water System, which includes, without limitation, the District's water rates, system capacity charge, and prior to its sunset effective July 1, 2015, its seismic surcharge, as well as investment income, less Operation and Maintenance Costs. Property taxes are applied to reduce Operation and Maintenance Costs and are not pledged to the repayment of the Water System Revenue Bonds. See "– Property Tax Revenues." Earned contributions on construction received for facility relocations, main extensions and service installations, and grants and other

reimbursements, which are restricted to use for the specified purposes are not included in Subordinated Water Revenues for purposes of the Indenture. Only Subordinated Water Revenues are pledged to the payment of the Water System Revenue Bonds. See “SECURITY FOR THE SERIES 2019A BONDS – Pledge of Subordinated Water Revenues” in the front part of this Official Statement. Comparative summaries of the Water System’s historical operating results and debt service coverage ratio for each of the last five Fiscal Years appear in Table 20 under “– Historical Operating Results.”

Table 8
WATER SYSTEM SOURCES OF FUNDS
Five Fiscal Years Ended June 30, 2018
(Millions)

	<i>Fiscal Year Ending June 30</i>				
	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
Operating Revenue and Other Income:					
Water sales	\$367.5	\$362.1	\$421.2	\$420.3	\$480.7
Power sales	1.4	2.2	3.5	7.8	6.4
Interest ⁽¹⁾	1.7	3.5	2.2	3.3	7.9
Taxes	25.5	27.9	29.9	32.0	34.7
Other ⁽²⁾	<u>19.9</u>	<u>15.3</u>	<u>14.0</u>	<u>14.9</u>	<u>14.8</u>
Total Operating Revenue and Other Income ⁽⁶⁾	<u>\$416.0</u>	<u>\$411.0</u>	<u>\$470.8</u>	<u>\$478.3</u>	<u>\$544.6</u>
Capital Contributions:					
Seismic Surcharge ⁽³⁾	\$ 22.6	\$ 22.2	\$ 0.0	\$ 0.0	\$ 0.0
System Capacity Charge ⁽⁴⁾	20.4	29.7	39.3	51.5	69.3
Earned contributions on construction ⁽⁵⁾	5.2	17.1	17.0	14.4	15.5
Grants and reimbursements	<u>0.8</u>	<u>2.5</u>	<u>4.4</u>	<u>10.1</u>	<u>2.8</u>
Total Contributions ⁽⁶⁾	<u>\$ 49.0</u>	<u>\$ 71.5</u>	<u>\$ 60.8</u>	<u>\$ 75.9</u>	<u>\$ 87.6</u>
Total ⁽⁶⁾	<u>\$465.0</u>	<u>\$482.5</u>	<u>\$531.5</u>	<u>\$554.2</u>	<u>\$632.2</u>

⁽¹⁾ Includes interest earnings on Water System Fund, including earnings on proceeds of the District’s Water System Revenue Bonds.

⁽²⁾ Other Revenues include receipts from property sales, rental of District property, fees for use of District recreational facilities and other miscellaneous receipts. Other Revenues also includes interest subsidy payments received in each year by the District in connection with its Series 2010B Bonds which are Build America Bonds. Excludes reimbursements and other receipts applied directly to operating expenses.

⁽³⁾ The sunset of the seismic surcharge became effective July 1, 2015 and beginning with Fiscal Year 2016 the seismic surcharge is no longer being charged.

⁽⁴⁾ System capacity charge collections presented in the table above include the “buy-in” portion and the “future water supply” portion of SCC charges when collected.

⁽⁵⁾ Includes contributions for facility relocations, main extensions and service installations.

⁽⁶⁾ Totals may not add due to rounding.

Source: The District.

Water Sales Revenues

In the Fiscal Year ended June 30, 2018, water sales to residential accounts provided approximately 55.8% of the District’s water sales revenues. Approximately 89.1% of the District’s accounts are residential, but because residential consumption per account is lower than for other customer types, residential sales account for only 51.5% of consumption. The ten largest customers of the District’s Water System consumed approximately 16.8% of the District’s water in Fiscal Year 2018 and accounted

for approximately 9.7% of water sales revenues. The largest account consumed 6.9% of the District's water sold and contributed 3.7% of total water sales revenues and the smallest of the ten largest accounts consumed 0.4% of the total water sold and accounted for approximately 0.3% of water sales revenues.

Table 9 sets forth water sales revenues, consumption and number of connections by customer type for the Fiscal Year ended June 30, 2018.

Table 9
WATER SALES REVENUES, CONSUMPTION AND NUMBER
OF CONNECTIONS BY CUSTOMER TYPE
Fiscal Year Ended June 30, 2018

<i>Type of Customer</i>	<i>Sales Revenues⁽¹⁾</i>	<i>Percent of Revenues</i>	<i>Consumption (MGD)</i>	<i>Percent of Consumption</i>	<i>Number of Connections⁽²⁾</i>	<i>Percent of Connections</i>
Residential	\$268,445,433	55.8%	74.5	51.5%	348,357	89.1%
Commercial	154,491,685	32.1	48.3	33.4	38,245	9.8
Industrial	38,543,535	8.0	15.3	10.6	1,840	0.5
Public Authority	19,264,596	4.0	6.5	4.5	2,352	0.6
Total ⁽³⁾	<u>\$480,745,249</u>	<u>100.0%</u>	<u>144.5</u>	<u>100.0%</u>	<u>390,794</u>	<u>100.0%</u>

⁽¹⁾ Does not include account establishment fees, recycled water fees and certain other miscellaneous charges.

⁽²⁾ Connections as of June 30, 2018.

⁽³⁾ Totals may not add due to rounding.

Source: The District.

Rates and Charges

The District's rates and rate structure are established by the District's Board after a public hearing process, and are not subject to regulation by any other agency. Under California law, the imposition of, or any increase in, a property-related fee or charge, including fees and charges for ongoing water service, is subject to specified procedural requirements (including notice, hearing and protest procedures). In addition, pursuant to California law all such property-related fees and charges are required to meet certain substantive standards, including that such fees and charges must be proportional to the cost of providing service. See "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES – Proposition 218" in the front part of this Official Statement for a discussion of the procedural and substantive requirements to which the District's rate increases are subject.

From Fiscal Year 2015 through Fiscal Year 2019, residential rates for water service have increased by an average of approximately 8.4% per Fiscal Year. The overall average rate increase, which includes the rate increases for all customer classes and rate components, for the same period was approximately 8.6%. The District's increases in water service rates and charges for Fiscal Years 2018 and 2019 were enacted by the adoption on July 11, 2017 of overall average rate increases (including meter, volume, elevation charges, non-potable (recycled) water and private fire service) of 9.25% for Fiscal Year 2018 and 9.00% for Fiscal Year 2019.

Most recently, at a public hearing on June 11, 2019, the Board adopted system-wide rate increases of 6.50% and 6.25% for Fiscal Years 2020 and 2021, respectively.

Table 10 sets forth the average residential and overall average rate increases enacted by the District for the five Fiscal Years 2015 through 2019, and the average residential and overall average rate increases as adopted by the Board on June 11, 2019 for Fiscal Years 2020 and 2021:

Table 10
WATER RATE INCREASES

<i>Fiscal Year</i>	<i>Average Residential Rate Increase</i>	<i>Overall Average Rate Increase⁽¹⁾</i>
2015	9.43%	9.50%
2016 ⁽²⁾	7.35 ⁽²⁾	8.00 ⁽²⁾
2017 ⁽³⁾	7.02 ⁽³⁾	7.00 ⁽³⁾
2018	9.21	9.25
2019	8.99	9.00
2020 ⁽⁴⁾	6.45 ⁽⁴⁾	6.50 ⁽⁴⁾
2021 ⁽⁴⁾	6.24 ⁽⁴⁾	6.25 ⁽⁴⁾

⁽¹⁾ Overall average rate increase includes water rates for all customer classes (including residential) and water rate components.

⁽²⁾ Fiscal Year 2016 rate increase is subsequent to cost of service adjustments. As a result of certain adjustments to individual meter, volume, elevation, non-potable and private fire service rates and charges designed to implement the results of an updated cost of service study completed by the District, different rate increases were applicable for each customer class and for individual customers within each customer class depending on water use and meter size. Rate increase excludes drought surcharge.

⁽³⁾ Excludes drought surcharge.

⁽⁴⁾ A public hearing on proposed rate increases for Fiscal Years 2020 and 2021 occurred on June 11, 2019 at which time the Board adopted the above Fiscal Year 2020 and 2021 rate increases. The adopted rate increase for Fiscal Year 2020 will be effective on bills issued on or after July 1, 2019 and the adopted rate increase for Fiscal Year 2021 will be effective on bills issued on or after July 1, 2020.

Source: The District.

The District's water rate structure is based on a cost of service methodology.

The District updates the Water System's rates and charges biennially in conjunction with the development of its budget. The rates and charges are designed to cover the expenditures identified in the biennial budget for the two ensuing Fiscal Years and to meet identified Board policy goals. In connection with the development of proposed rates and charges for Fiscal Years 2016 and 2017, the District completed a cost of service study aimed toward ensuring that its rates and charges equitably and appropriately recover costs. In addition, during the course of the year preceding the adoption of rates and charges for Fiscal Years 2016 and 2017, the District held a series of public workshops relating to long-term strategies designed to assure its continued financial stability. One of the goals of these activities was the development of a long-term water shortage strategy.

As a result of this planning process, including the cost of service study, a number of changes to the Water System's rates and charges were approved by the Board on June 9, 2015. The adopted revisions to the Water System schedule of rates and charges became effective on bills issued on or after July 1, 2015 for Fiscal Year 2016 and became effective on bills issued on or after July 1, 2016 for Fiscal Year 2017. The adopted revisions included a number of elements, among them: (i) overall average rate increases (including meter, volume, elevation charges, non-potable (recycled) water and private fire service) as described above; (ii) certain adjustments to individual meter, volume, elevation, non-potable and private fire service rates and charges designed to implement the results of the updated cost of service study completed by the District; (iii) the sunset of the District's seismic surcharge which had been imposed on each customer's water bill since May 1996, which sunset was approved following the determination by the District that seismic surcharge revenues then collected to date were sufficient to cover the then remaining costs of construction of the recommended seismic improvements undertaken as part of the SIP; and (iv) implementation of a new system of drought surcharges (hereinafter discussed).

Prior to the adopted revisions to the Water System schedule of rates and charges in 2015, approximately 70% of the District's rate revenue was generated from volumetric-based charges and approximately 30% of the District's rate revenue was generated from fixed charges. Taking into account the potential effects on the rate structure resulting from the sunset of the District's seismic surcharge, the revised rate structure and adopted schedule of rates and charges were designed to maintain a similar ratio of approximately 70%/30% between volumetric charge revenues and fixed charge revenues.

For Fiscal Years 2018 and 2019, the cost of service study was updated for the Fiscal Years 2018 and 2019 budgeted expenses and revenues to develop the required revenue from water rates for Fiscal Years 2018 and 2019. The water rates calculated from the cost of service update for Fiscal Year 2018 reflected a uniform 9.25% increase to the individual water rates in the Fiscal Year 2017 water rate schedule. There was an additional 9.0% increase for Fiscal Year 2019.

For Fiscal Years 2020 and 2021, the District continued to use the results of the 2015 cost of service study with an update for the expenses and revenues developed as part of the Fiscal Years 2020 and 2021 budget process. The water rates adopted for Fiscal Year 2020 reflect a uniform 6.5% increase to the individual water rates in the Fiscal Year 2019 water rate schedule. As approved, there will be an additional 6.25% increase for Fiscal Year 2021.

The District's rate structure consists of two components: a monthly service charge and a commodity charge for water delivered. With the exception of single family residential customers, commodity charges for water delivered are based on a uniform volume rate. Single family residential customers are billed on a three-tier inclining block rate structure.

Table 11 shows the rate schedule effective July 1, 2018 for Fiscal Year 2019, and the rate schedule to be effective July 1, 2019 for Fiscal Year 2020 as approved by the Board on June 11, 2019. For Fiscal Year 2019, the monthly water bill for a typical residential account consuming 800 cubic feet (8 Ccf or 5,980 gallons) per month, excluding any drought surcharge, is \$56.12. As noted above, the District's rates for Fiscal Year 2020, as approved on June 11, 2019, will become effective on July 1, 2019, under which the monthly water bill for a typical residential account consuming 800 cubic feet (8 Ccf or 5,980 gallons) per month, excluding any drought surcharge, would be \$59.74, representing an average increase of 6.45% for residential customers from Fiscal Year 2019 rates. See also Table 21 under "– Projected Operating Results" for a description of projected future rate increases.

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Table 11
WATER SYSTEM RATES AND CHARGES

Service Charge

<i>Meter Size</i>	<i>Effective July 1, 2018</i>	<i>Effective July 1, 2019</i>
	<i>Per Month</i>	<i>Per Month</i>
5/8-inch and ¾-inch	\$24.63	\$26.23
1-inch	37.20	39.62
1 ½-inch	68.65	73.11
2-inch	106.36	113.27
Over 2-inch	Various	Various

Charge for Water Delivered

<i>Rate Class</i>	<i>Effective July 1, 2018</i>	<i>Effective July 1, 2019</i>
	<i>Per Hundred Cubic Feet (Ccf)</i>	<i>Per Hundred Cubic Feet (Ccf)</i>
Basic Rate – Single Family ⁽¹⁾	\$3.76	\$4.00
Basic Rate – Multi Family	5.31	5.66
Basic Rate – Other	5.29	5.63
Elevation Band Surcharges ⁽²⁾ –		
Band 2: Pressure Zones 2 through 5	0.76	0.81
Band 3: Pressure Zones 6 and higher	1.58	1.68

⁽¹⁾ Applies to first 172 gallons per day (7 Ccf) for single family residential customers. In Fiscal Year 2019, additional consumption by residential customers is billed at \$5.17 per Ccf for consumption between 173 and 393 gallons per day (16 Ccf), and \$6.83 for all water used in excess of 393 gallons per day. For a household using 8 Ccf in Fiscal Year 2019, the water usage charge for the first 7 Ccf at the first tier rate of \$3.76 per Ccf is \$26.32 and the water usage charge for the additional 1 Ccf at the second tier rate of \$5.17 per Ccf is \$5.17, for a total charge for water delivered of \$31.49; the monthly service charge is \$24.63, resulting in a total monthly bill of \$56.12. Under the adopted rates for Fiscal Year 2020, additional consumption by residential customers will be billed at \$5.51 per Ccf for consumption between 173 and 393 gallons per day (16 Ccf), and \$7.27 for all water used in excess of 393 gallons per day. For a household using 8 Ccf in Fiscal Year 2020, the water usage charge for the first 7 Ccf at the first tier rate of \$4.00 per Ccf would be \$28.00 and the water usage charge for the additional 1 Ccf at the second tier rate of \$5.51 per Ccf would be \$5.51, for a total charge for water delivered of \$33.51; the monthly service charge would be \$26.23, resulting in a total monthly bill of \$59.74.

⁽²⁾ The water elevation surcharge provides for the increased power and facility costs needed to pump water to locations (zones) 200 or more feet above sea level.

Source: The District.

Drought Surcharges

In June 2015, in connection with the adoption of rates and charges for Fiscal Years 2016 and 2017, the District's Board of Directors adopted drought surcharges that may be implemented in the event of ongoing drought conditions when the Board declares specific drought stages pursuant to its water shortage contingency plan. The drought surcharges, corresponding to increasingly severe stages of water shortages, are applied to each unit of water used during the billing period, and are calculated to recover costs of providing supplemental water, increased costs of water shortage-related customer service and loss of revenue. The District's enacted rates and charges for Fiscal Years 2018 and 2019 included an update to the system of drought surcharges (although as noted below, commencing with bills issued on and after July 1, 2016, there are no drought surcharges currently in effect for District customers). The District's adopted rates and charges for Fiscal Years 2020 and 2021 include maintenance of the existing system of drought surcharges.

The staged system of drought surcharges and expected water use restrictions and supplemental supply needs for each of the four drought stages are summarized below.

Staged System of Drought Surcharges

Drought Stage based on Total System Storage:	0	1	2	3	4
Demand Reduction	--	Voluntary 0-15%	Voluntary 0-15%	Mandatory Up to 15%	Mandatory ≥ 15%
Supplemental Supplies	--	--	Up to 35,000 acre-feet	35,000- 65,000 acre-feet	≥ 65,000 acre-feet
Rates and Charges	Normal rates	Normal rates	Normal rates + Up to 8% surcharge	Normal rates + Up to 20% surcharge	Normal rates Up to 25% surcharge

The District's adopted schedule of drought surcharges is set forth below. The surcharges do not apply to non-potable water.

Drought Surcharges on Total Water Flow Charge for Water Delivered

	Maximum Applicable Drought Surcharge Percentage in 4 Stages			
	1	2	3	4
All potable water flow charges	0%	8%	20%	25%

In the previous bond disclosure, the District reported that the system of drought rates included a penalty on excessive water use in stages 3 and 4 to be applicable to the single family residential customer class. Pursuant Resolution 34081-16, adopted by the Board on April 26, 2016, the Board suspended the imposition of penalties on excessive water use in stages 3 and 4, applicable to single family residences. The suspension of the implementation of excessive water use penalties took effect on May 3, 2016.

Commencing with bills issued on and after July 1, 2016, there are no drought surcharges currently in effect for District customers. See also "THE WATER SYSTEM – Drought Management."

Comparison of Annual Water Service Charges

Table 12 shows comparative average annual water service charges by various Bay Area water agencies for a typical residential account with a 5/8-inch meter using 800 cubic feet of water (5,980 gallons) per month. Charges are for the minimum cost zone or area served by the agency based on rates effective (or proposed) as of July 1, 2019. The water service charges for the District in the table below reflect the rates approved on June 11, 2019 to become effective as of July 1, 2019.

Table 12
COMPARATIVE ANNUAL RESIDENTIAL WATER CHARGES
For 8 Ccf/Month and 5/8" Meter
Effective Rates as of July 1, 2019⁽¹⁾⁽²⁾

<i>Water Supplier</i>	<i>Average Annual Household Water Service Charge⁽³⁾</i>
City and County of San Francisco	\$997
City of Palo Alto ⁽⁴⁾	964
City of San Jose	885
Marin Municipal Water District ⁽⁵⁾	865
City of Livermore	779
Alameda County Water District	751
City of Los Altos	726
East Bay Municipal Utility District⁽⁶⁾	717
City of Hayward	701
Contra Costa Water District	689
Dublin San Ramon Services District ⁽⁴⁾	670
North Marin Water District	634
City of Pleasanton	438

⁽¹⁾ Unless otherwise noted, the table reflects charges based on rates applicable as of July 1, 2019 regardless of characterization as base rates or other characterization.

⁽²⁾ Rates have been obtained from publicly available sources and have not been independently verified by the District.

⁽³⁾ Chart does not reflect a comparison of average single family residential bill for each agency. The comparison is based on 8 Ccf/mo usage, which represents the average for the District. Average or typical single family residential water use at the other agencies may be lower or higher than 8 Ccf/mo.

⁽⁴⁾ Proposed rates for Fiscal Year 2020.

⁽⁵⁾ Rate includes \$163.50 collected on property tax bill.

⁽⁶⁾ Reflects the District's rates for Fiscal Year 2020 as adopted on June 11, 2019.

Source: The District.

Billing and Collection Procedures

All water service customers are billed directly by the District bimonthly, with the exception of approximately 1,000 accounts consisting of the largest users in the District, which are billed monthly. Billing is staggered throughout the billing cycle by geographic location within the District. Service may be discontinued if an overdue account is not paid after appropriate customer notification. The District considers its rates of payment delinquency, service discontinuance for non-payment, and write-offs for uncollectible accounts to be low by water industry standards for urban areas. Following retention of a new collection vendor and implementation of a new delinquent payment process, write-offs for uncollectible revenues have been further reduced. Write-offs for uncollectible accounts for the last five Fiscal Years are set forth in Table 13.

Table 13
WATER SALES UNCOLLECTIBLE REVENUES
Last Five Fiscal Years

<i>Fiscal Year Ended June 30</i>	<i>Uncollectible Revenues</i>	<i>Percent of Gross Billings</i>
2014	\$1,638,731	0.42%
2015	1,257,822	0.33
2016	971,828	0.23
2017	951,861	0.23
2018	904,840	0.19

Source: The District.

System Capacity Charge

The District's system capacity charge ("SCC") is designed to recover from new accounts a portion of the costs of existing facilities, as well as the costs of additional facilities (primarily water supply projects) to be constructed in the future to provide water service to new customers based on land use plans. Under the existing SCC policy, funds collected from SCCs are applied toward the costs of the District's capital program for such facilities, and in the case of future water supply projects, to reimburse the Water System for the payment of debt service on Water System Revenue Bonds issued to finance such facilities.

The SCC includes both a "buy-in" portion and a "future water supply" portion. The "buy-in" portion includes the costs of existing District storage, treatment and distribution facilities, as well as existing water supply facilities (including reservoirs and aqueducts) and administration facilities. As the "buy-in" portion of the SCC, new accounts are charged for their share of the costs of these existing District facilities (escalated to current dollars). The "future water supply" portion of SCC receipts is collected to fund the costs of additional facilities required to serve new accounts. The "future water supply" portion of SCC receipts when collected are deposited in the Future Water Supply Fund, a segregated account of the Revenue Fund, to be applied to offset debt service costs attributable to SCC-related capital facilities. In Fiscal Year 2018, SCCs collected totaled \$69.3 million (the "buy-in" portion of \$47.0 million and the "future water supply" portion of \$22.3 million).

For purposes of the Indenture, the District has included in the SCC Revenues, as shown in Table 20 for Fiscal Years 2014 and 2015, the "buy-in" portion of SCC charges when collected and the debt service repayment component of the "future water supply" portion of SCC charges when applied from the Future Water Supply Fund to offset debt service costs attributable to SCC-related capital facilities. Beginning with Fiscal Year 2016, all SCC Revenues are treated as Water Revenues when collected for purposes of the Indenture.

For financial statement purposes, however, the District has elected to account for both the "buy-in" portion of SCC charges when collected and the debt service repayment component of the SCC when applied as part of capital contributions in the Statements of Revenues, Expenses, and Changes in Net Position. As a result, no SCC amounts are reflected as operating revenues in the District's financial statements.

Property Tax Revenues

The District's share of the countywide 1% *ad valorem* property tax levy has provided approximately 5% to 6% of the revenues of the Water System in each of the past five Fiscal Years for the District. The District's share of the countywide 1% *ad valorem* property tax is not pledged as a source of payment for the Water System Revenue Bonds, although such amounts are applied to pay Water Operation and Maintenance Costs in accordance with the Indenture.

Table 14 shows a five-year record of assessed valuations, secured roll levies and delinquencies for the taxable property included within the District. Assessed valuations are expressed by county assessors as "full cash value" as defined by Article XIII A of the State Constitution. The tax levy shown is the District's allocated share of the maximum *ad valorem* tax levy by each county of 1% of full cash value.

Pursuant to California Revenue and Taxation Code Sections 4701 *et seq.*, Contra Costa County and Alameda County each maintain a reserve fund for the purpose of guaranteeing 100% of the secured levies of the electing governmental jurisdictions for which such county collects taxes (commonly referred to as the "Teeter Plan"). The District has elected to participate in Contra Costa County's Teeter Plan program but has elected not to participate in Alameda County's Teeter Plan program. Consequently, the

District is exposed to the effect of delinquencies in collections only for property located in Alameda County.

A Teeter Plan remains in effect unless the board of supervisors of the county that has established a Teeter Plan orders its discontinuance or unless, prior to the commencement of any fiscal year of such county, such board of supervisors receives a petition for its discontinuance joined in by a resolution adopted by at least two-thirds of the participating revenue districts within the county, in which event such board of supervisors is to order the discontinuance of the Teeter Plan effective at the commencement of the subsequent fiscal year. If the Board of Supervisors of the Contra Costa County, or in the event that the District elects to participate in Alameda County's Teeter Plan, the Board of Supervisors of Alameda County, is to order the discontinuance of the Teeter Plan, only those secured property taxes actually collected would be allocated to political subdivisions (including the District) for which such county acts as the tax-levying or tax-collecting agency.

Table 14
TAXABLE PROPERTY WITHIN THE WATER SYSTEM
Assessed Valuation and Tax Collection Record

	<i>Fiscal Year Ending June 30</i>				
	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
Assessed Valuation for Taxation Purposes ⁽¹⁾⁽²⁾					
Alameda County	\$ 98,956,612,301	\$103,645,001,482	\$112,041,019,464	\$119,325,397,941	\$127,263,417,316
Contra Costa County	<u>83,100,933,502</u>	<u>89,682,673,562</u>	<u>96,472,922,101</u>	<u>102,560,510,616</u>	<u>108,186,306,742</u>
Total	\$182,057,545,803	\$193,327,675,044	\$208,513,941,565	\$221,885,908,557	\$235,449,724,058
District Secured Roll Tax Receipts ⁽³⁾					
Alameda County	\$13,669,336	\$14,943,333	\$16,136,648	\$17,152,223	\$19,017,612
Contra Costa County	<u>11,823,055</u>	<u>12,978,787</u>	<u>13,732,785</u>	<u>14,818,866</u>	<u>15,687,955</u>
Total	\$25,492,391	\$27,922,120	\$29,869,433	\$31,971,089	\$34,705,567
Delinquent June 30 ⁽⁴⁾					
Amount	\$211,831	\$198,418	\$239,980	\$236,737	\$213,655
Percent	0.83%	0.71%	0.80%	0.74%	0.62%

⁽¹⁾ Historical Assessed Valuation for Tax Purposes numbers differ from those previously reported to realign the fiscal year of the County figures with the applicable Fiscal Year in the table. In previous reports, the amounts were offset by one year. In addition, minor differences in assessed valuation numbers from amounts previously reported occur from time to time due to a change in source data used.

⁽²⁾ Net of all exemptions except homeowner's exemptions, the taxes on which are paid by the State. All valuations are stated on a 100% of full cash value basis as defined by law. Assessed valuations shown include redevelopment project area incremental valuations.

⁽³⁾ Net basis excluding all exemptions. Levies reflect the tax reductions effected by the adoption of Article XIII A of the State Constitution in 1978, the "Jarvis-Gann Initiative." For Alameda County, receipts include District's share of prior years' delinquencies when collected.

⁽⁴⁾ Amounts apply to Alameda County only, since Contra Costa County guarantees 100% payment of the District's secured roll levy. The delinquency percentages are calculated based on the two counties' secured roll levies.

Sources: Reports of the Auditor-Controller's Offices of Alameda and Contra Costa Counties, table data as compiled by the District.

Historically, from time to time, legislation was enacted as part of the State budget to provide for the reallocation of local governments' shares of the countywide 1% *ad valorem* tax, including by shifting a portion of the property tax revenues collected by the counties from special districts (such as the District) to school districts or other governmental entities. Subsequently, certain amendments to the State Constitution have been enacted to reduce the State Legislature's authority over local revenue sources by placing restrictions on, among other things, the State's access to local governments' property tax revenues. For example, on November 2, 2004 voters within the State approved Proposition 1A, which prevented the State from reducing local government's share of the 1% *ad valorem* property tax below levels in effect as of November 3, 2004, except in the case of fiscal emergency. Proposition 1A provided that in the case of fiscal emergency, the State could borrow up to 8% of local property tax revenues to be repaid within three years. Following the exercise by the State of its authority to borrow such local

property tax revenues as part of the 2009-10 State budget act, on November 2, 2010, voters within the State approved Proposition 22, which prohibits any future action by the State Legislature to take, reallocate or borrow money raised by local governments for local purposes, and prohibits changes in the allocation of property taxes among local governments to aid State finances or pay for State mandates. Proposition 22 thereby effectively repealed the provisions of Proposition 1A allowing the State to borrow local property tax revenues from local governments, and prohibits any such future borrowing.

There can be no assurances that legislation or voter initiatives enacted or approved in the future will not reduce or eliminate the District's share of the 1% countywide *ad valorem* property tax revenues. See also "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES" in the front part of this Official Statement.

The tax rolls for property located within the District's Water System service area for the Fiscal Year ended June 30, 2018, aggregated a total assessed valuation of approximately \$235.4 billion, including redevelopment project areas incremental valuations of which the taxes payable were due to the redevelopment agency. In 2011, the State enacted legislation commonly referred to as "AB1X 26," which required the dissolution of California redevelopment agencies and the dissolution and winding up of the operations of those agencies, which dissolution occurred on February 1, 2012. AB1X 26 provides a framework for the management of the remaining obligations of the dissolved redevelopment agencies by their respective successor agencies and oversight boards to oversee those successor agencies. Pursuant to AB1X 26, tax increment will continue to flow to the payment of "enforceable obligations" (such as tax allocation bonds) of the dissolved redevelopment agencies.

Power Sales Revenues

The District operates hydropower plants at Pardee and Camanche Reservoirs. These plants generate 185 million kilowatt hours of electricity in normal rainfall years. Commencing July 1, 2015, the energy is being sold to MCE under a 10-year power purchase agreement which expires on June 30, 2025. This power purchase agreement includes the sale of up to 120 million kilowatt hours of hydroelectric energy, and renewable energy credits ("RECs") (*i.e.*, credits, benefits, offsets, reductions or allowances resulting from the generation of renewable energy). Purchases of generation and RECs in excess of 120 million kilowatt hours annually will be at MCE's option. Generation greater than 120 million kilowatt hours annually and not sold to MCE may be sold to another entity. The District negotiated a five-year power purchase option agreement with Shell Energy for the sale of the additional generation and RECs not purchased by MCE as well as the sale of Resource Adequacy (Capacity). This agreement provides the District with an alternate purchaser of hydroelectricity (and related RECs) produced at its Pardee and Camanche Reservoirs. Annual revenues to the District from power sales have ranged from approximately \$1.4 million to \$7.8 million over the last five fiscal years. Power sales revenues were reduced during the 2012 through 2015 drought due to less available runoff. Revenues from power sales vary depending on power prices and the volume of water available for release from the reservoirs. In its biennial budget for Fiscal Years 2020 and 2021, the District has budgeted \$5.0 million annually in hydropower revenue based upon an assumed normal year of precipitation. Power sales revenues for Fiscal Year 2018 totaled \$6.4 million.

Earned Contributions on Construction and Grants

Cash contributions for main extension and other facilities to serve new customers are affected by the level of development within the service area. In addition to payment of its SCC (as described under "—System Capacity Charge" above), District policy requires new applicants for service to pay direct charges for mains, hydrants, pipeline extensions and relocations, and other services necessary to serve them. In Fiscal Year 2018, these earned contributions on construction totaled \$15.5 million. For the first nine months of Fiscal Year 2019 (the nine-month period through March 31, 2019), the District received \$13.9

million in earned contributions on construction. Grants and other reimbursements are received for specific projects. In Fiscal Year 2018, the District collected approximately \$2.8 million in grants and other reimbursements for the Water System. For the first nine months of Fiscal Year 2019 (the nine-month period through March 31, 2019), the District received \$0.6 million in grants and reimbursements.

In the District's biennial budget for Fiscal Years 2020 and 2021, earned contributions on construction, grants, and other reimbursements are budgeted at \$32.0 million and \$31.7 million, respectively. The increases in these years are due in part to anticipated increases in new service requests. These amounts are treated as capital contributions and are not included in Subordinated Water Revenues for purposes of the Indenture.

Operation and Maintenance Costs

The primary component of the District's Operation and Maintenance Costs is labor costs, including wages, salaries and benefits. See also "– Employees' Retirement System." Operation and Maintenance Costs also include materials, supplies and services such as costs of chemicals for water treatment and electrical power, costs of purchased water such as water delivered to the District under the Long-Term Renewal CVP Project and/or water purchased by the District under other negotiated water purchase agreements, when applicable, and other general and administrative expenses.

Outstanding Debt

Table 15 shows the District's Water System debt outstanding as of June 10, 2019. As provided in the Municipal Utility District Act, prior to the exercise by the District of its power to issue Water System revenue bonds, a preliminary resolution is adopted by the Board declaring its intention to authorize the issuance of revenue bonds and specifying, among other things, the maximum principal amount of bonds then proposed to be issued (excluding refunding bonds) pursuant to such resolution. As of June 10, 2019 (prior to the Series 2019A Bonds to be issued), the District has \$764,230,000 of authorized but unissued Water System revenue bonds, including (i) \$111,230,000 remaining authorized but unissued Water System revenue bonds under Resolution No. 33606-07 adopted on June 12, 2007, pursuant to which the Board declared its intention to authorize the issuance of up to \$1,100,000,000 of Water System revenue bonds, to be issued from time to time in one or more series, and (ii) \$653,000,000 of authorized but unissued Water System revenue bonds under Resolution No. 34031-15 adopted on April 28, 2015, pursuant to which the Board declared its intention to authorize the issuance of an additional \$653,000,000 of Water System revenue bonds, to be issued from time to time in one or more series. The issuance of revenue bonds by the District is not subject to prior voter approval, although such resolutions of intention to authorize the issuance of bonds are subject to a 60-day referendum period (which, with respect to Resolution Nos. 33606-07 and 34031-15, expired without challenge). The District may from time to time in the future adopt other resolutions authorizing the issuance of additional Water System revenue bonds and may incur other Parity Debt, subject to the satisfaction of the conditions set forth in the Indenture. See "SECURITY FOR THE SERIES 2019A BONDS – Issuance of Additional Water System Revenue Bonds and Parity Debt; Junior and Subordinate Obligations" in the front part of this Official Statement.

Low-interest loans were made by the SWRCB and the CDWR to the District under the Safe Drinking Water State Revolving Fund and Clean Water State Revolving Fund loan programs (both programs now administered by the SWRCB) to finance certain drinking water infrastructure projects and certain water reclamation and reuse facilities within the District to conserve fresh water supplies. The District has applied for, and may from time-to-time in the future apply for, additional low-interest loans from the State under State loan programs ("State Loans"). Borrowings under each of the District's outstanding State Loans are treated by the District as Parity Debt under the Indenture for purposes of calculating debt service coverage ratios. Any future State Loans received by the District would likely constitute Parity Debt under the Indenture. See "– Parity State Loans" below.

Pursuant to the authority of the Municipal Utility District Act, the Board has declared its intention to authorize the issuance of short-term indebtedness of the District (which may include commercial paper notes and/or other forms of bonds, notes or other evidences of short-term indebtedness, including bank credit) in a maximum outstanding principal amount not exceeding the lesser of (1) the annual average of the District's total revenue for the three preceding years or (2) 25% of the District's total outstanding bonds issued pursuant to Chapters 6, 7 and 8 of the Municipal Utility District Act (which includes District revenue bonds). The District determined the maximum authorized principal amount of short-term indebtedness (including short-term indebtedness of both the Water System and the Wastewater System) pursuant to the above limit to be an amount not to exceed \$637,387,000 as of June 30, 2018. Commercial paper notes issued for the benefit of the Water System (and the District's repayment obligation for amounts borrowed, if any, under any applicable bank credit therefor), are payable from and secured by a pledge of Water Revenues on a basis subordinate to the Water System Revenue Bonds. See "–Subordinate Commercial Paper Programs" below.

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Table 15
OUTSTANDING WATER SYSTEM DEBT
(as of June 10, 2019)

<i>Issue</i>	<i>Date of Issue</i>	<i>Last Maturity</i>	<i>Amount Issued</i>	<i>Outstanding June 10, 2019</i>
<u>Water System Revenue Bonds</u>				
Revenue Refunding Bonds, Series 2008A ⁽¹⁾	03/20/08	06/01/38	\$ 322,525,000	\$ 105,250,000
Revenue/Refunding Bonds, Series 2010A	02/03/10	06/01/36	192,830,000	2,090,000
Revenue Bonds, Series 2010B (Build America Bonds)	02/23/10	06/01/40	400,000,000	400,000,000
Revenue Refunding Bonds, Series 2012A	10/10/12	06/01/37	191,750,000	81,750,000
Revenue Refunding Bonds, Series 2012B	11/13/12	06/01/26	358,620,000	178,740,000
Revenue Refunding Bonds, Series 2013A	03/05/13	06/01/21	48,670,000	14,780,000
Revenue Refunding Bonds, Series 2014A	06/11/14	06/01/35	128,315,000	128,315,000
Revenue Refunding Bonds, Series 2014B	06/11/14	06/01/30	242,730,000	216,985,000
Revenue Bonds, Series 2014C	06/26/14	06/01/44	75,000,000	75,000,000
Revenue Refunding Bonds, Series 2015A	03/03/15	06/01/37	429,360,000	429,360,000
Revenue Bonds, Series 2015B (Green Bonds)	06/17/15	06/01/45	74,335,000	74,335,000
Revenue Bonds, Series 2015C	06/17/15	06/01/45	110,715,000	110,715,000
Revenue Bonds, Series 2017A (Green Bonds)	06/22/17	06/01/45	185,355,000	185,355,000
Revenue/Refunding Bonds, Series 2017B	06/22/17	06/01/37	<u>309,665,000</u>	<u>297,130,000</u>
Total Water System Revenue Bonds			\$3,069,870,000	\$2,299,805,000
<u>Parity Debt:</u>				
Safe Drinking Water State Revolving Fund Loan (Upper San Leandro Reservoir)	01/01/03	01/01/24	2,188,000 ⁽⁴⁾	653,000 ⁽⁶⁾
State Water Resources Control Board Loan (East Bayshore Recycled Water Project)	05/22/08	04/01/28	20,100,000 ⁽⁴⁾	10,093,000 ⁽⁶⁾
State Water Resources Control Board Loan (South Reservoir Replacement)	12/14/17 ⁽²⁾	07/01/48 ⁽³⁾	18,946,632 ⁽⁵⁾	2,260,000 ⁽⁷⁾
State Water Resources Control Board Loan (MacArthur Davenport Pipeline Replacement Project)	04/18/18 ⁽²⁾	07/01/49 ⁽³⁾	<u>18,041,600⁽⁵⁾</u>	<u>0⁽⁷⁾</u>
Total Parity State Loans			\$ 59,276,232	\$ 13,006,000
<u>Subordinate Debt:</u>				
Commercial Paper Notes (Water Series)	Various	Various	<u>359,800,000⁽⁸⁾</u>	<u>359,800,000</u>
Total Debt			<u>\$3,488,946,232</u>	<u>\$2,672,611,000</u>

⁽¹⁾ Liquidity support currently provided by Standby Bond Purchase Agreements with Wells Fargo Bank, National Association (Series 2008A-1 Bonds and Series 2008A-4 Bonds) and U.S. Bank National Association (Series 2008A-2 Bonds and Series 2008A-3 Bonds). See "Table 16 – Liquidity Facilities and Expiration Dates" below. The District has entered into interest rate swap agreements that provide a hedge for the Series 2008A Bonds. See "Table 17 – Water Interest Rate Swap Agreements" below. See also "SECURITY FOR THE SERIES 2019A BONDS – Outstanding Water System Revenue Obligations – *Interest Rate Swap Agreements*."

⁽²⁾ Date of State Loan contract execution.

⁽³⁾ Expected final repayment date.

⁽⁴⁾ Full amount disbursed to the District.

⁽⁵⁾ Full Loan commitment amount eligible for disbursement to the District.

⁽⁶⁾ Outstanding balance remaining to be repaid

⁽⁷⁾ Amount disbursed to the District under the State Loan as of June 10, 2019.

⁽⁸⁾ Commercial paper notes may be issued by the District in an amount up to the statutory limit described herein.

Source: The District.

Variable Rate and Swap Obligations

Liquidity Supported Bonds. As of June 10, 2019, of the District's \$2,299,805,000 aggregate principal amount of outstanding Water System Revenue Bonds, the District's Water System Revenue Refunding Bonds, Series 2008A (the "Series 2008A Bonds") outstanding in the principal amount of \$105,250,000, are variable rate obligations. The Series 2008A Bonds were issued in four subseries, each

of which, at the election of the District, may bear interest in any of several interest rate modes. The interest rates for each subseries of the District's Series 2008A Bonds are currently re-set on a weekly basis (hereinafter, "Weekly Rate Bonds"), and such bonds are subject to tender prior to maturity, including optional tender by the owners thereof upon seven days' notice. Liquidity support for the purchase of the Weekly Rate Bonds is provided by standby bond purchase agreements between the District and various liquidity providers. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable Weekly Rate Bonds, as well as an increase in the risk of a failed remarketing of such tendered Weekly Rate Bonds. The obligation of the District to repay any draws on such liquidity facilities is payable from Subordinated Water Revenues on parity with the outstanding Water System Revenue Bonds to the extent such repayment is not thereafter provided from remarketing proceeds of the related Weekly Rate Bonds.

Table 16 sets forth a listing of the liquidity providers, the expiration date of each facility and the principal amount of outstanding bonds covered under each facility as of June 10, 2019.

Table 16
LIQUIDITY FACILITIES AND EXPIRATION DATES

<i>Water System Revenue Bond Issue</i>	<i>Outstanding Principal Amount</i>	<i>Liquidity Provider</i>	<i>Facility Expiration</i>
Series 2008A-1	\$32,395,000	Wells Fargo Bank, National Association	December 9, 2019
Series 2008A-2	24,285,000	U.S. Bank National Association	November 24, 2021
Series 2008A-3	24,285,000	U.S. Bank National Association	November 24, 2021
Series 2008A-4	24,285,000	Wells Fargo Bank, National Association	December 9, 2019
Total	\$105,250,000		

Source: The District.

Tendered Weekly Rate Bonds purchased with funds drawn under the related liquidity facility would constitute "bank bonds" until remarketed in accordance with the terms of the Indenture (which may include by conversion to another interest rate mode) and the terms of the related liquidity facility. bank bonds would bear interest at a per annum interest rate equal to the greater of (i) the Prime Rate plus up to 5.5% (depending on the applicable liquidity facility and the length of time for which such Weekly Rate Bonds were bank bonds), (ii) the Federal Funds Rate plus up to 6.5% (depending on the applicable liquidity facility and the length of time for which such Weekly Rate Bonds were bank bonds), and (iii) up to 11.0% (depending on the applicable liquidity facility and the length of time for which such Weekly Rate Bonds were bank bonds). The principal of the bank bonds would generally be payable in ten semi-annual installments on each June 1 and December 1, commencing on the earlier of the first such date occurring at least 91 days following the date of purchase under the standby bond purchase agreement or the end of the commitment period of the applicable liquidity provider thereunder, and ending on the fifth anniversary of the date of purchase under such standby bond purchase agreement. While the District may attempt in such event to refinance the Weekly Rate Bonds to avoid this additional debt burden, there can be no assurance that the District will have access to the debt markets on favorable terms.

Upon the occurrence of an event of default under a standby bond purchase agreement, including, among other things, a failure by the District to pay principal or interest due thereunder; a failure by the District to perform or observe its covenants; a default in other specified indebtedness of the District; the

occurrence of certain bankruptcy or insolvency-related events; or the reduction of the long-term credit ratings of the Water System Revenue Bonds of the District below “A–” by S&P or Fitch or below “A3” by Moody’s, the applicable liquidity provider has the right to declare all outstanding payment obligations of the District under the related agreement to be immediately due and payable.

Swap Obligations. In connection with the District’s \$105,250,000 principal amount of outstanding variable rate Water System Revenue Bonds, the District has entered into various interest rate swap agreements (collectively, the “Water Interest Rate Swap Agreements”). By virtue of these Water Interest Rate Swap Agreements, the related variable rate Water System Revenue Bonds are essentially treated by the District as fixed rate debt for the purpose of calculating debt service requirements, although the variable payments that the District receives from the Swap Providers (defined below) do not usually equal the payments that the District makes on associated variable rate debt. There is no guarantee that the floating rate payable to the District pursuant to each of the Water Interest Rate Swap Agreements will match the variable interest rate on the associated Water System Revenue Bonds to which the respective Water Interest Rate Swap Agreement relates at all times or at any time. Under certain circumstances, the Swap Providers may be obligated to make a payment to the District under their respective Water Interest Rate Swap Agreement that is less than the interest due on the associated Water System Revenue Bonds to which such Water Interest Rate Swap Agreement relates. In such event, the District would be obligated to pay such insufficiency from Subordinated Water Revenues.

As of June 10, 2019, the District had outstanding the following Water Interest Rate Swap Agreements relating to variable rate Water System Revenue Bonds with the following counterparties (collectively, the “Swap Providers”) in the aggregate notional amount of \$105,250,000.

Table 17
WATER INTEREST RATE SWAP AGREEMENTS

<i>Related Water System Revenue Bond Issue</i>	<i>Outstanding Notional Amount</i>	<i>Swap Provider or Guarantor</i>	<i>District Pays</i>	<i>District Receives</i>	<i>Scheduled Maturity/Termination Date</i>
Series 2008A Bonds	\$ 16,195,000	Bank of America Corporation	3.115%	62.3% of 30-day LIBOR	06/01/2038
Series 2008A Bonds	37,240,000	Bank of America, N.A.	3.115%	62.3% of 30-day LIBOR	06/01/2038
Series 2008A Bonds	14,575,000	The Bank of New York Mellon	3.115%	62.3% of 30-day LIBOR	06/01/2038
Series 2008A Bonds	<u>37,240,000</u>	JPMorgan Chase Bank, N.A.	3.115%	62.3% of 30-day LIBOR	06/01/2038
	\$105,250,000				

Source: The District.

As shown in the table above, the periodic payments due to the District from counterparties under its outstanding Water Interest Rate Swap Agreements are calculated by reference to the London interbank offering rate (“LIBOR”). On July 27, 2017, the Financial Conduct Authority (the “FCA”), the U.K. regulatory body currently responsible for the regulation and supervision of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the “FCA Announcement”). It is not possible to predict the effects of the FCA Announcement or how any prospective phasing out of LIBOR as a reference rate and transition to an alternate benchmark rate will be implemented, but increased volatility in the reported LIBOR rates may occur and the level of such LIBOR-based swap and interest payments may be affected.

Under certain circumstances, the Water Interest Rate Swap Agreements may be terminated and the District may be required to make a substantial termination payment to the respective Swap Providers. Pursuant to the Water Interest Rate Swap Agreements, any such termination payment owed by the District would be payable on a basis that is subordinate to the Water System Revenue Bonds but prior to the District's Water System CP Notes (defined below).

Early termination of an interest rate swap agreement could occur due to a default or the occurrence of a termination event, including a default under other specified swaps and indebtedness, or certain events of insolvency, or if a party may not legally perform its swap obligations, or if the credit rating of certain debt obligations of a party are downgraded below specified levels (which, with respect to the District, is the downgrade of the credit rating on the Water System Revenue Bonds below "Baa3" or "BBB-" by Moody's or S&P, respectively). In the event of early termination of any of the Water Interest Rate Swap Agreements, there can be no assurance that (i) the District will receive any termination payment payable to the District by the respective Swap Providers, (ii) the District will at all times have sufficient available cash on hand to pay any termination payment payable by it to the respective Swap Providers, or (iii) the District will be able to obtain a replacement Water Interest Rate Swap Agreement with comparable terms. As of March 29, 2019, the District would have been required to pay to the Swap Providers termination payments if its then outstanding Water Interest Rate Swap Agreements were terminated on that date. The District estimated its net exposure to its Swap Providers for all such termination payments as of March 29, 2019 to be approximately \$23.1 million. As of March 29, 2019, the largest aggregate termination payment that would be owed to a single Swap Provider was estimated by the District to be approximately \$8.2 million. The District does not presently anticipate early termination of any of its Water Interest Rate Swap Agreements due to default by either party or the occurrence of a termination event. The District routinely monitors its Swap Providers' creditworthiness and performance under the Water Interest Rate Swap Agreements and may from time to time replace existing Swap Providers and Water Interest Rate Swap Agreements with new replacement interest rate swap agreements if the District determines such action is warranted. Additional information regarding the terms of the Water Interest Rate Swap Agreements may also be found in Note 6(E) in APPENDIX B – "EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017."

Pursuant to the terms of certain of the Water Interest Rate Swap Agreements, the District is required to post collateral in favor of the respective Swap Provider to the extent that the District's total exposure for termination payments to that Swap Provider exceeds the threshold amount specified in the applicable Water Interest Rate Swap Agreement. The applicable collateral posting threshold amounts specified in such Water Interest Rate Swap Agreements would be lower in the event certain ratings assigned to the Water System Revenue Bonds were to be revised downward or withdrawn. In the case of a ratings withdrawal or significant downward rating revision, such decline in the applicable threshold amounts could significantly increase the District's collateral posting obligation thereunder. If the District's ratings are revised upward, the amount of collateral required to be posted by the District under certain of the Water Interest Rate Swap Agreements could be reduced.

Under the terms of the Water Interest Rate Swap Agreements, the Swap Providers are required to release collateral to the District as market conditions become favorable to the District and may be required to post collateral for the benefit of the District to the extent that such Swap Provider's total exposure for termination payments to the District exceeds the threshold amount specified in the applicable Water Interest Rate Swap Agreement. The highest amount of collateral the District has been required to post in connection with the Water Interest Rate Swap Agreements on any date was approximately \$24.70 million, as of November 30, 2011 (at which time the District's outstanding notional amount of Water Interest Rate Swap Agreements totaled approximately \$861.97 million). The amount of collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. In the future, the District may be required to post additional collateral, or, if it has

previously posted collateral to a Swap Provider, may be entitled to a reduction or return of the required collateral amount. Collateral deposited by the District is held by the respective Swap Provider or an agent therefor. A bankruptcy of any Swap Provider holding collateral posted by the District could adversely affect the return of the collateral to the District. Moreover, posting collateral limits the District's liquidity. If collateral requirements increase significantly, the District's liquidity may be adversely affected. As of June 10, 2019, the District had \$0.00 in collateral posted in favor of the Swap Providers for its Water Interest Rate Swap Agreements.

Parity State Loans

The District has entered into and may apply for additional State Loans in the future under the Safe Drinking Water State Revolving Fund and Clean Water State Revolving Fund loan programs to obtain long-term financing for a portion of its CIP costs. State Loans under these programs are administered by the SWRCB on a project-by-project basis. The State Loan programs offer loans to applicant entities based on available moneys and placement on a statewide priority list. Although placement on the priority list is a necessary condition to receiving State Loan program moneys, placement on the priority list does not create an obligation on the part of the applicant to accept State Loan program moneys.

State Loan program moneys are disbursed on a cost-incurred basis pursuant to disbursement requests submitted by the borrower under the State Loan documents. The District is obligated to repay a State Loan only after it has submitted a disbursement request and received State Loan program moneys from the State. The SWRCB's obligation to disburse any sum to the District under a State Loan is contingent upon the availability of sufficient funds to permit the disbursements provided for therein. The SWRCB may withhold all or any portion of the funds available under any State Loan in the event that: (a) the District has materially violated, or threatens to materially violate, any term, provision, condition, or commitment of any State Loan; or (b) fails to maintain reasonable progress toward completion of the project funded thereby.

As set forth in Table 15 above, of June 10, 2019, the District has four approved State Loans, two of which (the Upper San Leandro Reservoir project loan and the East Bayshore Recycled Water project loan) have been fully disbursed. These two State Loans are being amortized over a 20-year terms and bear interest at a per annum interest rate equal to 2.5% and 2.4% (inclusive of the service charge rate), respectively. The District also has two State Loans that have not yet been fully disbursed (the South Reservoir Replacement project loan and the MacArthur Davenport Pipeline Replacement project loan). These two State Loans will be amortized over a term of 30 years, with principal repayment commencing no later than one year following project completion. Amounts disbursed under each of these State Loans bear interest at a per annum interest rate of 1.7%. Upon completion of construction of the respective project and submission of required reports, the SWRCB will prepare a final loan repayment schedule based upon actual disbursements and provide the same to the District. The loan repayment schedule may be amended as necessary to accurately reflect amounts due under such State Loans.

Each State Loan may be terminated by written notice during construction of the project funded thereunder, or thereafter at any time prior to complete repayment by the District, at the option of the SWRCB, upon violation by the District of any material provision of the related State Loan after such violation has been called to the attention of the District and after failure of the District to bring itself into compliance with the provisions of the related State Loan within a reasonable time as established by the SWRCB. In the event of such a termination, the District agrees, upon demand, to immediately repay to the SWRCB an amount equal to the current balance on the State Loan, including accrued interest, and all amounts due. The repayment obligations of the District under the State Loans are treated as Parity Debt under the Indenture.

Subordinate Commercial Paper Programs

The District currently maintains two commercial paper note programs for the benefit of the Water System and the District's Wastewater System. Under the extendable municipal commercial paper program, commercial paper may be issued for the Water System or the Wastewater System at prevailing interest rates for periods of not more than 120 days from the date of issuance with the option by the District to extend the maturity for another 150 days. The extendable municipal commercial paper program is not supported by any liquidity or revolving credit agreement. Under the District's traditional commercial paper program, commercial paper notes may be issued for the Water System or the Wastewater System at prevailing interest rates for periods of not more than 270 days from the date of issuance. In connection with its traditional commercial paper program, the District has covenanted to procure and maintain in effect for any series or subseries of commercial paper notes issued thereunder one or more liquidity facilities enabling it to borrow an aggregate amount at least equal to the principal amount of such series or subseries of commercial paper notes. As of June 10, 2019, the District had outstanding \$359,800,000 aggregate principal amount of tax-exempt Commercial Paper Notes (Water Series) ("Water System CP Notes") issued under the District's traditional commercial paper program. As of June 10, 2019, the District had outstanding no Extendable Municipal Commercial Paper Notes (Water Series) issued under the District's extendable municipal commercial paper program. The Water System CP Notes, together with any additional commercial paper notes issued by the District for the benefit of the Water System under either the District's extendable municipal commercial paper program or its traditional commercial paper program (and the District's repayment obligation for amounts borrowed, if any, under any applicable liquidity facility therefor), are payable from and secured by a pledge of Water Revenues on a basis subordinate to the Water System Revenue Bonds and Parity Debt.

In order to provide an additional source of repayment for the Water System CP Notes, the District has entered into the following liquidity arrangements for the Water System CP Notes: (i) a standby letter of credit and reimbursement agreement with Sumitomo Mitsui Banking Corporation, acting through its New York Branch, under which up to \$200,000,000 may be advanced to the District to pay the principal of maturing Water System CP Notes, which expires on December 1, 2020, and (ii) a revolving credit agreement with Bank of America, N.A, under which up to \$160,000,000 may be advanced to the District to pay the principal of maturing Water System CP Notes, which expires on November 30, 2021. The District's repayment obligation for amounts borrowed, if any, under the liquidity facilities for the Water System CP Notes are payable from and secured by a pledge of Water Revenues on a basis subordinate to the Water System Revenue Bonds. The liquidity facilities supporting the Water System CP Notes are subject to early termination upon the occurrence of certain events, including, among other things, the failure of the District to make certain payments, the occurrence of certain bankruptcy or insolvency-related events or the reduction (by two rating agencies if three rating agencies are then rating the Water System Revenue Bonds) of the long-term credit ratings of the Water System Revenue Bonds of the District below "A-" by S&P or Fitch or below "A3" by Moody's. Upon the occurrence of such termination or certain other specified events of default, one or more of the following would likely occur: (a) the District would be prohibited from issuing additional commercial paper notes supported by such liquidity facility; (b) any outstanding obligations of the District to the liquidity provider, including any repayment obligation for amounts advanced under any such liquidity facility for the payment of Water System CP Notes, could bear interest at rates substantially higher than the rates borne by the Water System CP Notes; and (c) any outstanding repayment obligations of the District to the liquidity provider could be accelerated and become immediately due and payable.

Debt Service Requirements

Table 18 on the following page shows estimated future payments on outstanding debt.

Table 18: WATER SYSTEM ESTIMATED DEBT SERVICE⁽¹⁾

<i>Fiscal Year Ending June 30</i>	<i>Series 2008A Through Series 2017B</i>			<i>Series 2019A Bonds</i>			<i>State Parity Loans⁽³⁾</i>	<i>Total Bonds and Parity Debt</i>	<i>Water System CP Notes⁽⁴⁾</i>	<i>Total Debt Service⁽⁵⁾</i>
	<i>Principal</i>	<i>Interest⁽²⁾</i>	<i>Total</i>	<i>Principal</i>	<i>Interest</i>	<i>Total</i>				
2020	\$ 63,165,000	\$ 113,767,923	\$ 176,932,923				\$ 2,577,433	\$ 179,510,356	\$ 10,794,000	\$ 190,304,356
2021	64,825,000	110,709,373	175,534,373				2,983,270	178,517,643	10,794,000	189,311,643
2022	67,590,000	107,687,273	175,277,273				2,983,270	178,260,543	10,794,000	189,054,543
2023	70,885,000	104,446,323	175,331,323				2,983,270	178,314,593	10,794,000	189,108,593
2024	74,040,000	100,989,523	175,029,523				2,983,270	178,012,793	10,794,000	188,806,793
2025	77,725,000	97,417,123	175,142,123				2,843,411	177,985,533	10,794,000	188,779,533
2026	79,270,000	93,651,273	172,921,273				2,843,411	175,764,683	10,794,000	186,558,683
2027	83,230,000	89,695,773	172,925,773				2,843,411	175,769,183	10,794,000	186,563,183
2028	87,340,000	85,584,273	172,924,273				2,843,411	175,767,683	10,794,000	186,561,683
2029	92,965,000	81,217,273	174,182,273				1,583,163	175,765,435	10,794,000	186,559,435
2030	97,585,000	76,598,423	174,183,423				1,583,163	175,766,585	10,794,000	186,560,585
2031	102,465,000	71,719,173	174,184,173				1,583,163	175,767,335	10,794,000	186,561,335
2032	107,405,000	66,781,779	174,186,779				1,583,163	175,769,941	10,794,000	186,563,941
2033	112,585,000	61,603,755	174,188,755				1,583,163	175,771,918	10,794,000	186,565,918
2034	117,735,000	56,451,196	174,186,196				1,583,163	175,769,359	10,794,000	186,563,359
2035	123,100,000	51,090,706	174,190,706				1,583,163	175,773,869	10,794,000	186,567,869
2036	128,950,000	45,241,505	174,191,505				1,583,163	175,774,668	10,794,000	186,568,668
2037	135,375,000	38,817,885	174,192,885				1,583,163	175,776,048	10,794,000	186,570,048
2038	142,520,000	31,858,676	174,378,676				1,583,163	175,961,838	10,794,000	186,755,838
2039	150,170,000	24,025,151	174,195,151				1,583,163	175,778,314	10,794,000	186,572,314
2040	66,295,000	15,406,270	81,701,270				1,583,163	83,284,433	10,794,000	94,078,433
2041	50,165,000	11,882,800	62,047,800				1,583,163	63,630,963	10,794,000	74,424,963
2042	52,560,000	9,484,700	62,044,700				1,583,163	63,627,863	10,794,000	74,421,863
2043	55,075,000	6,971,200	62,046,200				1,583,163	63,629,363	10,794,000	74,423,363
2044	57,630,000	4,416,650	62,046,650				1,583,163	63,629,813	10,794,000	74,423,813
2045	39,155,000	1,742,300	40,897,300				1,583,163	42,480,463	10,794,000	53,274,463
2046	--	--	--				1,583,163	1,583,163	10,794,000	12,377,163
2047	--	--	--				1,583,163	1,583,163	10,794,000	12,377,163
2048	--	--	--				1,583,163	1,583,163	10,794,000	12,377,163
2049	--	-	--				1,176,916	1,176,916	10,794,000	11,970,916
2050	--	--	--				385,334	385,334	10,794,000	11,179,334
Total ⁽⁵⁾	<u>\$2,299,805,000</u>	<u>\$1,559,258,294</u>	<u>\$3,859,063,294</u>				<u>\$59,109,661</u>	<u>\$3,918,172,956</u>	<u>\$334,614,000</u>	<u>\$4,252,786,956</u>

⁽¹⁾ Debt service is calculated on a cash basis.

⁽²⁾ Includes fees to liquidity providers assuming current fee levels. Assumes debt service on outstanding Series 2008A Bonds has been fixed pursuant to interest rate swap agreements. See “–Variable Rate and Swap Obligations” above. Includes gross interest payable before application of any cash subsidy received by the District from the United States Treasury relating to the Series 2010B Bonds (“BABs Interest Subsidy Payments”). Upon the effective date of the amendments to the Indenture pursuant to the Sixteenth Supplemental Indenture, the BABs Interest Subsidy Payments reasonably expected to be received by the District will be treated as an offset to debt service on the Series 2010B Bonds for purposes of the Indenture. See “AMENDMENTS TO THE INDENTURE” in the front part of this Official Statement.

⁽³⁾ Assumes full loan amounts disbursed. See “SECURITY FOR THE SERIES 2019A BONDS – Outstanding Water System Revenue Obligations–Parity State Loans.”

⁽⁴⁾ Assumes \$359,800,000 principal amount outstanding at assumed interest rate of 3.00%. Includes interest only (no principal amortization). While the commercial paper program is limited by statute to seven years, it is the District’s intention to reestablish the commercial paper program prior to the expiration of each seven-year period.

⁽⁵⁾ Totals may not add due to rounding.

Source: The District.

Financial Management Policies

The District has detailed management policies that include guidelines for debt, capital planning, investments, derivatives, and formal reserves. It is the current policy of the District to seek to maintain a debt service coverage ratio of 1.6 times on its outstanding Water System Revenue Bonds and to fund no more than 65% of its capital program over each five-year planning period from proceeds of debt. The District's current policy target for debt service coverage is higher than that required by the rate covenant under the Indenture and may be changed at the Board's discretion. See "SECURITY FOR THE SERIES 2019A BONDS – Rate Covenant." The debt policy also limits unhedged variable rate debt to 25% of the total debt portfolio. Derivatives use is governed by a comprehensive derivatives policy and related set of procedures with guidelines for counterparties, termination, and risk exposure. The District budgets for a number of formal reserves for the Water System, including: (i) a working capital reserve equal to three months of operation and maintenance expenses; (ii) a self-insurance reserve of approximately \$7.0 million as of December 31, 2018; (iii) a workers' compensation reserve of approximately \$5.4 million as of December 31, 2018; and (iv) a contingency/rate stabilization reserve (which is included in the Rate Stabilization Fund) of at least 20% of projected annual water volume sales revenues. The aggregate reserves level for these four formal reserves for the Water System as of December 31, 2018 was approximately \$179.8 million, which amount the District maintained in accordance with its reserve policies. The current investment policy dictates investment criteria, reporting, and administrative requirements.

District Investment Policy

Funds of the District are invested in accordance with the Government Code of the State, the Municipal Utility District Act and the District's investment policy. The four primary investment criteria set forth in the District's written investment policy are (in order of priority): (1) safety; (2) liquidity; (3) yield; and (4) diversification. In order to keep funds available to meet commitments, the District's investment policy provides that the maturity date (or put provision) of individual investments shall not exceed five years and that the average maturity of the portfolio shall not exceed 720 days. Investments permitted by the District's current investment policy include U.S. Treasury Obligations, U.S. Government Agencies Obligations, State of California's Local Agency Investment Fund (LAIF), California Asset Management Program (CAMP), a Local Government Investment Pool (LGIP), Money Market Mutual Funds, Certificates of Time Deposit, Negotiable Certificates of Deposit, Commercial Paper, Medium Term Corporate Notes, Repurchase Agreements, if collateralized, and Municipal Obligations, limited to California issuers, including the State of California. Monies in the funds and accounts held by the Trustee under the Indenture may be invested only in Investment Securities, as defined therein. The District does not enter into reverse repurchase agreements or otherwise borrow for purposes of investing. The District does not invest in highly volatile derivatives and other such securities. The District has, however, entered into interest rate swap transactions to hedge interest rate exposure on outstanding variable rate Water System Revenue Bonds as described herein.

Pursuant to the District's investment policy, all securities purchased from dealers and brokers are held in safekeeping by the District's custodial bank. All transactions require delivery of the security prior to payment for the security (delivery vs. payment). Collateral, when required, would only be in U.S. Treasury or U.S. Government Agencies Obligations, with a Master Repurchase Agreement on file with the District. Trade confirmations are reviewed for conformity to the original transaction by an individual other than the one who originated the transaction. On a monthly basis, a report listing transactions is submitted to the General Manager and the District's Board; and on a quarterly basis, an investment report is submitted to the General Manager and the Finance/Administration Committee of the District's Board. This quarterly report includes the type of investment, issuer, date of maturity, par and dollar amount invested for all securities, investments and moneys held by the District, and provides an investment

summary by security type, percent of the portfolio, investment yield and the remaining period of investment to maturity.

Cash and Investments

The District's cash and investments are segregated by restricted and unrestricted amounts. Restricted cash and investments generally include bond proceeds and debt service reserve funds, developer advances and capital contributions, and other miscellaneous restricted amounts. At June 30, 2018, the breakdown between restricted and unrestricted amounts for the Water System is as follows:

Table 19
WATER SYSTEM
CASH AND INVESTMENTS
(As of June 30, 2018)
(Thousands)

Cash and investments included in current and unrestricted assets	\$441,259
Cash and investments included in restricted assets	<u>50,115</u>
Total cash and investments	<u>\$491,374</u>

Source: The District.

See also “– *Cash and Investment by Fund*” in the Management's Discussion and Analysis included in APPENDIX B – “EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017.” Additional information regarding the District's investment portfolio may also be found in Note 2 in the District's financial statements included in APPENDIX B – “EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017.”

Historical Operating Results

The Basic Financial Statements of the District for the Years ended June 30, 2018 and 2017, and the Report of Maze & Associates, independent accountants, are included as Appendix B to this Official Statement, and should be read in their entirety. The summary of operating results for Fiscal Years 2014 through 2018 contained in Table 20 is derived from information from the audited financial statements for such Fiscal Years and is qualified in its entirety by reference to such statements, including the notes thereto. See also “INDEPENDENT ACCOUNTANTS” in the front part of this Official Statement.

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Table 20
WATER SYSTEM
Historical Operating Results and Debt Service Coverage⁽¹⁾
Fiscal Years 2014 through 2018

	2014	2015	2016	2017	2018
WATER REVENUES⁽²⁾:					
Water Sales ⁽³⁾	\$367,547,268	\$362,135,681	\$421,239,645	\$420,293,252	\$480,745,249
Power Revenue	1,380,348	2,209,938	3,524,767	7,806,642	6,435,118
Interest	1,691,927	3,449,378	2,196,001	3,345,710	7,941,217
SCC Revenue ⁽⁴⁾	20,365,047	29,725,090	39,323,341	51,463,496	69,272,188
Seismic Rate Surcharge ⁽⁵⁾	22,628,261	22,258,683	38,793	9,270	392
Other Revenue ⁽⁶⁾	19,937,710	15,291,924	13,972,663	14,852,674	14,765,959
TOTAL WATER REVENUES	\$433,550,561	\$435,070,694	\$480,295,210	\$497,771,044	\$579,160,123
RATE STABILIZATION FUND TRANSFERS:					
Deposits to the Rate Stabilization Fund	\$(35,000,000)	\$(10,000,000)	\$ 0	\$ 0	\$ 0
Withdrawals from Rate Stabilization Fund for Inclusion in revenues	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
WATER REVENUES AFTER RATE STABILIZATION TRANSFER	\$398,550,561	\$425,070,694	\$480,295,210	\$497,771,044	\$579,160,123
WATER OPERATION & MAINTENANCE COSTS:					
Operating Expenses	\$213,692,428	\$210,786,463	\$238,624,710	\$219,844,980	\$232,959,911
(Less Tax Receipts) ⁽⁷⁾	<u>(25,492,391)</u>	<u>(27,922,120)</u>	<u>(29,869,433)</u>	<u>(31,971,089)</u>	<u>(34,705,567)</u>
TOTAL WATER OPERATION & MAINTENANCE COSTS	\$188,200,037	\$182,864,343	\$208,755,277	\$187,873,891	\$198,254,344
NET WATER REVENUES	\$210,350,524	\$242,206,351	\$271,539,933	\$309,897,153	\$380,905,779
PARITY DEBT SERVICE:					
Water System Revenue Bonds ⁽⁸⁾	\$125,016,887	\$144,320,119	\$162,809,748	\$164,213,889	\$175,759,278
Parity State Loans	<u>1,400,107</u>	<u>1,400,108</u>	<u>1,400,108</u>	<u>1,400,108</u>	<u>1,401,897</u>
TOTAL PARITY DEBT SERVICE	\$126,416,994	\$145,720,227	\$164,209,856	\$165,613,997	\$177,161,175
PARITY DEBT SERVICE COVERAGE	1.66	1.66	1.65	1.87	2.15
SUBORDINATE WATER SYSTEM DEBT SERVICE⁽⁹⁾	\$ 13,562,675	\$ 335,794	\$ 340,580	\$ 3,627,676	\$ 5,011,892
TOTAL PARITY AND SUBORDINATE DEBT SERVICE	\$139,979,669	\$146,056,021	\$164,550,436	\$169,241,673	\$182,173,067
TOTAL PARITY AND SUBORDINATE DEBT SERVICE COVERAGE	1.50	1.66	1.65	1.83	2.09

⁽¹⁾ Calculated in accordance with the Indenture as footnoted.

⁽²⁾ Revenues exclude grant receipts, taxes, and certain developer contributions which are treated as contributions (not Water Revenues).

⁽³⁾ Reflects average daily billed consumption of 167.5 MGD in Fiscal Year 2014, 148.5 MGD in Fiscal Year 2015, 128.0 MGD in Fiscal Year 2016, 132.7 MGD in Fiscal Year 2017 and 144.5 MGD in Fiscal Year 2018.

⁽⁴⁾ Prior to Fiscal Year 2016, SCC Revenues presented in the table above include the "buy-in" portion of SCC charges when collected and the "future water supply" portion of SCC charges when applied from the Future Water Supply Fund to offset such debt service costs. SCC Revenues are capitalized and are not recognized as operating revenues for purposes of the District's audited financial statements.

⁽⁵⁾ Seismic rate surcharge revenues are capitalized and are not recognized as operating revenues for purposes of the District's audited financial statements. The sunset of the seismic surcharge became effective July 1, 2015 and beginning with Fiscal Year 2016 the seismic surcharge is no longer being collected. However, a small amount of seismic surcharge collections were made in Fiscal Years 2016, 2017 and 2018.

⁽⁶⁾ Includes BABs Interest Subsidy Payments received in connection with the Series 2010B Bonds which are Build America Bonds.

⁽⁷⁾ Operation and Maintenance Costs exclude those expenses paid from District's share of countywide 1% property tax revenues. Under current District policy, District's share of countywide 1% property tax revenues are used to pay for operations allocable to maintenance of fire protection capacity.

⁽⁸⁾ Includes net swap payments. Debt service on the Series 2010B Bonds is gross of the BABs Interest Subsidy Payments received by the District.

⁽⁹⁾ Includes outstanding Water System commercial paper notes. Commercial paper notes debt service includes interest and a one-time principal pay down in Fiscal Year 2014 of \$13.1 million.

Source: The District.

District Management's Discussion of Fiscal Year 2018 Operating Results

As reflected in the preceding table summarizing the District's operating revenues, operating expenses and debt service coverage ratios for the five Fiscal Years ended June 30, 2014 through June 30, 2018, recent Fiscal Years have been characterized by annual rate increases leading to generally stable-to-increasing revenues and stable-to-increasing debt service coverage. The operating results for Fiscal Year 2018 were strong largely due to rate increases, increased water consumption, and continued growth in System Capacity Charges. Water sales revenue increased by \$60 million, or 14.4%, in Fiscal Year 2018 due to an 8.9% increase in billed water consumption, and a 9.25% water rate increase, partially offset by the ending of drought surcharges for bills received on and after July 1, 2016. System Capacity Charge revenue increased \$18 million in Fiscal Year 2018 due to continued increases in infill development within the water service area. Property tax receipts increased \$2.7 million, or 8.6% in Fiscal Year 2018 due to growth in assessed valuations within the District's boundaries.

Operating expenses increased by \$13.1 million, or 6.0% in Fiscal Year 2018 due in part to an increase in raw water expenses, increases in general administration expenses, and a one-time retroactive salary increase payment following the approval of MOUs with the District's four unions in that Fiscal Year.

The District anticipates that water consumption will continue to vary from year-to-year based on varying hydrology in California and the service area's exposure to economic cycles. The Rate Stabilization Fund provides the District with a tool to help maintain stable revenues and policy level coverage as it addresses the current and anticipated future impacts of variable weather conditions. The Rate Stabilization Fund totaled \$95 million as of June 30, 2018.

Parity lien debt service coverage in Fiscal Year 2018 was approximately 2.15 times, above the District's policy target of 1.6 times which reflects increased water consumption and higher-than-budgeted System Capacity Charges. This is an increase from the prior Fiscal Year's coverage level of 1.87 times. Overall debt service coverage was 2.09 times in Fiscal Year 2018, up from 1.83 times in Fiscal Year 2017. Debt service coverage in Fiscal Years 2017 and 2018 represent higher coverage levels compared with the previous three years.

See also the "Management's Discussion and Analysis" contained in APPENDIX B – "EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017."

Projected Operating Results

In the preparation of the projections in this section, the District has made certain assumptions with respect to conditions that may occur in the future. While the District believes these assumptions are reasonable for the purpose of the projections, they are dependent on future events. See the footnotes to Table 21 below for relevant assumptions, including projected average daily billed consumption for water sales, and assumed future average annual rate increases in water rates. See also "– Discussion of Projected Operating Results for Fiscal Year 2019" and "– Discussion of Budget Projections for Fiscal Years 2020 through 2024" for a discussion of potential impacts. Some assumptions inevitably will not materialize and unanticipated events and circumstances may occur. To the extent actual future factors differ from those assumed by the District or provided to the District by others or unanticipated events or circumstances occur, the actual results will vary from those forecasted, and such variations may be material. The projected information has not been compiled, reviewed or examined by the District's independent accountants.

Table 21 sets forth the projected operating results and calculation of the debt service coverage ratio for the Water System for the current and next five Fiscal Years. Projected results for Fiscal Year 2019 were originally developed in connection with the District's biennial budget for Fiscal Years 2018 and 2019, and were subsequently updated in connection with the District's semi-annual budget performance review to reflect actual results experienced through December 31, 2018 and expectations as of such date for the remainder of Fiscal Year 2019. Projected results for Fiscal Year 2020 through 2024 were developed in connection with the District's biennial budget for Fiscal Years 2020 and 2021. The District's biennial budget and rate increases for Fiscal Years 2020 and 2021 were approved and adopted by the Board on June 11, 2019. In the preparation of the projected operating results, the District developed forecasts of water consumption for the projection period, taking into account historical consumption levels, the continuing effects of conservation measures taken by customers in response to the recent drought in California, modest growth in the service area, and the expectations for the future economic environment. See also "– Discussion of Projected Operating Results for Fiscal Year 2019" and "– Discussion of Budget Projections for Fiscal Years 2020 through 2024" below.

The District does not expect that growth will significantly bolster net revenues. As such, maintaining the District's policy target of at least 1.60 times for debt service coverage on its Water System Revenue Bonds will require annual rate increases. The projection period reflects the approved overall rate increases of 6.50% and 6.25% for Fiscal Years 2020 and 2021, respectively. Annual rate increases of 5.00%, 5.00% and 5.00% are assumed for Fiscal Years 2022, 2023 and 2024, respectively. Any such assumed rate increases will be subject to future Board approval. Projected Operating Expenses incorporate salary and benefit expectations. The District's service area is mature and significant increases in SCC revenues are not expected. A higher level of cash funded capital spending is planned because of the nature of the District's CIP which is largely comprised of renewal and replacement projects. See "THE WATER SYSTEM – Capital Improvement Program."

As noted above, the District's biennial budget for Fiscal Years 2020 and 2021 includes a budget forecast of projected operating results covering the five Fiscal Years 2020 through 2024. The proposed biennial budget for Fiscal Years 2020 and 2021 was presented to the Board on March 26, 2019, and the biennial budget and rates and charges for Fiscal Years 2020 and 2021 were approved and adopted by the Board on June 11, 2019.

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Table 21
WATER SYSTEM
Projected Operating Results and Debt Service Coverage (Millions)
Fiscal Years 2019 to 2024

FY 2020 and 2021 Budget
Five Year Financial Forecast

	<i>2019⁽¹⁾</i>	<i>2020⁽²⁾</i>	<i>2021⁽²⁾</i>	<i>2022⁽²⁾</i>	<i>2023⁽²⁾</i>	<i>2024⁽²⁾</i>
WATER REVENUES⁽³⁾:						
Water Sales ⁽⁴⁾	\$514.0	\$543.5	\$582.5	\$617.3	\$653.7	\$692.3
Power Revenue	6.8	5.0	5.0	5.0	5.0	5.0
Interest Earnings ⁽⁵⁾	7.3	9.3	9.6	9.8	10.5	11.1
SCC Revenue ⁽⁶⁾	70.0	40.0	40.0	40.0	40.0	40.0
Other Revenue ⁽⁷⁾	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.4</u>	<u>13.5</u>
TOTAL WATER REVENUES	<u>\$611.4</u>	<u>\$611.1</u>	<u>\$650.4</u>	<u>\$685.4</u>	<u>\$722.6</u>	<u>\$761.9</u>
RATE STABILIZATION FUND TRANSFERS:						
Deposits to the Rate Stabilization Fund	\$ 0.0	\$ 0.0	\$ (5.0)	\$ (10.0)	\$ (10.0)	\$ (10.0)
Withdrawals from Rate Stabilization Fund for Inclusion in revenues	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
WATER REVENUES AFTER RATE STABILIZATION TRANSFER	<u>\$611.4</u>	<u>\$611.1</u>	<u>\$645.4</u>	<u>\$675.4</u>	<u>\$712.6</u>	<u>\$751.9</u>
WATER OPERATION & MAINTENANCE COSTS:						
Operating Expense ⁽⁸⁾	\$254.8	\$282.0	\$297.7	\$310.0	\$323.1	\$336.7
(Less Tax Receipts) ⁽⁹⁾	<u>(34.7)</u>	<u>(35.0)</u>	<u>(35.8)</u>	<u>(36.7)</u>	<u>(37.6)</u>	<u>(38.5)</u>
TOTAL WATER OPERATION & MAINTENANCE COSTS	<u>\$220.1</u>	<u>\$247.0</u>	<u>\$261.9</u>	<u>\$273.3</u>	<u>\$285.5</u>	<u>\$298.2</u>
NET WATER REVENUES	\$391.3	\$364.0	\$383.5	\$402.1	\$427.1	\$453.7
PARITY DEBT SERVICE:						
Water System Revenue Bonds ⁽¹⁰⁾	\$176.9	\$191.4	\$200.4	\$214.4	\$225.9	\$237.5
Parity State Loans	<u>1.8</u>	<u>2.6</u>	<u>3.0</u>	<u>3.0</u>	<u>3.0</u>	<u>3.0</u>
TOTAL PARITY DEBT SERVICE	\$178.8	\$194.0	\$203.4	\$217.4	\$228.9	\$240.5
PARITY DEBT SERVICE COVERAGE	2.19	1.88	1.89	1.85	1.87	1.89
SUBORDINATE WATER SYSTEM CP NOTES DEBT SERVICE⁽¹¹⁾	7.1	12.0	12.0	12.0	12.0	12.0
TOTAL PARITY AND SUBORDINATE DEBT SERVICE	\$185.9	\$206.0	\$215.4	\$229.4	\$240.9	\$252.5
PARITY AND SUBORDINATE DEBT SERVICE COVERAGE	2.11	1.77	1.78	1.75	1.77	1.80

⁽¹⁾ Fiscal Year 2019 projected results are based upon the District's biennial budget for Fiscal Years 2018 and 2019 which was approved by the Board on June 27, 2017, as subsequently updated in connection with the District's Fiscal Year 2019 semi-annual budget performance review to reflect actual results through December 31, 2018. See also "– Discussion of Projected Operating Results for Fiscal Year 2019" below.

⁽²⁾ Fiscal Years 2020 through 2024 projected results are derived from the District's five-year financial forecast prepared in connection with the proposed biennial budget for Fiscal Years 2020 and 2021 which was presented to the Board on March 26, 2019. The biennial budget for Fiscal Years 2020 and 2021 was approved by the Board on June 11, 2019.

⁽³⁾ Revenues exclude grant receipts, taxes, reimbursements and certain developer contributions which are treated as contributions (not Water Revenues). Revenues as projected do not take into account any amounts to be derived from the drought surcharges. See "– Rates and Charges."

(Table footnotes continued on following page.)

(Footnotes to table continued from prior page.)

- (4) Assumes projected average daily billed consumption per day of 141 MGD in Fiscal Year 2019, 141 MGD in Fiscal Year 2020, 143 MGD in Fiscal Year 2021, 144 MGD in Fiscal Year 2022, 146 MGD in 2023 and 147 MGD in 2024. See “– Rates and Charges” above. Reflects adopted average annual rate increase (excluding drought surcharges) of 9.00% in Fiscal Year 2019, and assumes average annual rate increases (excluding any drought surcharges) of 6.50% in Fiscal Year 2020 and 6.25% in Fiscal Year 2021, and assumes average annual rate increases (excluding drought surcharges) of 5.00% in each of Fiscal Years 2022 through 2024. Any such assumed rate increases will be subject to Board approval. See “CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES.”
- (5) Fiscal Year 2019 is based on estimated earnings for that year. The projections assume a 2.5% earnings rate in Fiscal Years 2020 through 2024. Excludes non-cash change in fair market value of investments.
- (6) SCC Revenues presented in the table above include both the projected “buy-in” portion of SCC charges and the “future water supply” portion of SCC charges when collected. See “– System Capacity Charge” above. SCC Revenues are capitalized and are not recognized as operating revenues for purposes of the District’s audited financial statements.
- (7) Other Revenue includes the anticipated receipt of BABs Interest Subsidy Payments relating to Series 2010B Bonds. In light of the potential effect of ongoing sequestration, the District has assumed cash receipts of approximately 32% of the interest payable on the Series 2010B Bonds (93% of the BABs Interest Subsidy Payments of 35% provided for under the American Recovery and Reinvestment Act of 2009) for Fiscal Years 2020 through 2024.
- (8) Projected Operating Expenses do not take into account the incremental costs of any supplemental water supplies purchased by the District. It is expected that costs associated with the purchase, treatment and delivery of supplemental water supplies, when taken, would be funded from receipts to be derived from the system of drought surcharges adopted by the Board (originally on June 9, 2015 and subsequently updated in connection with the adoption of rates and charges for Fiscal Years 2020 and 2021). See “THE WATER SYSTEM – Drought Management.” See also “WATER SYSTEM FINANCES – Drought Surcharges.”
- (9) Water Operation and Maintenance Costs exclude those expenses paid from *ad valorem* taxes. Under current District policy, taxes are used to pay for operations allocable to maintenance of fire protection capacity.
- (10) Assumes that interest with respect to the outstanding Series 2008A Bonds have been swapped to fixed rates. See “SECURITY FOR THE SERIES 2019A BONDS – Outstanding Water System Revenue Obligations – *Water Interest Rate Swap Agreements*” in the front part of this Official Statement. Includes assumed liquidity fees. Assumes issuance of additional Water System Revenue Bonds of approximately \$205 million at the beginning of Fiscal Year 2020, \$160 million in Fiscal Year 2021, \$233 million in Fiscal Year 2022, \$176 million in Fiscal Year 2023 and \$183 million in Fiscal Year 2024. The actual size and timing of future debt issuances undertaken by the District will be determined by the District based on market considerations and other factors. Also includes additional amount budgeted by the District (not included in Table 18) for estimated basis differential between variable rate bond interest rates and related swap receipts.
- (11) Includes assumed liquidity fees. Fiscal Year 2019 is based on estimated interest for that year. Assumes interest only at 3.0% per annum in Fiscal Years 2020 through 2024 with no principal amortization. Assumes \$359.8 million of Water System CP Notes outstanding.

Source: The District.

Discussion of Projected Operating Results for Fiscal Year 2019

Total Water System revenues for Fiscal Year 2019 are projected to be \$611.4 million or \$51.5 million more than originally budgeted. This is primarily due to projected System Capacity Charge revenue of \$70.0 million compared with \$28.0 million in the budget. Based on the District’s Semi-Annual Budget Performance Report prepared in February 2019, water sales for Fiscal Year 2019 are projected at a level near the budgeted amount of 141 MGD with the corresponding water sales revenue projected to be slightly higher than budgeted based on revenues collected during the first half of the year. Operating expenses are projected to be \$21 million below budget due in part to a lower spending on labor. Parity debt service is projected to be \$179 million which is \$19 million lower than budgeted. The lower debt service is due to lower-than-budgeted interest rates on bonds since adoption of the biennial budget for Fiscal Years 2018 and 2019 and a delay in the need for bond proceeds for capital funding given recent increases in revenue. Parity debt service coverage is projected to be 2.19 times in Fiscal Year 2019 and total debt service coverage is projected to be 2.11 times.

As described, the projected operating results for Fiscal Year 2019 were originally developed in connection with the District's biennial budget for Fiscal Years 2018 and 2019, and were subsequently updated in connection with the District's semi-annual budget performance review to reflect actual results experienced through December 31, 2018 and expectations as of such date for the remainder of Fiscal Year 2019. The actual results may differ from those projected.

Discussion of Budget Projections for Fiscal Years 2020 through 2024

The five-year financial forecast for the period between Fiscal Years 2020 and 2024 is based on specified assumptions, reflected in the footnotes to Table 21 and outlined below. These assumptions do not incorporate drought-related costs or revenues, as discussed below. The first two years in the five-year financial forecast are based upon the District's two-year budget. The proposed biennial budget for Fiscal Years 2020 and 2021 was presented to the Board on March 26, 2019. The final biennial budget for Fiscal Years 2020 and 2021 was approved by the Board on June 11, 2019. In conjunction with the Board's approval of the District's biennial budget, the Board adopted rate increases for Fiscal Years 2020 and 2021, following a public hearing on the proposed rate increases held on June 11, 2019. See "– Rates and Charges" above.

Based upon the base budget assumptions outlined below, revenues are forecast to increase by an average annual rate of 5.7% annually over the period between Fiscal Years 2020 and 2024, while forecasted operating expenses are expected to grow by an average of approximately 4.5% per year and debt service increases by an average of 5.5% per year. Capital cash flow spending is projected at 1.9 billion over the five-year period between Fiscal Years 2020 and 2024. Projected capital expenditures are directed at pipelines infrastructure renewal; meter, valve and hydrant replacement; water treatment plant upgrades; raw water aqueduct improvements; pressure zone Improvements; reservoir rehabilitation; and other water system projects.

The average percentage of capital funded from debt is projected at 49.4% over that period, lower than the financial policy maximum of 65%. Revenue bond debt service coverage is projected to exceed the 1.60x policy target each year. In Fiscal Year 2020 revenue bond debt service coverage is projected to be 1.88x. In Fiscal Year 2021 revenue bond debt service coverage is projected to be 1.89x after taking into account a \$5.0 million deposit to the Rate Stabilization Fund reserve. Debt service coverage is projected to remain relative steady, at 1.85x, 1.87x, and 1.89x in Fiscal Years 2022, 2023 and 2024, respectively. These debt service coverage ratios takes into account deposits into the Rate Stabilization Fund reserve of \$10.0 million each year in Fiscal Years 2022, 2023 and 2024. Reserve balances, including the Rate Stabilization Fund reserve, are projected to meet or exceed the policy reserve levels throughout the five-year period. The District is projecting ending each year over the five-year period with total reserves of over \$350 million. Included in these reserves is the Rate Stabilization Fund reserve, which is projected to be \$95.0 million at the end of Fiscal Year 2020, increasing to \$130.0 million by the end of the five-year projection period.

The five-year financial forecast for the period covering Fiscal Years 2020 and 2024 is based on certain assumptions, which the District believes to be reasonable, incorporating among other factors the decreased demand for water in recent years. The forecast includes conservative assumptions on the rebound of customer water use after the critical drought from 2012 through 2015, but it does not include the impact of any new drought in the base assumptions; management of drought costs from a new drought during the forecast period is addressed below. Water sales volume is projected at 141 MGD in Fiscal Year 2020 and 143 MGD in Fiscal Year 2021, near the prior years' budget assumptions of 137 MGD and 141 MGD in Fiscal Years 2018 and 2019, respectively. Water sales volume is projected to increase only modestly to 144 MGD, 146 MGD and 147 MGD in Fiscal Years 2022, 2023, and 2024, respectively. The overall increases to base rates and charges for Fiscal Years 2020 and 2021 of 6.50% and 6.25%, consistent with the proposed budget and Proposition 218 notice and subsequently adopted by the Board,

are reflected. Lower overall rate increases of 5.0%, 5.0% and 5.0% per annum are assumed for Fiscal Years 2022, 2023 and 2024, respectively. Assumed rate increases for such years will be subject to Board approval. The base rates exclude any drought surcharges.

The District has developed a comprehensive approach to managing the financial impacts and recovery of reduced water consumption following a drought. The five-year financial forecast from Fiscal Year 2020 through 2024 is built on prudent water sales assumptions which remain below water sales totals prior to the most recent drought. Should a drought occur during the five-year period, the District's Board of Directors can implement a Drought Surcharge through a drought declaration to offset costs related to purchasing supplemental water and reduced consumption. See "– Drought Surcharges" above. The District can also use funds in its Rate Stabilization Fund reserve in a year in which water consumption is below budgeted projections.

Employees' Retirement System

General. The District has a contributory retirement system covering substantially all of its employees (including the Water System and Wastewater System). The East Bay Municipal Utility District Employees' Retirement System (the "Retirement System") was established in 1937 to administer a single-employer, contributory, defined benefit pension plan (the "Plan") to provide retirement, disability, survivorship and post-employment health insurance benefits ("HIB") for eligible directors, officers and employees of the District. The Plan is funded by contributions from its members and from the District, and from investment earnings on Plan assets. The payment of benefits earned by Plan members of the Retirement System is an obligation of the District. Employees of the District are also covered by Social Security.

The Retirement System is administered by a Retirement Board composed of three members appointed by the District Board, two members elected by and from the active membership and one (nonvoting) member elected by and from the retired membership of the Retirement System. Ordinance No. 40 of the District, effective October 1, 1937, as amended (the "Retirement System Ordinance"), assigns the authority to establish Plan benefit provisions to the District Board.

Contributions to the Retirement System are made by the members and the District. Each member's contribution is based upon a percentage of that member's covered compensation. The employee contribution rates for 1955/1980 Plan members (*i.e.*, employees first hired prior to January 1, 2013) are prescribed in the Retirement System Ordinance and may be adjusted by the District Board solely pursuant to the terms of a negotiated collective bargaining agreement or MOU with employee bargaining units. Pursuant to applicable provisions of the California Public Employees' Pension Reform Act of 2013 as codified ("PEPRA"), 2013 Tier members (*i.e.*, employees first hired on or after January 1, 2013) are required to contribute at least 50% of the "normal cost" rate. The District employees' contribution rate for 1955/1980 Plan members (which includes a 0.09% contribution to the HIB) was increased from 6.83% to 7.33% effective April 22, 2013, to 7.83% beginning April 21, 2014, to 8.33% beginning April 20, 2015 and to 8.75% on April 18, 2016. The current District employees' contribution rate for 1955/1980 Plan members (including the 0.09% contribution to the HIB) is 8.75%. The District employees' contribution rate for 2013 Tier members (which also includes a 0.09% contribution to the HIB) is established by the District Board, and such rates are based upon actuarial valuations. The current District employees' contribution rate for 2013 Tier members (including the 0.09% contribution to the HIB) is 8.84%.

The District (employer) contributions are based upon percentages of the aggregate amount of members' covered compensation. Employer contribution percentages are established by the District Board. Such percentages are based upon actuarial valuations. The District's employer contribution percentage for 1955/1980 Plan members has been established at 43.18% for Fiscal Year 2019 (including a

5.32% contribution to the HIB) and has been established at 36.16% for 2013 Tier members (including a 4.92% contribution to the HIB). For Fiscal Year 2020, based upon the June 30, 2018 funding valuation reports prepared by the actuary, the recommended District employer contribution percentage for 1955/1980 Plan members is 41.75% (including a 5.03% contribution to the HIB) and is 34.52% for 2013 Tier members (including a 4.73% contribution to the HIB). The June 30, 2018 funding valuation reports, which provide the recommended contribution rates for Fiscal Year 2020, were presented by the actuary to the Retirement Board at their January 17, 2019 meeting. While the valuation reports were adopted by the Board at that meeting, the Board elected to continue the same employer contribution rates from Fiscal Year 2019 for Fiscal Year 2020 (*i.e.*, 43.18% for 1955/1980 Plan members and 36.16% for 2013 Tier members) to help pay down the System's unfunded actuarial accrued liability, and to provide a partial offset in the case of future lower than expected investment returns.

The District estimates that approximately 85% of the District's annual contributions are attributable to the Water System and approximately 15% are attributable to the Wastewater System.

As of June 30, 2018, collectively for the Water and Wastewater Systems, there were 1,828 active (non-retired) Plan members, 284 terminated Plan members entitled to but not yet receiving benefits and 1,779 retirees and beneficiaries receiving benefits.

Table 22 sets forth the number of active (non-retired) members, total Plan assets, District and Member contributions and retirement allowances paid in the five Fiscal Years 2014 through 2018.

Table 22
RETIREMENT SYSTEM
Active (Non-Retired) Members, Total Plan Assets, District and Member Contributions and
Allowances Paid
Five Fiscal Years Ended June 30, 2018⁽¹⁾

<i>Fiscal Year Ended June 30</i>	<i>Active (Non-Retired) Members⁽²⁾</i>	<i>Total Plan Assets⁽³⁾</i>	<i>District Contribution⁽⁴⁾</i>	<i>Member Contributions</i>	<i>Allowances Paid From Retirement Plan⁽⁵⁾</i>
2014	1,952	\$1,346,888,000	\$70,117,000	\$12,133,000	\$ 78,265,000
2015	2,001	1,407,209,000	73,141,000	13,427,000	85,184,000
2016	2,037	1,418,129,000	74,672,000	14,925,000	91,571,000
2017	2,069	1,612,644,000	76,860,000	16,018,000	98,617,000
2018	2,112	1,753,240,000	81,096,000	17,079,000	106,377,000

⁽¹⁾ Includes Health Insurance Benefit.

⁽²⁾ Includes active plan members and terminated plan members entitled to but not yet receiving benefits.

⁽³⁾ Market value as of June 30 of such Fiscal Year as shown in the audited financial statements of the Retirement System.

⁽⁴⁾ The District estimates that approximately 85% of the District's annual contributions are attributable to the Water System and approximately 15% are attributable to the Wastewater System.

⁽⁵⁾ Includes benefits paid and refunds of contributions.

Source: The District.

The Retirement System is an integral part of the District and, as noted above, the District appoints the majority of the governing body of the Retirement System and provides for its funding. Accordingly, the Retirement System's operations are reported as a Pension and Other Employee Benefit Trust Fund in the District's basic financial statements. The Retirement System also issues separately available financial statements on an annual basis. Such financial statements can be obtained from the District at 375 Eleventh Street, Oakland, California 94607.

The amounts set forth in this discussion of the District's Retirement System, including, for example, actuarial accrued liabilities and funded ratios, are based upon numerous demographic and economic assumptions, including investment return rates, inflation rates, salary increase rates, cost of living adjustments, postemployment mortality, active member mortality, and rates of retirement. Prospective purchasers of the District's bonds are cautioned to review and carefully assess the reasonableness of the assumptions set forth in the documents that are cited as the sources for such information. In addition, prospective purchasers of the District's bonds are cautioned that such sources and the underlying assumptions are made as of their respective dates, and are subject to change. Prospective purchasers of the District's bonds should also be aware that some of the information presented in this discussion of the Retirement System contains forward-looking statements and the actual results of the Retirement System may differ materially from the information presented herein.

Benefits. All regular full-time employees (as well as certain job share and intermittent employees) of the District are members of the Plan. In accordance with the Retirement System Ordinance, eligible employees become members of the Plan on the first day they are physically on the job. Retirement plan benefits are generally determined by a formula based on the employee's highest two years of compensation (highest 36 months for 2013 Tier members) and the length of employment with the District. Benefits adopted by the District vest in part with members after five years of continuous full-time employment. Vested members who terminate employment may elect a refund of their contributions or leave them in the Plan until eligible to receive benefits.

In addition to retirement benefits, the District provides post-employment health benefits assistance, administered by the Retirement System, for employees who retire from the District or their surviving spouses. As of June 30, 2018, there were 1,591 participants receiving these healthcare benefits. For participants entering the Retirement System prior to July 1, 1996, a monthly allowance of up to \$450 (up to \$550 for married retirees and retirees with domestic partners) is paid to retirees with at least five years of full-time service to reimburse the retiree-paid medical expenses (including any health, dental or long-term care insurance premiums paid by the retiree for his or her self, and current spouse or domestic partner, or any health, dental or long-term care insurance premiums paid by the eligible surviving spouse or domestic partner of a retiree). Effective July 1, 1996, a 20-year vesting schedule for full benefits was implemented for all new employees. Effective January 1, 1999, retired members who had separated from the District prior to their retirement and who had at least five years of service also become eligible for the post-employment healthcare benefits based on the same vesting schedule.

Actuarial Assumptions and Funding Policy. Under the Retirement System Ordinance, the District is required to have an actuarial study performed at least every two years, but the District's current policy is to have an actuarial study performed each year. The most recent actuarial study of the Retirement System, including the pension and the HIB trusts, was performed by Segal Consulting, as of June 30, 2018.

The actuarial report provides a basis for the District Board's decision regarding the rate of contributions by the District to the Retirement System, including both the pension and the HIB trusts. The District makes its contribution using rates determined by its outside actuaries.

The Governmental Accounting Standards Board ("GASB") issued Statements 67 and 68 affecting the reporting of net pension liabilities for accounting purposes, and Statements 74 and 75 affecting the reporting of other post-employment healthcare benefits ("OPEB") liabilities for accounting purposes. Statements 67 and 74 are for plan reporting, and Statements 68 and 75 are for employer reporting. The information needed to comply with Statements 67 and 74 was provided by the actuary in separate reports (*i.e.*, separate from the pension and health insurance benefits funding valuation reports) dated January 10, 2019, and the information needed to comply with Statements 68 and 75 is scheduled to be provided by the actuary in separate reports before the end of Fiscal Year 2019 (for employer reporting as of June 30,

2019). The GASB Statements require shorter periods for recognition of non-investment gains/losses and actuarial assumption changes, as well as for recognition of investment gains/losses. The GASB Statements provide for a complete separation between financial reporting and funding requirements for pension and health insurance benefit plans. Under the GASB statements, the District is required to report the Net Pension Liability (*i.e.*, the difference between the Total Pension Liability and the Pension Plan's Fiduciary Net Position or market value of assets) and the Net OPEB Liabilities (*i.e.*, the difference between the Total OPEB Liability and the OPEB Plan's Fiduciary Net Position or market value of assets) in its financial statements. See Note 8(G) and the Required Supplementary Information in the audited financial statements of the District included in APPENDIX B – "EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017" for additional information regarding the Net Pension Liability and the Net OPEB Liability of the District for the Retirement System.

To calculate the required contribution for each Fiscal Year, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than assumed (an actuarial loss). If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

A summary of the funding method and assumptions utilized in the actuarial study as of June 30, 2018 are described below.

Funding Method. The Plan's funding policy provides for periodic District contributions at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due as specified by the ordinance governing the Retirement System. The Entry Age Cost Method is used for this purpose. Under the Entry Age Cost Method, there are two components to the total contributions: (i) the normal cost, which is the amount of contributions required to fund the benefit allocated to the current year of service (associated with active employees only), and (ii) an amortization payment on any unfunded actuarial accrued liability ("UAAL"). The normal cost is calculated on an individual basis where the entry age normal cost is calculated as the sum of the individual normal costs. The UAAL (past service liability) is amortized as a level percentage of payroll on a closed basis over the amortization periods described below. The actuarial accrued liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation.

Amortization Periods. As of June 30, 2018, the UAAL is currently being funded using a layered approach. Each layer of the UAAL established prior to July 1, 2011 is being funded over a separate decreasing 30-year period, starting from the date the layer was originally established. On or after July 1, 2011, changes in the UAAL attributable to plan amendments are amortized over separate decreasing 15-year periods; changes in the UAAL attributable to assumption or method changes are amortized over separate decreasing 25-year periods; and changes in the UAAL attributable to actuarial gains/losses (*i.e.*, the extent to which actual overall experience deviates from the assumptions) are amortized over separate decreasing 20-year periods. Under the layered approach, any new UAAL layer that emerges between the prior and the current actuarial valuation (due to deviations between actual and expected actuarial experience, changes in actuarial assumptions used to measure the liabilities or other factors) will be determined and factored into the District's contribution rates so that it will be paid off after its respective amortization period described above.

Actuarial Value of Assets (Asset Smoothing Method). Methods used to compute District contribution requirements include a five-year smoothing of the difference between the actual market return and the expected return on the market value of the assets (with further adjustments as may be

required to keep the smoothed assets within 30% of market value). The impact of this will result in a “smoothed” valuation value of assets (or “Actuarial Value of Assets”) that is higher or lower than the market value of the assets depending on whether the amount that is being smoothed is either a net deferred loss or a net deferred gain.

Actuarial Assumptions. A number of assumptions are used to calculate the costs of the Plan and to compute contribution requirements for the Plan. The principal assumptions used in preparing the pension plan and HIB funding valuation reports as of June 30, 2018 and the pension plan financial reporting (*i.e.*, GASB 67) valuation report as of June 30, 2018 include:

1. Investment rate of return: 7.00%.
2. Inflation rate: 2.75%.
3. Interest credited to member contributions: 7.00%.
4. Projected salary increases: Ranges from 9.25% to 3.75% based on years of service (includes inflation at 2.75% plus across the board salary increase of 0.50% plus merit and promotional increases).
5. Cost of living adjustments for pension benefits: 2.75%.
6. Increase in HIB maximum monthly allowance: The Plan does not provide for an automatic increase in the HIB allowance and no such increase is assumed in the valuation.
7. Additional assumptions: Additional assumptions were used regarding rates of termination from active membership, post-retirement mortality, active member mortality, disability rates and rates of retirement.

Adopted Changes in Actuarial Assumptions. Under the ordinance governing the Retirement System, the District is required to have an actuarial experience study conducted no less frequently than every four years in order to review the mortality, service and compensation experience of the members, retired members and beneficiaries of the Retirement System, over the study period. The experience study provides the factual information upon which the outside actuary makes recommendations to the District regarding the economic and demographic assumptions that provide the basis for the actuarial valuation of the assets and liabilities of the Retirement System. In November 2016, Segal Consulting completed and presented to the Retirement Board its Analysis of Actuarial Experience During the Period July 1, 2012 through June 30, 2016, for the Retirement System (the “2016 Experience Study”). The 2016 Experience Study utilized demographic data of the Plan’s members and retirees from the last four actuarial valuations and provided recommendations regarding changes to the economic and demographic actuarial assumptions to be used in the June 30, 2016 and later actuarial valuations. Pursuant to the 2016 Experience Study, the actuary recommended changes in a number of the actuarial assumptions used to calculate the costs of the Plan and to compute the future contribution requirements for the Plan, including changes in the assumptions from those used in the actuarial study of the Plan as of June 30, 2015. At its November 17, 2016 meeting, the Retirement Board approved the changes in assumptions recommended by the actuary for the actuarial valuation to be performed as of June 30, 2016.

Subsequently, the Board approved an interim review of the economic actuarial assumptions for the June 30, 2018 valuations. In September 2018, Segal Consulting completed and presented to the Retirement Board its Review of Economic Actuarial Assumptions for the June 30, 2018 Actuarial Valuations (the “2018 Economic Assumptions Review”). Pursuant to the 2018 Economic Assumptions Review, the actuary recommended changes in a number of the economic actuarial assumptions used to calculate the costs of the Plan and to compute the future contribution requirements for the Plan. At its September 20, 2018 meeting, the Retirement Board approved the changes in assumptions recommended by the actuary for the actuarial valuation to be performed as of June 30, 2018. The actuarial assumptions

used in the actuarial study of the Plan as of June 30, 2018 are described under “Actuarial Assumptions” above. Some of the changes in the actuarial assumptions from those used in the actuarial study of the Plan as of June 30, 2017 are as follows: (i) a reduction in the assumed investment rate of return from 7.25% to 7.00%; (ii) a reduction in the assumed interest crediting rate for member contributions from 7.25% to 7.00%; (iii) a reduction in the inflation assumption from 3.00% to 2.75%, (iv) a reduction in the cost-of-living adjustments assumption from 3.00% to 2.75%, and (v) the introduction of an assumption to anticipate election of an optional form of benefit at retirement.

In the June 30, 2018 valuation, the actuary determined the increase in the actuarial accrued liability for the pension plan (not including the HIB) due to the assumption changes (including the change in the investment return assumption from 7.25% to 7.00%) to be \$12.5 million.

Contribution History. The schedule of District contributions for each of the pension plan and the HIB plan for the last five Fiscal Years are shown in Table 23:

Table 23
RETIREMENT SYSTEM
History of Contributions
Five Fiscal Years Ended June 30, 2018
(Dollar Amounts in Thousands)

Pension Plan:

<i>Fiscal Year Ended June 30</i>	<i>Contributions as a Percentage of Covered Payroll⁽¹⁾</i>	<i>Actuarially Determined Contribution</i>	<i>Actual Contribution</i>	<i>Percentage Contributed</i>
2014	38.66%	\$61,660	\$61,660	100%
2015	38.46	64,177	64,177	100
2016	37.36	65,218	65,218	100
2017	36.86 ⁽²⁾	67,096	67,096	100
2018	36.77	71,221	71,221	100

Health Insurance Benefit:

<i>Fiscal Year Ended June 30:</i>	<i>Contributions as a Percentage of Covered Payroll⁽¹⁾</i>	<i>Actuarially Determined Contribution</i>	<i>Actual Contribution</i>	<i>Percentage Contributed</i>
2014	5.30%	\$8,457	\$8,457	100%
2015	5.37	8,964	8,964	100
2016	5.42	9,454	9,454	100
2017	5.36 ⁽²⁾	9,764	9,764	100
2018	5.10	9,875	9,875	100

⁽¹⁾ This rate represents the aggregate rate for the 1955/1980 Plan and the 2013 Tier, based on the District’s actual contributions expressed as a percentage of the actual pensionable payroll amounts reported by the Retirement System.

⁽²⁾ Based on the higher contribution rates adopted by the Board resulting from the June 30, 2015 valuation, rather than the actuarially determined contribution rates from that valuation. The Board decided to carry over unchanged for Fiscal Year 2017 the higher total employer contribution rates previously adopted by the Board for Fiscal Year 2016, as determined in the June 30, 2014 valuation.

Source: Segal Consulting’s GAS 67 Actuarial Valuation for the Pension Plan as of June 30, 2018 and GAS 74 Actuarial Valuation for the Health Insurance Benefit Plan as of June 30, 2018.

As reflected in the funding actuarial study and shown (rounded to the nearest thousand dollars) in Table 24, the combined Actuarial Accrued Liability for pension and HIB benefits at June 30, 2018 was \$2,342,014,317 and the Actuarial Value of Assets was \$1,714,363,843, resulting in an Unfunded Actuarial Accrued Liability of \$627,650,474 and a funded ratio of the Plan under the Entry Age Cost Method of 73.2%. As described above, the Actuarial Value of Assets has been calculated using a five-year smoothing of the difference between the actual market return and the expected return on the market value of the assets. The valuation was performed in accordance with generally accepted actuarial principles and practices and the District's funding policy that was last reviewed with the Board in 2012. The assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice (ASOPs).

Table 24 sets forth the Actuarial Accrued Liability, Actuarial Value and Market Value of Assets, the Unfunded Actuarial Accrued Liability, and Funded Ratios as of June 30 of each of the Fiscal Years 2014 through 2018.

Table 24
RETIREMENT SYSTEM
(Pension Plan and HIB Combined)
Actuarial Accrued Liability, Actuarial Value and Market Value of Assets,
Unfunded Actuarial Accrued Liability and Funded Ratios
Five Fiscal Years Ended June 30, 2018⁽¹⁾
(Dollar Amounts in Thousands)

<i>Fiscal Year Ended June 30</i>	<i>Actuarial Accrued Liability (AAL)</i>	<i>Actuarial Value of Assets</i>	<i>Market Value of Assets</i>	<i>Unfunded Actuarial Accrued Liability (UAAL)⁽²⁾</i>	<i>Funded Ratio on Actuarial Value</i>	<i>Funded Ratio on Market Value</i>
2014	\$1,866,563	\$1,229,955	\$1,346,888	\$636,608	65.89%	72.16%
2015	1,957,833	1,350,292	1,407,209	607,541	68.97	71.88
2016	2,111,518	1,452,787	1,418,129	658,731	68.80	67.16
2017	2,185,674	1,580,665	1,612,644	605,009	72.32	73.78
2018	2,342,014 ⁽³⁾	1,714,364	1,753,240	627,650	73.20	74.86

⁽¹⁾ Dollars rounded to nearest thousand.

⁽²⁾ The District estimates that approximately 85% of the UAAL is attributable to the Water System and approximately 15% is attributable to the Wastewater System. The UAAL is determined based on the Actuarial Value of Assets.

⁽³⁾ Of this amount, \$121,037 is attributable to the HIB liabilities.

Source: Segal Consulting.

As of June 30, 2018, the market value of the combined pension and HIB plan's assets was \$1,753,240,000 and the projected benefit obligation ("PBO") was \$2,292,859,000, resulting in a funded ratio of the plan under the PBO basis of 76.5%. Under the plan provisions, determination of the funded ratio on a PBO basis is required and certain cost of living adjustments for pension benefits are granted when the funded ratio of the plan is 85% or higher as calculated on the PBO basis.

Schedule of Funding Progress. The District reports the schedule of funding progress for each of the pension plan and the post-employment healthcare plan (HIB), based on the results of the funding valuations. The schedule of funding progress presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The schedule of funding progress for the pension plan is set forth in Table 25.

Table 25
PENSION PLAN
Schedule of Funding Progress
(Dollar Amounts in Thousands)

<i>Actuarial Valuation Date June 30</i>	<i>Actuarial Value of Assets</i>	<i>Actuarial Accrued Liability (AAL)</i>	<i>Unfunded AAL (UAAL)</i>	<i>Funded Ratio</i>	<i>Covered Payroll⁽¹⁾</i>	<i>UAAL as a Percentage of Covered Payroll</i>
2014	\$1,210,321	\$1,756,706	\$546,385	68.9%	\$167,196	326.8%
2015	1,327,113	1,845,912	518,799	71.9	174,899	296.6
2016	1,425,785	1,995,863	570,078	71.4	183,971	309.9
2017	1,549,213	2,068,015	518,802	74.9	184,859	280.6
2018	1,678,417	2,220,977	542,560	75.6	202,995	267.3

⁽¹⁾ Projected payroll based on valuation results.

Source: Segal Consulting's Actuarial Valuation and Review of Pension Plan as of June 30, 2018.

The schedule of funding progress for the post-employment healthcare plan is set forth in Table 26.

The retiree health liabilities reported in the actuarial funding study as of June 30, 2018 (and shown in Table 26 below) will not match those required to be used for GASB reporting purposes as shown in Table 28. The retiree health liabilities as reflected in the funding study have not been adjusted to include the implicit retiree rate subsidy as required under GASB reporting requirements. (Note that when premiums for active employees are determined on a pooled basis with premiums for retirees under age 65, a significant accounting obligation may exist even though the retiree under age 65 contributes most or all of the blended premium cost of the plan. The average costs for retirees if determined on a stand-alone basis is likely to exceed the average cost for the whole group, leading to an implicit subsidy for these retirees. The GASB accounting standard requires the employer to identify and account for this implicit subsidy as well as any explicit subsidies the employer may provide.) In addition, the liabilities for GASB reporting purposes for the HIB portion of the obligations shown in Table 28 were determined based upon a lower discount rate (*i.e.*, 5.59%) than the 7.00% investment rate of return used in Segal Consulting's prefunding study. The liabilities calculated for GASB reporting purposes shown in Table 28 are therefore higher than those reflected in the actuarial study as of June 30, 2018 and described above.

Table 26
POST-EMPLOYMENT HEALTH INSURANCE BENEFIT (HIB)
Schedule of Funding Progress
(Dollar Amounts in Thousands)

<i>Actuarial Valuation Date June 30</i>	<i>Actuarial Value of Assets</i>	<i>Actuarial Accrued Liability (AAL)</i>	<i>Unfunded AAL (UAAL)</i>	<i>Funded Ratio</i>	<i>Covered Payroll⁽¹⁾</i>	<i>UAAL as a Percentage of Covered Payroll</i>
2014	\$19,634	\$109,857	\$90,223	17.9%	\$167,196	54.0%
2015	23,179	111,921	88,742	20.7	174,899	50.7
2016	27,002	115,655	88,653	23.3	183,971	48.2
2017	31,452	117,659	86,207	26.7	184,859	46.6
2018	35,947	121,037	85,090	29.7	202,995	41.9

⁽¹⁾ Projected payroll based on valuation results.

Source: Segal Consulting's Actuarial Valuations and Review of Other Postemployment Benefits (OPEB) as of June 30, 2014 through 2018.

Net Pension Liability. Under GASB 67, the pension plan is required to disclose the Net Pension Liability for financial reporting purposes. When measuring pension liability, GASB uses the same actuarial cost method (entry age method) and the same type of discount rate (expected return on assets) as the District uses for funding. This means that the Total Pension Liability (“TPL”) measure for financial reporting is determined on the same basis as the District’s AAL measure for funding. The Net Pension Liability (“NPL”) is equal to the difference between the TPL and the Plan’s Fiduciary Net Position. The Plan’s Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is the same as the UAAL calculated on a market value basis. The Net Pension Liability as of June 30, 2018 and June 30, 2017 is set forth in Table 27.

Table 27
PENSION PLAN
Net Pension Liability
(Dollar Amounts in Thousands)

	<u>June 30, 2018</u>	<u>June 30, 2017</u>
Total Pension Liability	\$ 2,220,977	\$ 2,068,015
Plan’s Fiduciary Net Position	<u>(1,716,478)</u>	<u>(1,580,556)</u>
Net Pension Liability	\$ 504,499	\$ 487,459
Plan’s Fiduciary Net Position as a % of the Total Pension Liability	77.28%	76.43%

Source: Segal Consulting.

The NPL was measured as of June 30, 2018 and 2017. The Plan’s Fiduciary Net Position (plan assets) was valued as of the measurement date, while the Total Pension Liability was determined based upon the results of the actuarial valuations as of June 30, 2018 and 2017, respectively. It should be noted that for GASB 68 purposes, the NPL for the reporting date of June 30, 2018 is based upon results as of the June 30, 2017 measurement date and those results are not adjusted or rolled forward. Therefore, the information as of June 30, 2017 set forth above is the same as that reported in the District’s audited financial statements as of June 30, 2018.

The discount rate used to determine the Total Pension Liability was 7.00% as of June 30, 2018 and 7.25% as of June 30, 2017, following the same assumptions used by the Retirement System in the pension funding valuations as of June 30, 2018 and June 30, 2017, respectively. It should be noted that, according to GASB, the discount rate used for financial reporting purposes should be based on the long-term expected rate of return on a retirement system’s investments, just as it is for funding. However, GASB requires that this assumption should be net of investment expenses but not net of administrative expenses (*i.e.*, without reduction for administrative expenses). Currently, the District’s investment return assumption used for the annual funding valuation is developed net of both investment and administrative expenses.

Net OPEB Liability. Under GASB 74, the OPEB plan is required to disclose the Net OPEB Liability for financial reporting purposes. When measuring OPEB liability, GASB uses the same actuarial cost method (entry age method) and the same expected return on plan assets as the District uses for funding. This means that the Total OPEB Liability (“TOL”) measure for financial reporting is determined on the same basis as the District’s AAL measure for funding. The Net OPEB Liability (“NOL”) is equal to the difference between the TOL and the OPEB Plan’s Fiduciary Net Position. The OPEB Plan’s Fiduciary Net Position is equal to the market value of assets. The NOL reflects all investment gains and losses as of the measurement date. The Net OPEB Liability as of June 30, 2018 and June 30, 2017 is set forth in Table 28.

Table 28
HEALTH INSURANCE BENEFIT PLAN
Net OPEB Liability
(Dollar Amounts in Thousands)

	<u>June 30, 2018</u>	<u>June 30, 2017</u>
Total OPEB Liability	\$167,770	\$167,894
Plan's Fiduciary Net Position	(36,762)	(32,088)
Net OPEB Liability	\$131,008	\$135,806
Plan's Fiduciary Net Position as a % of the Total OPEB Liability	21.91%	19.11%

Source: Segal Consulting.

The NOL was measured as of June 30, 2018 and 2017. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date, while the Total OPEB Liability was determined based upon the results of the actuarial valuations as of June 30, 2018 and 2017, respectively. It should be noted that for GASB 75 purposes, the NOL for the reporting date of June 30, 2018 is based upon results as of the June 30, 2017 measurement date and those results are not adjusted or rolled forward. Therefore, the information as of June 30, 2017 set forth above is the same as that reported in the District's audited financial statements as of June 30, 2018.

The discount rate used to determine the TOL and NOL was 5.59% as of June 30, 2018 and 5.53% as of June 30, 2017. It should be noted that, according to GASB, the discount rate used for financial reporting purposes as of June 30, 2018 is a blend of the assumed investment return on plan assets (*i.e.*, 7.00% for the June 30, 2018 valuation) and the rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (*i.e.*, 3.87% as of June 30, 2018). Projected benefit payments are discounted by the plan investment return assumption of 7.00% until June 30, 2043. Benefit payments after June 30, 2043 are then discounted by the municipal bond rate of 3.87%. The 5.59% discount rate used in this valuation is the blended discount rate reflecting benefits discounted by the plan investment return assumption rate and the bond rate.

Additional information concerning the Retirement System may be found in APPENDIX B – "EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017."

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APPENDIX B

**EAST BAY MUNICIPAL UTILITY DISTRICT
AUDITED FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017**

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EAST BAY MUNICIPAL UTILITY DISTRICT
BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017

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**EAST BAY MUNICIPAL UTILITY DISTRICT
BASIC FINANCIAL STATEMENTS
For the Years Ended June 30, 2018 and 2017**

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**EAST BAY MUNICIPAL UTILITY DISTRICT
BASIC FINANCIAL STATEMENTS
For the Years Ended June 30, 2018 and 2017**

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INDEPENDENT AUDITOR'S REPORT

Board of Directors
East Bay Municipal Utility District
Oakland, California

Report on Financial Statements

We have audited the accompanying financial statements of each major fund and the discretely presented component unit, of the East Bay Municipal Utility District as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the District'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 the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the District'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 District'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 positions of each major fund and the discretely presented component unit of the East Bay Municipal Utility District as of June 30, 2018 and 2017, and the respective changes in the financial positions and where applicable, cash flows, thereof for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

Management adopted the provisions of the following Governmental Accounting Standards Board Statement, Statement No. 75 – *Accounting and Financial Reporting for Post-employment Benefit Plans Other than Pensions* which became effective during the year ended June 30, 2018, and required a restatement to the financial statement, as discussed in Note 1R of the financial statements.

This emphasis of matter does not constitute a modification to our opinions.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis, other required supplementary information as listed in the Table of Contents, and certain schedules related to the Pension and Post Employment Healthcare Plans 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 Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the District's basic financial statements. The Supplemental Information as listed in the Table of Contents are presented for purposes of additional analysis and are not required parts of the basic financial statements.

The Supplemental Information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Supplemental Information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated August 27, 2018 on our consideration of the District'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 the 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 District's internal control over financial reporting and compliance.

Maze + Associates

Pleasant Hill, California
August 27, 2018

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EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

This section presents management's analysis of the East Bay Municipal Utility District's (the District) financial condition and activities as of and for the year ended June 30, 2018. Management's Discussion and Analysis (MDA) is intended to serve as an introduction to the District's basic financial statements.

This information should be read in conjunction with the audited financial statements that follow this section. The District, as the primary governmental entity, includes within the financial statements, the financial position and activities of the District's Employees' Retirement System (Employees' Retirement System) as a component unit. The Employees' Retirement System issues its own financial statements and MDA under a separate cover. Significant matters pertaining to the Employees' Retirement System have been included in the notes to the financial statements as deemed appropriate.

The information in this MDA is presented under the following headings:

Organization and Business

Overview of the Basic Financial Statements

Financial Analysis

Capital Assets

Debt Administration

Request for Information

ORGANIZATION AND BUSINESS

The District provides water and wastewater services to industrial, commercial, residential, and public authority users. The Water System collects, transmits, treats, and distributes high quality water to approximately 60% (332 square miles) of the developed area within Alameda and Contra Costa counties of California and serves a population of about 1.4 million. The Wastewater System intercepts and treats wastewater from residences and industries within an 88-square-mile service area including the communities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District and serves a population of about 685,000. The District recovers cost of service primarily through user fees.

OVERVIEW OF THE BASIC FINANCIAL STATEMENTS

The District's basic financial statements are comprised of two components: (1) Fund Financial Statements and (2) Notes to Basic Financial Statements. The report also contains other required supplementary information in addition to the basic financial statements.

Fund Financial Statements. 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 District, like other special purpose governments, uses fund accounting to ensure and demonstrate compliance with financial-related legal requirements.

Proprietary Funds. The District's proprietary funds consist of two enterprise funds, the Water System and the Wastewater System. Enterprise funds are used to account for operations that are financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that the costs (including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

The District's proprietary fund statements include:

The *Balance Sheet* presents information on the District's assets and deferred outflows, and liabilities and deferred inflows, with the difference between the two reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the District is improving or deteriorating.

While the Balance Sheet provides information about the nature and amount of resources and obligations at year-end, the *Statement of Revenues, Expenses, and Changes in Net Position* presents the results of the District's operations over the course of the fiscal year and information as to how the net position changed during the year. This statement can be used as an indicator of the extent to which the District has successfully recovered its costs through user fees and other charges. All changes in net position are reported during the period in which the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows. Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in future fiscal periods, such as delayed collection of operating revenues and the expense of employee earned but unused vacation leave.

The *Statement of Cash Flows* presents changes in cash and cash equivalents resulting from operational, capital, noncapital, and investing activities. This statement summarizes the annual flow of cash receipts and cash payments, without consideration of the timing of the event giving rise to the obligation or receipt and excludes noncash accounting measures of depreciation or amortization of assets.

Fiduciary Fund. Fiduciary funds are used to account for resources held for the benefit of parties outside the government. The District's fiduciary fund consists of the Pension and Other Employee Benefit Trust fund, which is maintained to account for assets held by the Employees' Retirement System in a trustee capacity for vested and retired employees. The accounting used for fiduciary funds is much like that used for the proprietary funds.

Notes to Basic Financial Statements. The notes provide additional information that is essential to a full understanding of the data provided in the basic financial statements. The notes to basic financial statements can be found on pages 31 to 92 of this report.

Other Information. In addition to the basic financial statements and accompanying notes, this report also presents *certain required supplementary information* concerning the District's progress in funding its obligation to provide pension and other post-employment healthcare benefits to its employees. Such required supplementary information can be found on pages 95 to 100 of this report.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

FINANCIAL ANALYSIS

Financial Highlights

In fiscal year 2018, EBMUD continued to effectively manage its finances and strengthen its financial position by adopting sufficient water and wastewater rates to fund capital infrastructure improvements and to maintain strong financial performance. The District implemented Government Accounting Standards Board (GASB) Statement No. 75 - Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions that created a \$108 million decrease of prior period adjustment in beginning net position. The following results of operations indicate a continuing strong and stable fiscal position.

The total assets and deferred outflows of the District exceeded the total liabilities and deferred inflows by \$1.6 billion (*net position*).

Net position increased by \$102 million or 7% during the fiscal year.

Capital assets increased by \$205 million or 4% to \$4.9 billion.

Operating revenue increased by \$65 million or 12% to \$599 million.

Operating expense remained stable at \$430 million.

Non-operating net expense increased by \$4 million or 7% to (\$58) million.

Capital contributions increased by \$14 million or 17% from the prior fiscal year.

Financial Position

In the current year, the District's total net position increased by \$102 million or 7% during the fiscal year. Without GASB 75 adjustment, the total net position increase would be \$210 million. The Water System's net position increased by \$82 million or 7% and the Wastewater System's net position increased by \$20 million or 7%. Current and other assets decreased by \$64 million or 7%. Capital assets increased by \$205 million or 4%. By far the largest portion of the District's net position, 92% or \$1.5 billion, represents its investment in capital assets necessary to provide services.

In the previous fiscal year, the District's total net position increased by \$136 million or 10% during the fiscal year. The Water System's net position increased by \$108 million or 10% and the Wastewater System's net position increased by \$28 million or 11%. Current and other assets increased by \$191 million or 25%. Capital assets increased by \$162 million or 4%. By far the largest portion of the District's net position, 79% or \$1.2 billion, represents its investment in capital assets necessary to provide services.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 1 shows the District's net position for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 1
Net Position
Water and Wastewater
June 30, 2018 and 2017
(In thousands)

	2018	2017	Variance	%
Current and other assets	\$ 904,282	967,829	(63,547)	(7)%
Capital assets	4,855,907	4,651,237	204,670	4%
Deferred outflow of resources	169,099	230,903	(61,804)	(27)%
Total assets and deferred outflow	<u>5,929,288</u>	<u>5,849,969</u>	<u>79,319</u>	<u>1%</u>
Current and other liabilities	899,620	880,313	19,307	2%
Long-term liabilities	3,317,300	3,412,637	(95,337)	(3)%
Deferred inflow of resources	82,478	28,636	53,842	188%
Total liabilities and deferred inflow	<u>4,299,398</u>	<u>4,321,586</u>	<u>(22,188)</u>	<u>(1)%</u>
Net position:				
Net investment in capital assets	1,494,381	1,204,366	290,015	24%
Restricted	256,299	259,887	(3,588)	(1)%
Unrestricted	(120,790)	64,130	(184,920)	(288)%
Total net position	<u>\$ 1,629,890</u>	<u>1,528,383</u>	<u>101,507</u>	<u>7%</u>

Net Position
Water and Wastewater
June 30, 2017 and 2016
(In thousands)

	2017	2016	Variance	%
Current and other assets	\$ 967,829	776,898	190,931	25%
Capital assets	4,651,237	4,489,702	161,535	4%
Deferred outflow of resources	230,903	148,078	82,825	56%
Total assets and deferred outflow	<u>5,849,969</u>	<u>5,414,678</u>	<u>435,291</u>	<u>8%</u>
Current and other liabilities	880,313	729,648	150,665	21%
Long-term liabilities	3,412,637	3,173,637	239,000	8%
Deferred inflow of resources	28,636	119,093	(90,457)	(76)%
Total liabilities and deferred inflow	<u>4,321,586</u>	<u>4,022,378</u>	<u>299,208</u>	<u>7%</u>
Net position:				
Net investment in capital assets	1,204,366	1,249,549	(45,183)	(4)%
Restricted	259,887	272,138	(12,251)	(5)%
Unrestricted	64,130	(129,387)	193,517	(150)%
Total net position	<u>\$ 1,528,383</u>	<u>1,392,300</u>	<u>136,083</u>	<u>10%</u>

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Results of Operations

In the current fiscal year, the District's total operating revenue of \$599 million for the year increased by \$65 million and total operating expense of \$430 million for the year increased by \$2 million. The change in net position (including capital contributions) increased from \$136 million in the previous fiscal year to \$210 million in the current fiscal year. The District's total net position increased from \$1,528 million to \$1,630 million during the current fiscal year after a \$108 million decrease of prior period adjustment in net position per implementation of GASB 75.

The major components of the District's results of operations in the current fiscal year were:

- Water revenue increased by \$59 million or 14% due to an 8.9% increase in billed water consumption, and a 9.25% water rate increase, offset by no drought surcharge received in the current fiscal year compared to \$6 million received in the prior year.
- Wastewater revenue increased by \$6 million or 6% primarily due to a 5% wastewater rate increase.
- Operating expense remained stable primarily as increases of \$3 million in raw water expenses, \$3 million in sewer treatment plant operations, \$16 million in general administration expense (primarily \$7.5 million salary retro pay and \$3.5 million loss liabilities reserve), were offset by decreases of \$4 million in financial and risk management and \$16 million in pension expense.
- Non-operating net expense increased by \$4 million primarily as an \$11 million increase in interest and amortization of bond expenses, was offset by a \$5 million increase in investment income and a \$2 million increase in property tax received. Included in non-operating net expense is investment income (loss), consisting of interest earned on investment and the net change in the fair value of investments. The interest earned on investment and the net change in the fair value of investments were \$9 million and (\$2) million respectively in the current fiscal year, and \$4 million and (\$1) respectively in the prior fiscal year.
- Capital contributions increased by \$14 million primarily reflecting an \$18 million increase in System Capacity Charges and a \$3 million increase in Wastewater Capacity Fees due to an increase of infill projects (multi-family dwelling and mixed used structures), particularly in the Oakland areas, offset by an \$8 million decrease in grants and other reimbursements received in the current fiscal year compared to the prior year. Page 17 contains additional capital contributions information.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

In the previous fiscal year, the District's total operating revenue of \$534 million for the year increased by \$9 million and total operating expense of \$428 million for the year increased by \$13 million. The change in net position (including capital contributions) increased from \$119 million in fiscal year 2016 to \$136 million in the fiscal year 2017. The District's total net position increased from \$1,392 million to \$1,528 million during the fiscal year 2017.

The major components of the District's results of operations in fiscal year 2017 were:

- Water revenue remained stable due to a 3.6% increase in billed water consumption, and a 7% water rate increase, offset by \$6 million drought surcharge received in fiscal year 2017 compared to \$51 million received in fiscal year 2016.
- Wastewater revenue increased by \$5 million or 5% primarily due to a 5% wastewater rate increase.
- The power revenue increase resulted from release of excess water to generate more hydropower in the current year.
- Operating expense increased by \$13 million, primarily due to an increase of \$29 million in pension expense, increases of \$7 million in water treatment and distribution expense and \$5 million in depreciation expense, offset by a decrease in raw water expenses of \$27 million in supplemental water purchase and delivery in fiscal year 2016.
- Non-operating net expense decreased by \$3 million primarily due to a \$2 million increase in property tax received and \$1 million increase in sale of capital assets. Included in non-operating net expense is investment income (loss), consisting of interest earned on investment and the net change in the fair value of investments. The interest earned on investment and the net change in the fair value of investments were \$4 million and (\$1) million respectively in fiscal year 2017, and \$3 million and \$119 thousand respectively in fiscal year 2016.
- Capital contributions increased by \$20 million primarily reflecting a \$12 million increase in System Capacity Charges and a \$5 million increase in Wastewater Capacity Fees due to an increase of infill projects (multi-family dwelling and mixed used structures), particularly in the Oakland and Berkeley areas. Page 17 contains additional capital contributions information.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 2 shows changes in the District's net position for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 2

Changes in Net Position

Water and Wastewater

June 30, 2018 and 2017

(In thousands)

	<u>2018</u>	<u>2017</u>	<u>Variance</u>	<u>%</u>
Operating Revenue:				
Water	\$ 480,745	420,293	60,452	14%
Sewer	86,514	81,904	4,610	6%
Power	7,544	8,707	(1,163)	(13)%
Wet weather facilities charges	24,293	23,105	1,188	5%
Total operating revenue	<u>599,096</u>	<u>534,009</u>	<u>65,087</u>	12%
Operating Expense:				
Raw water	40,349	37,551	2,798	7%
Water treatment & distribution	113,422	113,587	(165)	(0)%
Recreation areas, net	5,682	5,689	(7)	(0)%
Sewer lines & pumps	13,422	14,611	(1,189)	(8)%
Sewer treatment plant operations	38,220	35,147	3,073	9%
Customer accounting & collecting	19,434	19,915	(481)	(2)%
Financial and risk management	17,518	21,643	(4,125)	(19)%
Facilities management	5,523	5,177	346	7%
General administration	60,036	43,600	16,436	38%
Pension expense	(10,183)	6,194	(16,377)	(264)%
OPEB expense	(1,153)	—	(1,153)	N/A
Depreciation (excluding amounts reported within the Water and Wastewater operations)	<u>128,076</u>	<u>125,227</u>	<u>2,849</u>	2%
Total operating expense	<u>430,346</u>	<u>428,341</u>	<u>2,005</u>	0%
Net operating income (expense)	168,750	105,668	63,082	60%
Nonoperating income (expense):				
Investment income	7,131	2,538	4,593	181%
Taxes & subventions	41,480	39,751	1,729	4%
Interest & amortization of bond expenses, net	(120,719)	(109,742)	(10,977)	10%
Increase (decrease) of Equity in JPA partnership fund	(3,380)	(3,759)	379	(10)%
Other income	17,420	16,848	572	3%
Total nonoperating income (expense), net	<u>(58,068)</u>	<u>(54,364)</u>	<u>(3,704)</u>	7%
Income (loss) before contributions	110,682	51,304	59,378	116%
Capital contributions	<u>98,997</u>	<u>84,779</u>	<u>14,218</u>	17%
Change in net position	209,679	136,083	73,596	54%
Total net position – beginning	1,528,383	1,392,300	136,083	10%
Prior Period adjustment per implementation of GASB 75	<u>(108,172)</u>	<u>—</u>	<u>(108,172)</u>	N/A
Total net position – ending	<u>\$ 1,629,890</u>	<u>1,528,383</u>	<u>101,507</u>	7%

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 2 (Continued)

Changes in Net Position

Water and Wastewater

June 30, 2017 and 2016

(In thousands)

	<u>2017</u>	<u>2016</u>	<u>Variance</u>	<u>%</u>
Operating Revenue:				
Water	\$ 420,293	421,240	(947)	(0)%
Sewer	81,904	77,542	4,362	6%
Power	8,707	4,771	3,936	82%
Wet weather facilities charges	23,105	21,918	1,187	5%
Total operating revenue	<u>534,009</u>	<u>525,471</u>	<u>8,538</u>	<u>2%</u>
Operating Expense:				
Raw water	37,551	64,386	(26,835)	(42)%
Water treatment & distribution	113,587	106,484	7,103	7%
Recreation areas, net	5,689	5,581	108	2%
Sewer lines & pumps	14,611	13,407	1,204	9%
Sewer treatment plant operations	35,147	33,292	1,855	6%
Customer accounting & collecting	19,915	19,110	805	4%
Financial and risk management	21,643	19,648	1,995	10%
Facilities management	5,177	6,329	(1,152)	(18)%
General administration	43,600	49,686	(6,086)	(12)%
Pension expense	6,194	(22,776)	28,970	(127)%
Depreciation (excluding amounts reported within the Water and Wastewater operations)	125,227	119,791	5,436	5%
Total operating expense	<u>428,341</u>	<u>414,938</u>	<u>13,403</u>	<u>3%</u>
Net operating income (expense)	105,668	110,533	(4,865)	(4)%
Nonoperating income (expense):				
Investment income	2,538	2,675	(137)	(5)%
Taxes & subventions	39,751	37,808	1,943	5%
Interest & amortization of bond expenses, net	(109,742)	(109,340)	(402)	0%
Increase (decrease) of Equity in JPA partnership fund	(3,759)	(3,081)	(678)	22%
Other income	16,848	15,050	1,798	12%
Total nonoperating income (expense), net	<u>(54,364)</u>	<u>(56,888)</u>	<u>2,524</u>	<u>(4)%</u>
Income (loss) before contributions	51,304	53,645	(2,341)	(4)%
Capital contributions	<u>84,779</u>	<u>65,004</u>	<u>19,775</u>	<u>30%</u>
Change in net position	136,083	118,649	17,434	15%
Total net position – beginning	<u>1,392,300</u>	<u>1,273,651</u>	<u>118,649</u>	<u>9%</u>
Total net position – ending	<u>\$ 1,528,383</u>	<u>1,392,300</u>	<u>136,083</u>	<u>10%</u>

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Liquidity

The District had \$604 million in combined current and noncurrent District Cash and Investments as of June 30, 2018, a decrease of \$64 million compared to \$668 million as of June 30, 2017. Components of cash and investments for the year ended June 30, 2018 were:

- Water System total combined current and noncurrent cash and investments decreased by \$75 million compared to the same date of the previous fiscal year. Net increase (decrease) in cash and cash equivalents decreased by \$248 million compared to the prior year. This was primarily due to an increase of \$70 million from operating activities and an increase of \$11 million from the reallocation of investments between short-term and long-term, offset by a decrease of \$332 million from capital and related financing activities. The \$332 million decrease from capital and related financing activity is a result of a \$57 million increase in capital expending in the current fiscal year net of \$275 million new bond issuance proceeds received in the prior year. Net increase (decrease) in noncurrent investments increased by \$8 million also primarily due to reallocation of investments between short-term and long-term.
- Wastewater System total combined current and noncurrent cash and investments increased by \$11 million compared to the same date in the previous fiscal year. For the year ended June 30, 2018, net increase (decrease) in cash and cash equivalents increased by \$16 million compared to the prior year. This was primarily due to an increase of \$5 million from operating activities, an increase of \$19 million from the reallocation of investments between short-term and long-term, offset by a decrease of \$7 million from capital and related financing activities. The \$7 million decrease from capital and related financing activity is a result of a \$14 million decrease in capital expending in the current fiscal year net of \$21 million new bond issuance proceeds received in the prior year. Net increase (decrease) in noncurrent investments decreased by \$18 million also primarily due to reallocation of investments between short-term and long-term.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 3 shows the District's cash flow for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 3
Cash Flows
Water and Wastewater System
June 30, 2018 and 2017
(In thousands)

	<u>2018</u>	<u>2017</u>	<u>Variance</u>	<u>%</u>
Cash and cash equivalents:				
Beginning of year	\$ 269,057	\$ 204,700	64,357	31%
Net cash provided by operating activities	342,147	267,208	74,939	28%
Net cash provided by financing activities	41,480	39,751	1,729	4%
Net cash provided by (used in) capital and related financing activities	(453,499)	(114,505)	(338,994)	296%
Net cash provided by (used in) investing activities	(98,242)	(128,097)	29,855	(23)%
Net increase (decrease) in cash and cash equivalents	(168,114)	64,357	(232,471)	(361)%
End of period	<u>100,943</u>	<u>269,057</u>	<u>(168,114)</u>	(62)%
Investments:				
Beginning of year	398,759	268,442	130,317	49%
Net increase (decrease) in investments	103,939	130,317	(26,378)	(20)%
End of period	<u>502,698</u>	<u>398,759</u>	<u>103,939</u>	26%
Total District Cash and Investments	<u>\$ 603,641</u>	<u>\$ 667,816</u>	<u>(64,175)</u>	(10)%

Cash Flows
Water and Wastewater System
June 30, 2017 and 2016
(In thousands)

	<u>2017</u>	<u>2016</u>	<u>Variance</u>	<u>%</u>
Cash and cash equivalents:				
Beginning of year	\$ 204,700	\$ 415,831	(211,131)	(51)%
Net cash provided by operating activities	267,208	246,911	20,297	8%
Net cash provided by financing activities	39,751	37,808	1,943	5%
Net cash provided by (used in) capital and related financing activities	(114,505)	(383,496)	268,991	(70)%
Net cash provided by (used in) investing activities	(128,097)	(112,354)	(15,743)	14%
Net increase (decrease) in cash and cash equivalents	64,357	(211,131)	275,488	(130)%
End of period	<u>269,057</u>	<u>204,700</u>	<u>64,357</u>	31%
Investments:				
Beginning of year	268,442	153,682	114,760	75%
Net increase (decrease) in investments	130,317	114,760	15,557	14%
End of period	<u>398,759</u>	<u>268,442</u>	<u>130,317</u>	49%
Total District Cash and Investments	<u>\$ 667,816</u>	<u>\$ 473,142</u>	<u>194,674</u>	41%

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Cash and Investments by Fund

In fiscal years 2018 and 2017, total cash and investments available for operating and capital activities are reported in current and noncurrent assets as unrestricted and restricted funds. Significant activities in current fiscal year were as follows: Water System increased reserves of \$4 million in working capital, use of \$80 million in capital reserves to fund capital projects and equipment and reserve of an additional \$3 million in funds received for construction. Wastewater System increased \$12 million in capital reserves to fund capital projects and equipment.

In the previous fiscal year, significant activities were as follows: Water System increased reserves of \$4 million in working capital, \$2 million in self-insurance reserves, \$4 million in workers' compensation reserves, and \$170 million in capital reserves to fund capital projects, and additional \$11 million in funds received for construction; and release of \$9 million in debt service reserve fund through refunding. Wastewater System increased reserve of \$1 million in working capital, \$1 million in workers' compensation reserves, and additional \$12 million in capital reserves to fund capital projects and equipment.

Operating and Capital Reserves are components of Unrestricted Cash and Investments. Individual funds within Operating and Capital Reserves are funded pursuant to Board policy but are unrestricted as to use. The Unrestricted Reserve Balances indicate the District's ability to meet unanticipated revenue declines or expenditure increases. Unrestricted reserves are committed by the Board of Directors. This is distinct from restricted reserves which are legally constrained by law or by third party. For additional information, see Note 1H to the financial statements.

Table 4 shows the District's cash and investment by fund for the fiscal years ended June 30, 2018, 2017, and 2016:

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 4

Cash and Investment by Fund

Water and Wastewater

June 30, 2018 and 2017

(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
Unrestricted cash and investment								
Operating reserves:								
Rate stabilization fund	\$ 95,000	95,000	24,090	24,090	119,090	119,090	—	0%
Working capital reserve	69,100	65,600	17,600	17,700	86,700	83,300	3,400	4%
Self-insurance	6,974	6,651	1,135	1,267	8,109	7,918	191	2%
Workers compensation	5,422	7,066	883	1,346	6,305	8,412	(2,107)	(25)%
Total operating reserves	<u>176,496</u>	<u>174,317</u>	<u>43,708</u>	<u>44,403</u>	<u>220,204</u>	<u>218,720</u>	<u>1,484</u>	<u>1%</u>
Capital reserves:								
Reserved for capital projects	254,186	334,746	35,731	31,771	289,917	366,517	(76,600)	(21)%
Reserve funded CIP - Wastewater	—	—	14,803	14,642	14,803	14,642	161	1%
Vehicle replacements	7,387	6,791	—	—	7,387	6,791	596	9%
Equipment replacements	3,190	3,282	18,007	10,062	21,197	13,344	7,853	59%
Total capital reserves	<u>264,763</u>	<u>344,819</u>	<u>68,541</u>	<u>56,475</u>	<u>333,304</u>	<u>401,294</u>	<u>(67,990)</u>	<u>(17)%</u>
Total Unrestricted cash and investment	<u>441,259</u>	<u>519,136</u>	<u>112,249</u>	<u>100,878</u>	<u>553,508</u>	<u>620,014</u>	<u>(66,506)</u>	<u>(11)%</u>
Restricted Cash and Investments								
Bond interest and redemption fund	97	519	18	18	115	537	(422)	(79)%
Debt service reserve fund	3,654	3,620	—	—	3,654	3,620	34	1%
Funds received for construction	43,659	40,924	—	—	43,659	40,924	2,735	7%
FERC partnership fund	2,164	2,185	—	—	2,164	2,185	(21)	(1)%
Monetary reserve	541	536	—	—	541	536	5	1%
Total restricted cash and investments	<u>50,115</u>	<u>47,784</u>	<u>18</u>	<u>18</u>	<u>50,133</u>	<u>47,802</u>	<u>2,331</u>	<u>5%</u>
Total District Cash and Investments	<u>\$ 491,374</u>	<u>566,920</u>	<u>112,267</u>	<u>100,896</u>	<u>603,641</u>	<u>667,816</u>	<u>(64,175)</u>	<u>(10)%</u>

Cash and Investment by Fund

Water and Wastewater

June 30, 2017 and 2016

(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2017	2016	2017	2016	2017	2016	Amount	%
Unrestricted cash and investment								
Operating reserves:								
Rate stabilization fund	\$ 95,000	95,000	24,090	24,090	119,090	119,090	—	0%
Working capital reserve	65,600	62,100	17,700	16,400	83,300	78,500	4,800	6%
Self-insurance	6,651	5,000	1,267	1,700	7,918	6,700	1,218	18%
Workers compensation	7,066	3,200	1,346	600	8,412	3,800	4,612	121%
Total operating reserves	<u>174,317</u>	<u>165,300</u>	<u>44,403</u>	<u>42,790</u>	<u>218,720</u>	<u>208,090</u>	<u>10,630</u>	<u>5%</u>
Capital reserves:								
Reserved for capital projects	334,746	168,768	31,771	23,884	366,517	192,652	173,865	90%
Reserve funded CIP - Wastewater	—	—	14,642	14,530	14,642	14,530	112	1%
Vehicle replacements	6,791	5,300	—	—	6,791	5,300	1,491	28%
Equipment replacements	3,282	1,063	10,062	5,779	13,344	6,842	6,502	95%
Total capital reserves	<u>344,819</u>	<u>175,131</u>	<u>56,475</u>	<u>44,193</u>	<u>401,294</u>	<u>219,324</u>	<u>181,970</u>	<u>83%</u>
Total Unrestricted cash and investment	<u>519,136</u>	<u>340,431</u>	<u>100,878</u>	<u>86,983</u>	<u>620,014</u>	<u>427,414</u>	<u>192,600</u>	<u>45%</u>
Restricted Cash and Investments								
Bond interest and redemption fund	519	5	18	18	537	23	514	2,235%
Debt service reserve fund	3,620	12,726	—	—	3,620	12,726	(9,106)	(72)%
Funds received for construction	40,924	30,243	—	—	40,924	30,243	10,681	35%
FERC partnership fund	2,185	2,201	—	—	2,185	2,201	(16)	(1)%
Monetary reserve	536	535	—	—	536	535	1	0%
Total restricted cash and investments	<u>47,784</u>	<u>45,710</u>	<u>18</u>	<u>18</u>	<u>47,802</u>	<u>45,728</u>	<u>2,074</u>	<u>5%</u>
Total District Cash and Investments	<u>\$ 566,920</u>	<u>386,141</u>	<u>100,896</u>	<u>87,001</u>	<u>667,816</u>	<u>473,142</u>	<u>194,674</u>	<u>41%</u>

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Capital Contributions

Capital contributions primarily consist of System Capacity Charges (SCC) and Wastewater Capacity Fees (WCF). Additionally, the District receives contributions when the District's facilities need to be relocated during construction projects. The District also receives state and federal grants to fund capital projects.

The Water System's SCC consists of charges collected from all applicants who request a new water service connection or a larger water meter size, and varies depending on geographic region. The SCC pays for the applicant's share of the capital facilities, including those that serve the entire water system such as the aqueducts and raw water facilities, regional facilities such as treatment plants and distribution facilities, and future water supply upgrades needed to meet long-term increases in water demand created by new customers. The portion of the SCC that pays for the future water supply is restricted and the remainder is unrestricted.

The Wastewater System's Capacity Fees are treated as unrestricted funds and pays for the share of Wastewater facilities attributed to new customers.

System Capacity Charges increased by \$18 million and Wastewater Capacity Fees increased by \$3 million due to an increase in infill projects (multi-family dwelling and mixed used structures), particularly in the Oakland area. Grants and other reimbursements decreased by \$8 primarily due to less state grants received in the current fiscal year compared to the prior year.

Table 5 shows the District's capital contributions received for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 5
Capital Contributions
Water and Wastewater
June 30, 2018 and 2017
(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
System capacity charges	\$ 69,270	51,451	—	—	69,270	51,451	17,819	35%
Wastewater capacity fees	—	—	11,418	7,969	11,418	7,969	3,449	43%
Earned contributions on construction	15,518	14,370	16	705	15,534	15,075	459	3%
Seismic improvement surcharge	—	9	—	—	—	9	(9)	(100)%
Grants and other reimbursements	2,775	10,081	—	194	2,775	10,275	(7,500)	(73)%
Totals	\$ 87,563	75,911	11,434	8,868	98,997	84,779	14,218	17%

Capital Contributions
Water and Wastewater
June 30, 2017 and 2016
(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2017	2016	2017	2016	2017	2016	Amount	%
System capacity charges	\$ 51,451	39,321	—	—	51,451	39,321	12,130	31%
Wastewater capacity fees	—	—	7,969	3,142	7,969	3,142	4,827	154%
Earned contributions on construction	14,370	17,045	705	747	15,075	17,792	(2,717)	(15)%
Seismic improvement surcharge	9	33	—	—	9	33	(24)	(73)%
Grants and other reimbursements	10,081	4,392	194	324	10,275	4,716	5,559	118%
Totals	\$ 75,911	60,791	8,868	4,213	84,779	65,004	19,775	30%

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

CAPITAL ASSETS

The District had \$4.9 billion (net of accumulated depreciation) invested in a broad range of utility capital assets as of June 30, 2018. Total capital assets were \$4.7 billion as of June 30, 2017. The investment in capital assets includes land, buildings, improvements, water treatment plants, filter plants, aqueducts, water transmission and distribution mains, water storage facilities, pump stations, water reclamation facilities, wastewater and wet weather treatment facilities, machinery and equipment (*see Table 6 below*). In the current fiscal year, capital assets increased by \$205 million or 4.4% over the prior fiscal year. In fiscal year 2017, capital assets increased by \$162 million or 3.6% over fiscal year 2016. Annual changes are consistent with the District's capital improvement program.

The Water System had \$4.1 billion (net of accumulated depreciation) invested in a broad range of utility capital assets as of June 30, 2018. The investment in capital assets includes land, buildings, improvements, water treatment plants, filter plants, aqueducts, water transmission and distribution mains, water storage facilities, power generation, pump stations, water reclamation facilities, machinery and equipment.

The Wastewater System had \$716 million (net of accumulated depreciation) invested in a broad range of utility capital assets as of June 30, 2018. The investment in capital assets includes land, buildings, improvements, power generation, wastewater and wet weather treatment facilities, machinery and equipment.

Table 6 shows the District's capital assets for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 6

Capital Assets, Net of Depreciation

Water and Wastewater

June 30, 2018 and 2017

(In thousands)

	Water System		Wastewater System		Total		Increase/(decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
Structures, buildings, and equipment	\$ 3,602,573	3,470,628	650,584	632,224	4,253,157	4,102,852	150,305	3.7%
Land and rights of way	65,001	64,508	21,357	21,285	86,358	85,793	565	0.7%
Construction work in progress	472,446	405,357	43,946	57,235	516,392	462,592	53,800	11.6%
Totals	\$ 4,140,020	3,940,493	715,887	710,744	4,855,907	4,651,237	204,670	4.4%

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

Table 6 (Continued)

Capital Assets, Net of Depreciation

Water and Wastewater

June 30, 2017 and 2016

(In thousands)

	Water System		Wastewater System		Total		Increase/(decrease)	
	2017	2016	2017	2016	2017	2016	Amount	%
Structures, buildings, and equipment	\$ 3,470,628	3,434,454	632,224	608,946	4,102,852	4,043,400	59,452	1.5%
Land and rights of way	64,508	58,733	21,285	21,191	85,793	79,924	5,869	7.3%
Construction work in progress	405,357	302,973	57,235	63,405	462,592	366,378	96,214	26.3%
Totals	<u>\$ 3,940,493</u>	<u>3,796,160</u>	<u>710,744</u>	<u>693,542</u>	<u>4,651,237</u>	<u>4,489,702</u>	<u>161,535</u>	3.6%

The District's net revenue, long-term debt, and contributions from customers are used to finance capital investments. More detailed information about the District's capital assets is presented in Note 3 to the basic financial statements.

This year's major capital expenditures included:

Water System:

Pipeline Infrastruct Renewals	\$ 56,876
WTTIP WTP Improvements	55,006
Reservoir Rehab/Maintenance	37,941
Summit Pressure Zone Improve	32,622
Open Cut Reservoir Rehab	31,781
Pumping Plant Rehabilitation	28,598
Large Diameter Pipelines	24,565
Addl Supplemental Supply Projs	15,857
Faria PZI (formerly Purdue)	14,737
Treatment Plant Upgrades	14,410
Reservoir Tower Modifications	13,595
Raw Water Studies and Improves	12,652
Water Conservation Project	9,249
Service Lateral Replacements	8,157
SRV Recycled Water Program	7,199
Water Capital Costs Misc.	6,658
Pipeline Relocations	6,235
West of Hills Master Plan	6,167
Trench Soils Storage Sites	5,203
Mok Aqu No 2 & 3 Relining Proj	4,235

Wastewater System:

Treatment Plant Infrastructure	\$ 7,679
3rd St Sewer Interceptor Rehab	5,989
PS Q FM Dual-Mode Operation	4,863
Treatment Plant Infra Ph 2	4,073
Digester Upgrade	3,804
Infiltration/Inflow Contrl Prj	2,873
Routine Cap Equip Replacement	2,538
Resource Recovery Project	2,092
MWWTP Master Planning	1,968
Concrete Rehab at SD1	1,638
MWWTP Pwr Dist Sys Upgrade	1,146

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

DEBT ADMINISTRATION

The District had total long-term debt outstanding of \$3.4 billion as of June 30, 2018, a 3% decrease from June 30, 2017. Total long-term debt outstanding was \$3.5 billion as of June 30, 2017, an 8% increase from June 30, 2016. Components of the District's long-term debt portfolio as of June 30, 2018 are:

- The Water System had total long-term debt outstanding of \$3.0 billion.
- The Wastewater System had total long-term debt outstanding of \$423 million.

Table 7 shows the District's long-term debt outstanding for the fiscal years ended June 30, 2018, 2017, and 2016:

Table 7
Long -Term Debt
(Net of Unamortized Costs)
Water and Wastewater
June 30, 2018 and 2017
(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
General obligation bonds	\$ —	—	—	3,602	—	3,602	(3,602)	(100)%
Revenue bonds	2,592,137	2,671,994	407,937	421,825	3,000,074	3,093,819	(93,745)	(3)%
Commercial paper	359,800	359,800	15,000	15,000	374,800	374,800	—	0%
Loans	14,061	12,892	—	—	14,061	12,892	1,169	9%
Totals	\$ 2,965,998	3,044,686	422,937	440,427	3,388,935	3,485,113	(96,178)	(3)%

Long -Term Debt
(Net of Unamortized Costs)
Water and Wastewater
June 30, 2017 and 2016
(In thousands)

	Water System		Wastewater System		Total		Increase (decrease)	
	2017	2016	2017	2016	2017	2016	Amount	%
General obligation bonds	\$ —	—	3,602	7,616	3,602	7,616	(4,014)	(53)%
Revenue bonds	2,671,994	2,435,000	421,825	408,779	3,093,819	2,843,779	250,040	9%
Commercial paper	359,800	359,800	15,000	15,000	374,800	374,800	—	0%
Loans	12,892	13,957	—	—	12,892	13,957	(1,065)	(8)%
Totals	\$ 3,044,686	2,808,757	440,427	431,395	3,485,113	3,240,152	244,961	8%

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

It is the policy of the District to maintain a reasonable balance between debt and current revenue financing of capital projects. The following targets provide the framework for financing capital projects:

Debt Service Coverage Ratio: Maintain an annual revenue bond debt service coverage ratio of at least 1.6 times. As of June 30, 2018, the coverage ratio for Water was 2.15 and for Wastewater was 2.51; the overall District ratio was 2.20.

Debt-Funded Capital Spending: Limit debt-funded capital to no more than 65% of the total capital program over each five-year planning period. As of June 30, 2018, the percentage of debt-funded capital spending for Water was 44% and for Wastewater was 15%; the overall District percentage was 41%.

Extended Commercial Paper and Un-hedged Variable Rate Debt: Maintain an annual limit of 25% of outstanding long-term debt. As of June 30, 2018, the percentage of extended commercial paper and un-hedged variable rate debt compared to total outstanding long-term debt for Water was 13% and for Wastewater was 4%; the overall District percentage was 12%.

The District's credit ratings are outlined in Table 8.

Table 8

Credit Ratings

Water and Wastewater

June 30, 2018

District debt by type	Rating by		
	Standard & Poor's	Moody's Investors Service	Fitch
Water system:			
Fixed Rate Revenue Bonds	AAA	Aa1	AA+
Variable Rate Revenue Bonds			
Long-term Underlying Rating	AAA	Aa1	-
Short-Term Rating	A-1+	VMIG-1	-
Commercial Paper Notes	A-1+	P-1	-
Wastewater system:			
Fixed Rate Revenue Bonds	AAA	Aa2	AA+
Extendable Commercial Paper	A-1+	P-1	F1+

For detail credit rating by bond issue, please visit our website at <http://www.ebmud.com>.

Revenue-supported debt authorization for the District can be approved by the District's Board of Directors, subject to a referendum process. At June 30, 2018, the Water System had \$764 million and the Wastewater System had \$186 million in authorized but unissued revenue bonds.

Additional information on the District's long-term debt can be found in Note 6 to the financial statements.

EAST BAY MUNICIPAL UTILITY DISTRICT

Management's Discussion and Analysis

June 30, 2018

REQUEST FOR INFORMATION

This financial report is designed to provide ratepayers and creditors with a general overview of the District's finances and demonstrate the District's accountability for the monies it receives. If you have any questions about this report or need additional information, please contact: the Controller, Accounting Division, P.O. Box 24055, Oakland, CA 94623-1055 or visit our website at <http://www.ebmud.com>.

EAST BAY MUNICIPAL UTILITY DISTRICT
BALANCE SHEETS
JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	Water System		Wastewater System		Totals	
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017
Current assets:						
Cash and cash equivalents (Note 2)	\$33,261	\$177,417	\$57,952	\$44,173	\$91,213	\$221,590
Investments (Note 2)	407,998	341,719	54,297	56,705	462,295	398,424
Receivables:						
Customer	46,232	42,259	6,093	6,021	52,325	48,280
Interest and other	3,223	4,513	2,901	2,904	6,124	7,417
Materials and supplies	9,901	9,246	-	-	9,901	9,246
Prepaid Insurance	1,269	1,054	248	-	1,517	1,054
Total current assets	501,884	576,208	121,491	109,803	623,375	686,011
Noncurrent assets:						
Restricted cash and investments (Note 2):						
Cash and cash equivalents	9,712	47,449	18	18	9,730	47,467
Investments	40,403	335	-	-	40,403	335
Total restricted cash and investments	50,115	47,784	18	18	50,133	47,802
Other assets:						
Equity in JPA partnership fund (Note 2K)	229,830	233,210	-	-	229,830	233,210
Other	666	531	278	275	944	806
Total other assets	230,496	233,741	278	275	230,774	234,016
Capital assets (Note 3):						
Structures, buildings, and equipment	5,497,734	5,264,539	1,114,555	1,073,495	6,612,289	6,338,034
Less accumulated depreciation	(1,895,161)	(1,793,911)	(463,971)	(441,271)	(2,359,132)	(2,235,182)
Subtotal	3,602,573	3,470,628	650,584	632,224	4,253,157	4,102,852
Land and rights-of-way	65,001	64,508	21,357	21,285	86,358	85,793
Construction in progress	472,446	405,357	43,946	57,235	516,392	462,592
Total capital assets, net	4,140,020	3,940,493	715,887	710,744	4,855,907	4,651,237
Total noncurrent assets	4,420,631	4,222,018	716,183	711,037	5,136,814	4,933,055
Total assets	4,922,515	4,798,226	837,674	820,840	5,760,189	5,619,066
Deferred outflows of resources:						
Accumulated decrease in fair value of hedging derivatives (Note 6)	18,256	24,777	-	-	18,256	24,777
Debt refundings related (Note 1I)	25,208	34,801	2,202	3,441	27,410	38,242
Pension related (Note 8)	97,176	143,621	16,202	24,263	113,378	167,884
OPEB related (Note 8)	8,611	-	1,444	-	10,055	-
Total deferred outflows	149,251	203,199	19,848	27,704	169,099	230,903
Total assets and deferred outflows	\$5,071,766	\$5,001,425	\$857,522	\$848,544	\$5,929,288	\$5,849,969

(Continued)

EAST BAY MUNICIPAL UTILITY DISTRICT
BALANCE SHEETS
JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	Water System		Wastewater System		Totals	
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017
Current liabilities:						
Current maturities of long-term debt and Commercial Paper (Note 5 & 6)						
Accounts payable and accrued expenses (Note 4)	\$61,265	\$58,926	\$10,370	\$13,550	\$71,635	\$72,476
Current reserve for claims (Note 9)	89,126	68,852	9,630	9,342	98,756	78,194
Accrued interest	9,081	9,341	644	755	9,725	10,096
	10,485	9,063	1,588	1,521	12,073	10,584
Total current liabilities	169,957	146,182	22,232	25,168	192,189	171,350
Noncurrent liabilities:						
Advances for construction	23,664	21,125	-	-	23,664	21,125
OPEB liabilities (Note 8)	-	23,019	-	4,131	-	27,150
Reserve for claims (Note 9)	37,016	33,036	4,260	4,322	41,276	37,358
Net pension liability (Note 8)	416,174	514,809	71,285	89,283	487,459	604,092
Net OPEB liability (Note 8)	115,930	-	19,876	-	135,806	-
Other liabilities	12,808	12,834	6,418	6,404	19,226	19,238
Long-term liabilities, net of current maturities (Note 5 & 6)	2,904,733	2,985,760	412,567	426,877	3,317,300	3,412,637
Total noncurrent liabilities	3,510,325	3,590,583	514,406	531,017	4,024,731	4,121,600
Total liabilities	3,680,282	3,736,765	536,638	556,185	4,216,920	4,292,950
Deferred inflows of resources						
Derivative instrument (Note 6)	18,256	24,777	-	-	18,256	24,777
Pension related (Note 8)	45,417	720	10,387	3,139	55,804	3,859
OPEB related (Note 8)	7,032	-	1,386	-	8,418	-
Total deferred inflows	70,705	25,497	11,773	3,139	82,478	28,636
Total liabilities and deferred inflows	3,750,987	3,762,262	548,411	559,324	4,299,398	4,321,586
Net position (Note 7):						
Net investment in capital assets	1,199,230	930,608	295,151	273,758	1,494,381	1,204,366
Restricted for construction (Note 1H)	19,995	19,799	-	-	19,995	19,799
Restricted for debt service (Note 1H)	3,751	4,139	18	18	3,769	4,157
Restricted for JPA	229,830	233,210	-	-	229,830	233,210
Restricted - other (Note 1H)	2,705	2,721	-	-	2,705	2,721
Unrestricted	(134,732)	48,686	13,942	15,444	(120,790)	64,130
Total net position	1,320,779	1,239,163	309,111	289,220	1,629,890	1,528,383
Total liabilities, deferred inflows and net position	\$5,071,766	\$5,001,425	\$857,522	\$848,544	\$5,929,288	\$5,849,969

See accompanying notes to financial statements

EAST BAY MUNICIPAL UTILITY DISTRICT
STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	Water System		Wastewater System		Total
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2017
Operating revenue:					
Water	\$480,745	\$420,293	-	-	\$480,745
Sewer	-	-	\$86,514	\$81,904	86,514
Power	6,435	7,807	1,109	900	7,544
Wet weather facilities charges	-	-	24,293	23,105	24,293
Total operating revenue	487,180	428,100	111,916	105,909	599,096
Operating expense:					
Raw water	40,349	37,551	-	-	40,349
Water treatment and distribution	113,422	113,587	-	-	113,422
Recreation areas, net	5,682	5,689	-	-	5,682
Sewer lines and pumping	-	-	13,422	14,611	13,422
Sewer treatment plant operations	-	-	38,220	35,147	38,220
Customer accounting and collecting	17,040	17,517	2,394	2,398	19,434
Financial and risk management	16,943	20,950	575	693	17,518
Facilities management	5,523	5,177	-	-	5,523
General administration	49,926	37,158	10,110	6,442	60,036
Pension expense	(7,494)	6,221	(2,689)	(27)	(10,183)
OPEB expense	(945)	-	(208)	-	(1,153)
Depreciation on utility plant and vehicle	105,375	102,561	22,701	22,666	128,076
Total operating expense	345,821	346,411	84,525	81,930	430,346
Net operating income	141,359	81,689	27,391	23,979	168,750
Nonoperating income (expense):					
Investment income	6,124	2,111	1,007	427	7,131
Taxes and subventions	34,706	31,971	6,774	7,780	41,480
Interest and amortization of bond expenses, net of capitalized interest of \$9,336 and \$10,358 for the Water System and \$420 and \$985 for the Wastewater System in 2018 and 2017, respectively	(103,931)	(92,855)	(16,788)	(16,887)	(120,719)
Increase (decrease) of equity in JPA partnership fund	(3,380)	(3,759)	-	-	(3,380)
Other income	11,452	12,682	5,968	4,166	17,420
Total nonoperating income (expense), net	(55,029)	(49,850)	(3,039)	(4,514)	(58,068)
Income (loss) before capital contributions	86,330	31,839	24,352	19,465	110,682
Capital contributions	87,563	75,911	11,434	8,868	98,997
Change in net position	173,893	107,750	35,786	28,333	209,679
Total net position - beginning	1,239,163	1,131,413	289,220	260,887	1,528,383
Prior period adjustment per implementation of GASB 75	(92,277)	-	(15,895)	-	(108,172)
Total net position - ending	\$1,320,779	\$1,239,163	\$309,111	\$289,220	\$1,629,890
					\$1,528,383

See accompanying notes to financial statements

EAST BAY MUNICIPAL UTILITY DISTRICT
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	Water System		Wastewater System		Total
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2017
Cash flows from operating activities					
Cash received from customers	\$483,207	\$431,882	\$111,843	\$105,581	\$537,463
Cash received from other income	11,452	12,682	5,969	4,166	16,848
Cash payments for judgments and claims	(4,981)	(7,668)	(207)	(273)	(7,941)
Cash payments to suppliers for goods and services	(23,379)	(37,167)	(32,397)	(28,699)	(65,866)
Cash payments to employees for services	(179,482)	(182,470)	(29,878)	(30,826)	(213,296)
Net cash provided by operating activities	286,817	217,259	55,330	49,949	267,208
Cash flows from noncapital financing activities:					
Tax receipts	34,706	31,971	6,774	7,780	39,751
Net cash provided by financing activities	34,706	31,971	6,774	7,780	39,751
Capital and related financing activities:					
Capital contributions	87,563	75,911	11,434	8,868	84,779
Proceeds from advances for construction	2,539	10,567	-	-	10,567
Proceeds from sale of capital assets	2,307	1,749	-	-	1,749
Net proceeds and premiums from sale of bonds	-	601,672	-	83,245	684,917
Acquisition and construction of capital assets	(322,725)	(266,255)	(30,041)	(41,637)	(307,892)
Principal retirement on long-term debt and commercial paper	(69,095)	(399,044)	(16,251)	(77,062)	(476,106)
Amount paid to refunding bond escrow agent	-	(2)	-	-	(2)
Costs and discounts from issuance on long-term debt	-	(1,498)	-	(592)	(2,090)
Interest paid on long-term debt	(102,509)	(93,376)	(16,721)	(17,051)	(110,427)
Net cash provided by (used in) capital and related financing activities	(401,920)	(70,276)	(51,579)	(44,229)	(114,505)
Cash flows from investing activities:					
Proceeds from securities	227,560	186,184	33,878	32,329	218,513
Expenditures from purchases of securities	(333,908)	(300,692)	(31,470)	(48,139)	(348,831)
Interest received on investments	4,852	1,825	846	396	2,221
Net cash provided by (used in) investing activities	(101,496)	(112,683)	3,254	(15,414)	(128,097)
Net increase (decrease) in cash and cash equivalents	(181,893)	66,271	13,779	(1,914)	64,357
Cash and cash equivalents:					
Beginning of year	224,866	158,595	44,191	46,105	204,700
End of period	\$42,973	\$224,866	\$57,970	\$44,191	\$269,057

(Continued)

EAST BAY MUNICIPAL UTILITY DISTRICT
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	Water System		Wastewater System		Total
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2017
Reconciliation of net operating income to net cash provided by operating activities:					
Net operating income	\$141,359	\$81,689	\$27,391	\$23,979	\$168,750
Adjustments to reconcile net operating income to net cash provided by operating activities:					
Pension expense	(7,494)	6,221	(2,689)	(27)	(10,183)
OPEB expense	(945)	-	(208)	-	(1,153)
Depreciation on utility plant and vehicle	105,375	102,561	22,701	22,666	128,076
Depreciation within recreation areas	1,518	1,335	-	-	1,518
Amortization	14,000	16,276	2,197	1,769	16,197
Other income	11,452	12,682	5,968	4,166	17,420
Changes in assets/liabilities:					
Materials and supplies	(655)	(1,162)	-	-	(655)
Prepaid insurance	(215)	46	(248)	-	(463)
Customer receivables	(3,973)	3,782	(72)	(328)	(4,045)
Other assets	2,427	(1,300)	161	(736)	2,588
OPEB liability	-	1,560	-	268	-
Reserve for claims	3,720	785	(173)	(1,108)	3,547
Accounts payable and accrued expenses	20,248	(7,216)	302	(700)	20,550
Net cash provided by operating activities	\$286,817	\$217,259	\$55,330	\$49,949	\$342,147
Schedule of Non-Cash Activities					
Change in Fair Value	(\$3,363)	(\$1,546)	(\$396)	(\$186)	(\$3,759)
					(\$1,732)

EAST BAY MUNICIPAL UTILITY DISTRICT
STATEMENTS OF FIDUCIARY NET POSITION
FIDUCIARY FUND - PENSION AND OTHER EMPLOYEE BENEFIT TRUST
(COMPONENT UNIT)
JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	2018	2017
Assets:		
Cash and investments (Note 2)	\$41,196	\$48,988
Invested securities lending collateral (Note 2)	47,104	108,858
Receivables:		
Contributions	1,648	1,263
Interest and other	5,097	6,790
Prepaid insurance	536	518
Retirement system investments, at fair value (Note 2)		
U.S. government obligations	107,464	66,948
Municipal bonds	2,464	2,135
Domestic corporate bonds	303,506	166,149
International bonds	18,275	16,628
Domestic stocks	778,484	1,005,785
International stocks	418,576	222,051
Real estate	89,629	84,282
Total Investments	<u>1,718,398</u>	<u>1,563,978</u>
Total assets	<u>1,813,979</u>	<u>1,730,395</u>
Liabilities:		
Accounts payable and accrued expenses	2,167	2,061
Retirement system liabilities	11,468	6,832
Securities lending collateral (Note 2)	47,104	108,858
Total liabilities	<u>60,739</u>	<u>117,751</u>
Net position:		
Net position restricted for pension benefits	1,716,478	1,580,556
Net Position restricted for post-employment healthcare benefits	36,762	32,088
Total net position	<u><u>\$1,753,240</u></u>	<u><u>\$1,612,644</u></u>

See accompanying notes to financial statements

EAST BAY MUNICIPAL UTILITY DISTRICT
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FIDUCIARY FUND - PENSION AND OTHER EMPLOYEE BENEFIT TRUST
(COMPONENT UNIT)
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(DOLLARS IN THOUSANDS)

	<u>2018</u>	<u>2017</u>
Additions:		
Contributions		
Employer	\$81,096	\$76,860
Plan members	<u>17,079</u>	<u>16,018</u>
Total contributions	<u>98,175</u>	<u>92,878</u>
Investment income:		
Net appreciation (depreciation) in fair value of investments		
Traded securities	123,096	176,883
Real estate	1,392	1,329
Interest	7,981	6,731
Dividends	22,218	21,014
Real estate operating income, net	<u>1,166</u>	<u>1,120</u>
Total investment income	155,853	207,077
Less:		
Investment expense	(4,037)	(4,607)
Borrowers' rebates and other agent fees on securities lending transactions	<u>(1,467)</u>	<u>(787)</u>
Net investment income	<u>150,349</u>	<u>201,683</u>
Total additions, net	<u>248,524</u>	<u>294,561</u>
Deductions:		
Benefits paid	105,984	98,152
Refund of contributions	393	465
Administrative expenses	<u>1,551</u>	<u>1,429</u>
Total deductions	<u>107,928</u>	<u>100,046</u>
Change in net position	140,596	194,515
Net position:		
Beginning of year	<u>1,612,644</u>	<u>1,418,129</u>
End of year	<u><u>\$1,753,240</u></u>	<u><u>\$1,612,644</u></u>

See accompanying notes to financial statements

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**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
--

A. Description of the Primary Government

The East Bay Municipal Utility District (the District) was formed in May 1923 under the provisions of the Municipal Utility District Act of 1921, as amended in 1941. The District is comprised of two financially independent entities: the Water System and the Wastewater System. These two entities are governed by the same elected seven-member Board of Directors which determines such matters as rates and charges for services, approval of contracts, and District policies. The Water System provides administrative and other support services to the Wastewater System. These costs are charged to the Wastewater System.

B. Description of the Component Unit

The District's Employees' Retirement System (the Employees' Retirement System or the Plan) has been reported as a Pension and Other Employee Benefit Trust fund (a fiduciary fund) in the accompanying basic financial statements and is discretely presented. The System provides retirement, disability, survivorship, and post-employment health insurance benefits for eligible directors, officers, and employees of the District. The System is administered by a Retirement Board composed of three members appointed by the Board of Directors of the District, two members elected by and from the active membership, and one (nonvoting) member elected by and from the retired membership of the System. Retirement Ordinance No. 40 (Ordinance) assigns the authority to establish Plan benefit provisions to the District's Board of Directors.

Copies of the audited financial statements of the Employees' Retirement System may be obtained by writing to the Controller, P.O. Box 24055, Oakland, CA 94623 or visit our website at <http://www.ebmud.com>.

C. Basis of Presentation

The accounts of the District are organized and operated on a fund basis. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, deferred outflows, liabilities, deferred inflows, net position, revenues, and expenses.

The basic financial statements include prior year comparative information. A complete presentation of the prior year information can be found in the District's financial statements for the year ended June 30, 2017.

The District reports the following major proprietary (enterprise) funds:

The **Water System** is engaged in the collection, transmission, and distribution of water to communities within Alameda and Contra Costa counties of California.

The **Wastewater System** is engaged in the interception and treatment of wastewater from residences and industries in the California communities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

Additionally, the District reports the following fiduciary fund:

The **Pension and Other Employee Benefit Trust** is used to account for the resources held by the Employees' Retirement System which provides retirement, disability, and survivorship benefits for eligible directors, officers, and employees of the District.

Enterprise funds are used to account for operations that are financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges. The Pension and Other Employee Benefit Trust fund is maintained to account for assets held by the Employees' Retirement System in a trustee capacity.

D. Basis of Accounting

Proprietary funds and the Pension and Other Employee Benefit Trust fund are accounted for on a flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets, deferred outflows, liabilities and deferred inflows associated with operations are included on the balance sheet, and revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

Proprietary funds distinguish *operating* revenues and expenses from *non-operating* items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the District are charges to customers for sales and services. The District also recognizes wet weather facilities charges as operating revenue. Operating expenses for enterprise funds include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the District's policy to use restricted resources first, then unrestricted resources as they are needed.

In addition, the accounting policies of the District conform to accounting policies generally accepted in the United States of America for water utilities. The accounts are maintained substantially in accordance with the Uniform System of Accounts for Water Utilities followed by investor-owned and major municipally owned water utilities.

Balance Sheet – The balance sheet is designed to display the financial position of the District. The District's fund equity is reported as net position, which is broken down into three categories defined as follows:

- Net investment in capital assets – This component of net position consists of capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets and related deferred inflows and outflows.
- Restricted – This component of net position consists of constraints placed on net position use through external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or law or regulations of other governments. It also pertains to constraints imposed by law or constitutional provisions or enabling legislation.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

- Unrestricted – This component of net position consists of net assets that do not meet the definition of “restricted” or “net investment in capital assets.”

Statement of Revenues, Expenses, and Changes in Net Position – The statement of revenues, expenses, and changes in net position is the operating statement for proprietary funds. Revenues are reported by major source. This statement distinguishes between operating and non-operating revenues and expenses and presents a separate subtotal for operating revenues, operating expenses, and other income.

E. Use of Estimates and Assumptions

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

F. Capital Assets

Utility Plant – at Original Cost

The cost of additions to utility plant and replacement of retired units of property are capitalized. Cost includes material, direct labor and fringe benefits, transportation, and such indirect items as engineering, supervision, and interest during construction based on the interest rate on outstanding debt of the system in the prior fiscal year as allowed by GASB 76. Repairs, maintenance, and minor purchases of equipment are charged to expenses as incurred.

The depreciated cost of capital assets, plus removal costs, less salvage, is charged to expense upon retirement.

Water Supply Management Program

Costs incurred in this program are debt funded and capitalized in construction in progress. These costs are transferred to utility plant upon completion of the project and depreciated over their useful life. Debt service costs on the debt used to finance the program are recovered in future through connection fees and rates and charges for service to those benefiting from the program.

Preliminary Survey and Investigation Costs

The District capitalizes initial costs incurred to study and evaluate certain potential long-term capital projects. These costs are transferred to property, plant and equipment upon completion of the project and are depreciated over the life of the asset. In the event the project is abandoned, these costs are expensed.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

Contract Water Rights

The District has contracted with the U.S. Bureau of Reclamation for water deliveries from the Central Valley Project (CVP) through February 2046 (Long Term Renewal Contract), with the anticipation of subsequent renewals of 40 year terms. Payments under the contract include reimbursement based on the amounts of water delivered to EBMUD of capital costs for CVP storage and conveyance facilities (EBMUD's current allocation is \$2,989) and the Operation & Maintenance Deficit (EBMUD's current balance is \$6,381). The Water Enterprise Fund capitalized the two components.

G. Depreciation

Depreciation of capital assets is computed on a straight-line basis using the estimated service lives of the related assets (5 to 100 years).

H. Restricted Assets

The District segregates cash and investments into funds that are "Restricted" and "Unrestricted." Funds are "restricted" when limitations on use of the resources are imposed by creditors, grantors, contributors, laws or regulations of other governments, or imposed by law through constitutional provision or by enabling legislation. "Unrestricted" resources are committed by the Board of Directors through the passage of a resolution, or constrained for a specific purpose by committees or officials with authority delegated by the Board. The exception is the Reserve for Capital Projects which is anticipated but not committed or constrained to be used for the District's capital improvement program.

Unrestricted cash and investments are further categorized into Operating and Capital Reserves:

Operating Reserves:

- Rate Stabilization Fund (RSF) reserve is established by Policy 4.02, as adopted by the Board of Directors in the biennial budget, to maintain at least 20% of projected annual water volume revenues for Water and at least 5% of annual operating and maintenance expenses for Wastewater. Funding of the RSF is consistent with the District's Bond indentures. In fiscal year 2014, the District combined the Rate Stabilization Fund referenced in the Bond indentures and the Contingency and Rate Stabilization Reserve referenced in Policy 4.02 into a single Rate Stabilization Fund reserve to enhance transparency.
- Working Capital reserve is established by Policy 4.02, as adopted by the Board of Directors in the biennial budget, to maintain at least three times the District's monthly net operating and maintenance expenses.
- Self-insurance reserve is established by Policy 4.02, as adopted by the Board of Directors in the biennial budget, to maintain a level based on the Actuarial Self-Insured Retention (SIR) funding recommendation for the following year's discounted loss and allocated loss adjustment expenses (ALAE) funding guidelines. Reserve amount should be calculated at a high (85%) confidence level. If an actuarial study is not available before close of the prior fiscal year end, the reserve shall equal 1.15 times the prior year reserve.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

- Workers' compensation reserve is established by Policy 4.02, as adopted by the Board of Directors in the biennial budget, to maintain a level based on the Actuarial SIR funding recommendation for the following year's discounted loss and ALAE funding guidelines. Reserve amount should be calculated at a high (85%) confidence level. If an actuarial study is not available before close of the prior fiscal year end, the reserve shall equal 1.15 times the prior year reserve.

Capital Reserves:

- Reserve for Capital Projects comprises the resources available for cash funding of the District's capital improvement program as projected in conjunction with the biennial budget.
- Reserve Funded CIP (Wastewater) balance is a specific designation [Board Motion No. 029-94] used to fund wet and dry weather eligible construction projects.
- Vehicle Replacement Fund [Board Motion No. 030-94] is financed by deposits based on internal user rate charges, and used to reimburse operational expenditures and vehicle replacement purchases.
- Equipment Replacement Fund was established by the District with the implementation of the Wastewater Capacity Fees effective July 1, 1984. The balance in this account represents funds set aside for future wastewater department equipment replacements.

Restricted funds include the following:

- Debt funded construction funds are the proceeds of bond or commercial paper issues that are restricted for use on eligible projects in the District's capital program.
- Capitalized Interest fund is restricted by the District's bond indenture for the purpose of defraying that bond issue's debt service payments for a specified period.
- Bond Interest and Redemption fund is required, under the District's bond indentures, in order for the District to transfer funds to the Trustee for the payment of principal and interest on the outstanding bonds one business day prior to the date such payment is due. The District uses the Bond Interest and Redemption Fund to segregate funds accumulated for such payments. In addition, under certain of the interest rate swap agreements related to the District's outstanding bonds, the District is required to post collateral to the swap counterparty to the extent that the District's total exposure for termination payments under the swap agreement exceeds the threshold amount specified in the applicable swap agreement. The District also uses the Bond Interest and Redemption Fund to segregate District funds held by the applicable custodian to satisfy this collateral posting obligation.
- Debt Service Reserve fund is created and required to be maintained at a specified level in connection with certain series of the District's outstanding bonds. Amounts in a Bond Reserve Fund may only be used (a) for the payment of principal of and interest on the related series of bonds in the event the District fails to transfer the required payment from the related system Revenue Fund (the respective designated part of the General Fund) (b) for the payment of redemption of all of the related series of bonds then outstanding or (c) for the payment of the final principal and interest payments on the related series of bonds.
- Funds received for construction reflect advances received from applicants for work to be performed by the District and the unspent future water supply component of system capacity charges. This fund is used for the construction of major facilities, applicant requested services, and the design and construction of water supply improvement program projects.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

- FERC partnership fund of \$2 million was established January 11, 1999, in compliance with Federal Energy Regulatory Commission (FERC) order which brought resolution to its Mokelumne River Proceeding. The District manages the fund and income derived from investing the funds to provide operating support to the Joint Settlement Agreement with US Fish and Wildlife and California Fish and Game to protect the Mokelumne River Ecosystem from Pardee Reservoir to the Delta. The principal and any unused earnings shall remain the property of the District and will revert to the District upon expiration of the agreement in March 2031 or upon withdrawal of any party to the agreement.
- Monetary Reserve represents money on deposit in the name of the District with the Automated Power Exchange Inc. (APX) in accordance with the terms and conditions of the Automated Power Exchange Inc. California Master Service Agreement of July 15, 1999, entered between the District and APX for the sale and purchase of electric power. The funds held on deposit shall be withdrawn by the Depository and Clearing Agent in the event that sufficient funds are not deposited in the District settlement account to cover power exchange transactions.

I. Deferred Amount on Bond Refundings

Gains and losses incurred in connection with debt refunding transactions are deferred and amortized over the shorter of the life of the refunded debt or the new debt.

J. Cash and Cash Equivalents

For purposes of the statement of cash flows, the District considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents.

K. District Investments

Investments are stated at fair value. Included in investment income (loss) is the net change in the fair value of investments, which consists of the realized gains or losses and the unrealized appreciation (depreciation) of those investments.

Measurement of the fair value of investments is based upon quoted market prices, if available. The estimated fair value of investments that have no quoted market price is determined based on equivalent yields for such securities or for securities of comparable maturity, quality, and type as obtained from market makers.

Each of the financial instruments invested in by the District represents a potential concentration of credit risk. However, as the portfolio and the components of the various instruments are diversified, and issuers of securities are dispersed throughout many industries and geographic locations, the concentrations of credit risk are limited.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

L. Retirement System Investments

Investments are reported at fair value. Securities and bonds traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that have no quoted market price are reported at estimated fair value, which is determined based on yields equivalent for such securities or for securities of comparable maturity, quality, and type as obtained from market makers. Measurement of the fair value of real estate investments is estimated by the investment managers and reflects both internal and independent appraisals of real estate properties.

The System presents in the Statements of Changes in Plan Net Position the net change in the fair value of its investments, which consists of the realized gains or losses and the unrealized appreciation (depreciation) on those investments. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Each of the financial instruments invested in by the System represents a potential concentration of credit risk. However, as the portfolio and the components of the various instruments are diversified and issuers of securities are dispersed throughout many industries and geographical locations, the concentrations of credit risk are limited.

The System invests in a combination of stocks, bonds, fixed income securities, real estate, and other investment securities. These investments are exposed to various risks, such as interest rate and market risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and those such changes could materially affect the amounts reported in the Statement of Plan Net Position.

Retirement Board policies permit the System to use investments of the Plan to enter into securities lending transactions, which are loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return collateral for the same securities in the future. The System's securities custodian is an agent in lending the Plan's securities for cash collateral, U.S. government securities, and irrevocable letters of credit of 102% for domestic securities and 105% for international securities lent.

As of June 30, 2018, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. Contracts with the lending agent require them to indemnify the System under certain circumstances if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the System for income distributions by the securities issuers while the securities are on loan. The risk of any loss of collateral or investment of cash collateral (including a loss of income or principal, or loss of market value thereon) lies with the System, except for losses resulting from negligence or intentional misconduct of the agent in performing the duties allocated under the securities lending agreement with respect to collateral. During the year ended June 30, 2018, there were no violations of legal or contractual provisions, and no borrower or lending agent default losses known to the securities lending agent.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

In lending securities, cash collateral is invested in the lending agent's short-term investment pool, which as of June 30, 2018, had a weighted average maturity of 29 days. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of the securities loans made by other entities that use the agent's pool, which the System cannot determine. Cash collateral may also be invested separately in term loans, in which case the maturity of the collateral investment generally matches the term of the loan. Noncash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of overall loans for the System was approximately 87 days. There are no dividends or coupon payments owing on the securities lent. Cash received as collateral on securities lending transactions is reported as an asset of the System with a corresponding liability.

As of June 30, 2018, the fair value of securities on loan was \$47,104. The total cash and noncash collateral held by the System's custodian to secure these securities on loan was valued at \$45,937 (all cash collateral).

M. Material and Supplies

Material and supplies inventories are valued at cost, which approximates market, using the average-cost method.

N. Compensated Absences

Compensated absences as of June 30, 2018 and 2017, are included on the balance sheet in accounts payable and accrued expenses. In previous years, trends have shown that the District employees utilize the accruals annually, therefore, amounts payable are accrued and reported as a current liability on the financial statements.

The changes in compensated absences were as follows:

	Water System		Wastewater System		Total	
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017
Beginning Balance	\$26,545	\$27,598	\$4,130	\$4,291	\$30,675	\$31,889
Additions	30,153	26,726	5,137	4,414	35,290	31,140
Payments	(28,192)	(27,779)	(4,440)	(4,575)	(32,632)	(32,354)
Total	<u>\$28,506</u>	<u>\$26,545</u>	<u>\$4,827</u>	<u>\$4,130</u>	<u>\$33,333</u>	<u>\$30,675</u>

O. Revenue

Water billings include charges for water flow, elevation, and a monthly meter charge. Customer water meters are read on a cyclical basis throughout a monthly or bimonthly period. Bills are rendered and revenue is recognized in the period that meters are read.

Wastewater treatment billings are a combination of flow, strength charges, and a monthly service charge. Customer bills are rendered on a cyclical basis throughout a monthly or bimonthly period, and revenue is recognized in the period in which bills are rendered.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

Wet weather facilities charges are designed to finance the operating and capital costs related to wet weather sewage flows and are billed annually on the property tax bill.

P. Interest Rate Swap

The District enters into interest rate swap agreements to modify interest rates on some outstanding debt. The net interest is recorded in the financial statements annually.

In June 2008, GASB issued Statement No. 53, Accounting and Financial Reporting for Derivative Instruments (GASB 53). The statement specifically requires governments to measure and report most derivative instruments at fair value in their financial statements that are prepared using the economic resources measurement focus and the accrual basis of accounting. The requirement of reporting the derivative instruments at fair value on the face of the basic financial statements gives the users of those statements a clearer look into the risks their governments are sometimes exposed to when they enter into these transactions and how those risks are managed. The statement also addresses hedge accounting requirements and improves disclosures, providing a summary of the government's derivative instrument activity, its objectives for entering into derivative instruments, and their significant terms and risks. The District implemented GASB 53 in fiscal 2010.

Q. Deferred Outflows/Inflows of Resources

In addition to assets, the balance sheet will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position or fund balance that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then.

In addition to liabilities, the balance sheet will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position or fund balance that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time.

R. Implementation of Governmental Accounting Standards Board (GASB) Pronouncements

GASB Statement No. 75 – Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions (other post-employment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This Statement results from a comprehensive review of the effectiveness of existing standards of accounting and financial reporting for all post-employment benefits (pensions and OPEB) with regard to providing decision-useful information, supporting assessments of accountability and inter-period equity, and creating additional transparency. The provisions of this statement are effective for financial statements for the periods beginning after June 15, 2017, therefore, the District implemented this statement in fiscal year ending June 30, 2018, which required a restatement to the District's financial statements. As a result, the beginning net positions of the Water Systems Fund were restated and had a net decrease of \$92,277 and the Wastewater Systems Fund had a net decrease of \$15,895.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)
--

GASB Statement No. 81 – Irrevocable Split-Interest Agreements. This Statement requires that a government that receives resources pursuant to an irrevocable split-interest agreement recognize assets, liabilities, and deferred inflows of resources at the inception of the agreement. Furthermore, this Statement requires that a government recognize assets representing its beneficial interests in irrevocable split-interest agreements that are administered by a third party, if the government controls the present service capacity of the beneficial interests. This Statement requires that a government recognize revenue when the resources become applicable to the reporting period.

GASB Statement No. 85 – Omnibus 2017. The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]).

GASB Statement No. 86 – Certain Debt Extinguishment Issues. The primary objective of this Statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources—resources other than the proceeds of refunding debt—are placed in an irrevocable trust for the sole purpose of extinguishing debt. This Statement also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance.

S. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The District categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels based on the extent to which inputs used in measuring fair value are observable in the market.

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are inputs – other than quoted prices included within level 1 – that are observable for an asset or liability, either directly or indirectly.

Level 3 inputs are unobservable inputs for an asset or liability.

If the fair value of an asset or liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 2 - CASH AND INVESTMENTS

A. Classification

Reconciliations of cash and investments reported on the financial statements as of June 30, 2018, are as follows:

	Water System	Wastewater System	Total
<i>District Enterprise Funds:</i>			
Cash and investments included in current assets	\$441,259	\$112,249	\$553,508
Cash and investments included in restricted assets	50,115	18	50,133
Total District cash and investments	491,374	112,267	603,641
Less investments	(448,401)	(54,297)	(502,698)
Cash and cash equivalents	\$42,973	\$57,970	\$100,943
<i>System Pension Trust Funds:</i>	Pension Plan Benefits	Post-employment Healthcare Benefits	Total
Cash and cash equivalents	\$40,348	\$848	\$41,196
Invested securities lending collateral	46,134	970	47,104
Retirement system investments	1,683,014	35,384	1,718,398
Total System cash and investments	\$1,769,496	\$37,202	\$1,806,698

Reconciliations of cash and investments reported on the financial statements as of June 30, 2017, are as follows:

	Water System	Wastewater System	Total
<i>District Enterprise Funds:</i>			
Cash and investments included in current assets	\$519,136	\$100,878	\$620,014
Cash and investments included in restricted investments	47,784	18	47,802
Total District cash and investments	566,920	100,896	667,816
Less investments	(342,054)	(56,705)	(398,759)
Cash and cash equivalents	\$224,866	\$44,191	\$269,057
<i>System Pension Trust Funds:</i>	Pension Plan Benefits	Post-employment Healthcare Benefits	Total
Cash and cash equivalents	\$48,032	\$956	\$48,988
Invested securities lending collateral	106,733	2,125	108,858
Retirement system investments	1,533,453	30,525	1,563,978
Total System cash and investments	\$1,688,218	\$33,606	\$1,721,824

B. District Enterprise Fund Investments Authorized by the California Government Code and the District's Investment Policy

The District's Investment Policy and the California Government Code allow the District to invest in the following, provided the credit ratings of the issuers are acceptable to the District; and approved percentages and maturities are not exceeded. The table below also identifies certain provisions of the California Government Code, or the District's Investment Policy where the District's Investment Policy is more restrictive and provides information as to the limitations as they relate to interest rate risk, credit risk and concentration risk.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

Authorized Investment Type	Maximum Maturity	Minimum Credit Quality	Maximum in Portfolio	Maximum Investment in One Issuer/Fund
U.S. Treasury Bonds, Notes and Bills	5 Years	N/A	up to 100%	N/A
U.S. Government Agency and U.S. Government-Sponsored Enterprise Obligation	5 Years	N/A	up to 100% \$65,000	40% in each Agency
State of California Local Agency Investment Fund (LAIF Pool)	N/A	N/A	per account	N/A
California Asset Management Program (CAMP)	N/A	AAAm	20%	N/A
Money Market Mutual Funds	N/A	AAAm	20%	5%
Certificates of Time Deposit	1 Year	AA-	20%	\$250
Negotiable Certificates of Deposit	5 Years	AA-	20%	\$250
Commercial Paper	270 Days	A-1+, P1 or F1+	20%	10%
Medium Term Corporate Notes	5 Years	AA- and A	30%	10%
Repurchase Agreements	270 Days	N/A	20%	N/A
Municipal Bonds	5 Years	AA- and A	40%	20%

The District does not enter into reverse repurchase agreements.

C. District Enterprise Fund Investments Authorized by Debt Agreements

The District must maintain required amounts of cash and investments with trustees or fiscal agents under the terms of certain debt issues. These funds are unexpended bond proceeds or are pledged reserves to be used if the District fails to meet its obligations under these debt issues. The California Government Code requires these funds to be invested in accordance with District resolutions, bond indentures or State statutes. The table below identifies the investment types that are authorized for investments held by fiscal agents. The table also identifies certain provisions of these debt agreements:

Authorized Investment Type	Minimum Credit Quality
Repurchase Agreements	Top Four Rating Category
U. S. Treasury Bonds, Notes and Bills	N/A
U.S. Government Agency and U.S. Government-Sponsored Enterprise Obligations	N/A
State Obligations	Not lower than the District's bond rating
Commercial Paper	Top Rating Category
Negotiable Certificates of Deposit	FDIC insured or collateralized
Time Certificates of Deposit – Banks or Savings and Loans	FDIC insured or collateralized
Corporate Notes (up to 3 years)	Top Short-Term Rating Category
Corporate Bonds (longer than 3 years)	Not lower than District's bond rating
Variable Rate Obligations	Top Short-Term Rating Category
Cash Sweep Agreements	Top Rating Category
Guaranteed Investment Contract	Not lower than District's bond rating
Shares of Beneficial Interest	Top Rating Category

**EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 2 - CASH AND INVESTMENTS (Continued)
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D. Employees Retirement System Authorized Investment Strategy

The System's investment policies authorize the System to invest in financial instruments in three broad investment categories: equity, fixed income, and real estate. These financial instruments can include, but are not limited to, corporate bonds, commercial paper, U.S. government securities, common and preferred stock, real estate investment trusts, and mutual funds. Fixed income investments may include futures and options contracts in order to provide added flexibility in managing the fixed income portfolio. The following is a summary of the System investment policy adopted by the System with on March 16, 2017.

The Retirement Board is authorized to designate multiple investment managers to manage the assets under their supervision subject to the laws of the State of California and the Investment Guidelines established by the Retirement Board. Allocation of assets to the investment managers are determined by the Retirement Board to accommodate changing conditions and laws. On March 15, 2018, the System adopted an updated asset allocation, which is shown in the table below. The System investment policy has not been updated to reflect this change.

US Equity	25%
Non-US Equity	25%
Core Fixed Income	20%
Non-Core Fixed Income	5%
Covered Calls	20%
Real Estate	5%

The composite asset allocation goal is pursued by the System on a long-term basis and revised if significant changes occur within the economic and/or capital market environment. Progress toward the goal is reviewed at least annually.

The Director of Finance is authorized to transfer assets from any asset class which varies the long-term asset allocation goal by more than 3% at the end of two or more consecutive quarters, allocating the excess assets to a manager or group of managers with the exception of real estate managers. The Director of Finance is further authorized to withdraw assets from assigned managers as necessary to efficiently meet operating needs.

The equity and fixed income asset allocations may vary by up to $\pm 5\%$ from the long-range asset allocation goals.

The core fixed income target allocation (10% of the total portfolio) will primarily consist of U.S. denominated fixed income securities. Individual managers may invest up to 20% of their assets in international fixed income securities.

The non-core fixed income target allocation (10% of the total portfolio) will primarily consist of U.S. denominated fixed income securities. Individual managers may invest up to 35% of their assets in international fixed income securities. It is expected that this allocation may have a material allocation to below investment grade securities.

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NOTE 2 - CASH AND INVESTMENTS (Continued)
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The domestic equity allocation target (40% of the total portfolio) will consist of approximately 37% in large cap market related growth and value (average risk) securities, 3% in small capitalized securities, and 20% in international securities. The international equity allocation target will consist of approximately 17% international equities and 3% emerging markets. It is expected this allocation will allow for exposure to mid cap securities based on tactical decisions by the Retirement Fund's large cap and small cap domestic equity managers.

The covered calls target allocation (20% of the total portfolio) may consist of a combination of Chicago Board Options Exchange S&P 500 BuyWrite Index (the "BXM Index") replication strategy and/or active non-replication strategies and their underlying domestic equity portfolios.

The international equity target allocation (15% of the total portfolio) will consist of approximately 12% in international equities and 3% in emerging markets equities.

The real estate target allocation (5% of the total portfolio) will consist of either equity (ownership) and/or fixed income participation in commercial, industrial, or residential properties. Investments may include interests in mortgages pools secured by loans of underlying properties.

The allocation goal recognizes that at any time equity and fixed income managers may have transactional cash on hand and the District will maintain enough cash as working capital to effectively meet cash flow demands on the system. However, there is no specific allocation for cash as all investable cash is allocated to specific investment disciplines.

Holding of securities issued by the United States Government or any of its agencies need not be diversified. Securities of any one issuer with maturities of more than one year, other than the United States Government or any of its agencies, shall not exceed 5% of the value of the total portfolio. Securities of any one issuer of foreign government issues shall not exceed 10% of the value of the total portfolio at the time of purchase. Fixed income managers have the authority to make international investments, not to exceed 20% of their total portfolio.

The use of futures and options in the fixed income accounts may be used as part of their portfolio management strategy and will be incidental to their securities trading activities. The resulting aggregate risk profile (volatility) of the portfolio will not be different from that permissible by using securities only.

Short (sold) options positions will generally be hedged, either with current portfolio security holding, other options or futures options. Mortgage derivatives with significant short option characteristics will not exceed 5% of the portfolio, and will generally be a) offset by position in other mortgage derivatives, or b) offset by other portfolio positions.

No derivatives will be executed which will increase the value at risk of the portfolio by more than 25 basis points of the portfolio's market value.

Structured notes with significant short options positions or increasing leverage will not be purchased, and in no case will structured notes exceed 5% of portfolio value. Structured notes issued by the U.S. Government (treasuries and agencies) will be considered allowable investments, and are restricted to 25%.

**EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 2 - CASH AND INVESTMENTS (Continued)

Fixed income managers are authorized to use futures and options contracts to supplement their investment capabilities to provide flexibility in managing the fixed income portfolios and reduce the cost of implementing strategies to respond to changing market conditions without incurring the higher transaction costs associated with buying and selling specific securities. These transactions are authorized to enable the manager to reduce the exposure of the portfolio to interest rate changes by reducing or increasing the duration of the portfolio without selling any of the actual holding.

No more than 5% of the portfolio will be invested in original futures margin and options premiums, exclusive of any in-the-money portion of the premiums.

Each equity portfolio shall be diversified. When fully invested in equities or at its normal level of investment, a minimum of 20 securities should be held. At no time may a single equity investment exceed 5% of the value of the total retirement fund.

Each international equity portfolio shall be diversified. When fully invested in international equities or at its normal level of investment, a minimum of 20 securities should be held. At no time may a single international equity investment exceed 5% of the value of the total retirement fund.

E. Fair Value Hierarchy

The District categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

The following is a summary of the fair value hierarchy of the fair value of investments of the District as of June 30, 2018 and 2017:

District Enterprise Funds:

The following is a summary of the fair value hierarchy of the fair value of investments of the District as of June 30, 2018:

Investment Type	Level 2	Total
Investments by Fair Value Level:		
U.S. Government-Sponsored Enterprise Agencies:		
Non-callable	\$55,381	\$55,381
Callable	400,091	400,091
Corporate Securities	21,297	21,297
Municipal Bonds	25,928	25,928
Total Investments at Fair Value	<u>\$502,697</u>	<u>502,697</u>
Investments Measured at Net Asset Value Per Share:		
California Asset Management Program		10,542
Investments Measured at Amortized Cost:		
California Local Agency Investment Fund		60,372
Mutual Funds (U.S. Securities)		8,676
Total Investments		<u>582,287</u>
Cash in banks		21,354
Total District Cash and Investments		<u>\$603,641</u>

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

In fiscal year 2018, the U.S. Government-Sponsored Enterprise Agency securities totaled \$455,472, Corporate securities totaled \$21,297, and Municipal Bonds total \$25,928, are classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by various pricing vendors. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

The following is a summary of the fair value hierarchy of the fair value of investments of the District as of June 30, 2017:

Investment Type	Level 2	Total
Investments by Fair Value Level:		
U.S. Government-Sponsored Enterprise Agencies:		
Non-callable	\$67,945	\$67,945
Callable	311,351	311,351
Corporate Securities	3,515	3,515
Municipal Bonds	15,947	15,947
	<u>\$398,758</u>	<u>398,758</u>
Investments Measured at Net Asset Value Per Share:		
California Asset Management Program		155,098
Investments Measured at Amortized Cost:		
California Local Agency Investment Fund		60,373
Mutual Funds (U.S. Securities)		43,285
Total Investments		<u>657,514</u>
Cash in banks		<u>10,302</u>
Total District Cash and Investments		<u>\$667,816</u>

In fiscal year 2017, the U.S. Government-Sponsored Enterprise Agency securities totaled \$379,296, Corporate securities totaled \$3,515, and Municipal Bonds total \$15,947, are classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by various pricing vendors. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

System Pension Trust Fund:

The following is a summary of the fair value hierarchy of the fair value of investments of the Pension Trust Fund as of June 30, 2018:

Investment Type	Level 1	Level 2	Level 3	Total
Investments by Fair Value:				
Asset Backed Securities		\$15,638		\$15,638
Equity Securities	\$633,179		\$630	633,809
Commercial Mortgage - Backed Securities		9,808		9,808
Commercial Paper		5,340		5,340
Corporate Bonds		87,409		87,409
Government Agencies		36,639		36,639
Government Bonds		37,354		37,354
Government Mortgage - Backed Securities		30,117		30,117
Government Issued				
Commercial Mortgage - Backed Securities		44		44
Non-Government Backed				
Commercial Mortgage Obligation		1,974		1,974
Index Linked Government Bonds		1,542		1,542
Municipal Bonds		2,463		2,463
Real Estate			37,231	37,231
Other Fixed Income		8,146		8,146
Short Term Bills and Notes		1,765		1,765
Total Investments at Fair Value	<u>\$633,179</u>	<u>\$238,239</u>	<u>\$37,861</u>	<u>909,279</u>
Investments Measured at Net Asset Value:				
Mutual Funds				809,119
Investments Measured at Amortized Cost:				
California Local Agency Investment Fund				4,582
Invested securities lending collateral				47,104
Cash in banks				<u>36,614</u>
Total District Cash and Investments				<u><u>\$1,806,698</u></u>

During fiscal year 2018, investments classified in Level 1 of the fair value hierarchy, valued at \$633,179, are valued using quoted prices in active markets. \$238,239 of investments classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by various pricing vendors. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Investments totaling \$37,861 classified in Level 3 of the fair value hierarchy are valued using appraisals and estimates by investment managers. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank.

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NOTE 2 - CASH AND INVESTMENTS (Continued)

The following is a summary of the fair value hierarchy of the fair value of investments of the Pension Trust Fund as of June 30, 2017:

Investment Type	Level 1	Level 2	Level 3	Total
Investments by Fair Value:				
Asset Backed Securities		\$15,044		\$15,044
Equity Securities	\$949,381	503	\$962	950,846
Collateralized Bonds		410		410
Commercial Mortgage - Backed Securities		7,828		7,828
Corporate Bonds		79,036		79,036
Government Agencies		11,503		11,503
Government Bonds		19,738		19,738
Government Mortgage - Backed Securities		26,899		26,899
Government Issued				
Commercial Mortgage - Backed Securities		202		202
Non-Government Backed				
Commercial Mortgage Obligation		914		914
Index Linked Government Bonds		8,605		8,605
Municipal Bonds		2,135		2,135
Real Estate			34,674	34,674
Other Fixed Income		14,495	2	14,497
Total Investments at Fair Value	<u>\$949,381</u>	<u>\$187,312</u>	<u>\$35,638</u>	<u>1,172,331</u>
Investments Measured at Net Asset Value:				
Mutual Funds				391,647
Investments Measured at Amortized Cost:				
California Local Agency Investment Fund				3,263
Invested securities lending collateral				108,858
Cash in banks				<u>45,725</u>
Total District Cash and Investments				<u>\$1,721,824</u>

During fiscal year 2017, investments classified in Level 1 of the fair value hierarchy, valued at \$949,381, are valued using quoted prices in active markets. \$187,312 of investments classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by various pricing vendors. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Investments totaling \$35,638 classified in Level 3 of the fair value hierarchy are valued using appraisals and estimates by investment managers. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank.

F. Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the market value of an investment. Normally, the longer the maturity of an investment, the greater the sensitivity of its market value to changes in market interest rates. The District generally manages its interest rate risk by holding investments to maturity.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

Information about the sensitivity of the market values of the District's and System's investments (including investments held by bond trustees) to market interest rate fluctuations is provided by the following table that shows the distribution of the District's investments by maturity or earliest call date.

District Enterprise Funds:

Information about the sensitivity of the fair value of the District's investments to market interest rate fluctuations is provided in the following table that shows the distribution of the District's investments by maturity or earliest call date for June 30, 2018:

Investment Type	12 Months or less	13 to 24 Months	25 to 60 Months	Total
U.S. Government-Sponsored Enterprise Agencies:				
Non-callable	\$46,131	\$9,250		\$55,381
Callable	169,200	118,490	\$112,401	400,091
Corporate Securities	18,329	2,968		21,297
Municipal Bonds	13,054	6,824	6,050	25,928
Mutual Funds (U.S. Securities)	8,676			8,676
California Asset Management Program	10,542			10,542
California Local Agency Investment Fund	60,372			60,372
Total Investments	<u>\$326,304</u>	<u>\$137,532</u>	<u>\$118,451</u>	582,287
Cash in banks				21,354
Total District Cash and Investments				<u>\$603,641</u>

Information about the sensitivity of the fair value of the District's investments to market interest rate fluctuations is provided in the following table that shows the distribution of the District's investments by maturity or earliest call date for June 30, 2017:

Investment Type	12 Months or less	13 to 24 Months	25 to 60 Months	Total
U.S. Government-Sponsored Enterprise Agencies:				
Non-callable	\$23,931	\$32,302	\$11,712	\$67,945
Callable	12,507	90,282	\$208,562	311,351
Corporate Securities	3,014	501		3,515
Municipal Bonds	6,505	8,201	1,241	15,947
Mutual Funds (U.S. Securities)	43,285			43,285
California Asset Management Program	155,098			155,098
California Local Agency Investment Fund	60,373			60,373
Total Investments	<u>\$304,713</u>	<u>\$131,286</u>	<u>\$221,515</u>	657,514
Cash in banks				10,302
Total District Cash and Investments				<u>\$667,816</u>

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

System Pension Trust Fund:

Information about the sensitivity of the fair value of the Pension Trust Fund's investments to market interest rate fluctuations is date provided in the following table that shows the distribution of the District's investments by maturity or earliest call for June 30, 2018:

Investment Type	Less than 12 Months	12 to 72 Months	72 to 120 Months	More than 120 Months	Maturity not Determined	Total
Asset Backed Securities	\$7	\$10,182	\$3,230	\$2,219		\$15,638
Equity Securities	633,809					633,809
Commercial Mortgage -Backed Securities			401	9,407		9,808
Commercial paper	5,340					5,340
Corporate Bonds	8,412	49,198	15,631	14,168		87,409
Government Agencies		10,044	23,099	3,496		36,639
Government Bonds	189	9,635	17,025	10,505		37,354
Government Mortgage -Backed Securities		3	994	29,120		30,117
Government Issued Commercial Mortgage -Backed Securities		44				44
Non-Government Backed Collateralized Mortgage Obligation			153	1,821		1,974
Index Linked Government Bonds			1,542			1,542
Municipal Bonds		706		1,757		2,463
Mutual Funds					809,119	809,119
Real Estate					37,231	37,231
Other Fixed Income		8,146				8,146
Short Term Bills and Notes	1,765					1,765
Total System Investments	\$649,522	\$87,958	\$62,075	\$72,493	\$846,350	\$1,718,398

Information about the sensitivity of the fair value of the Pension Trust Fund's investments to market interest rate fluctuations is date provided in the following table that shows the distribution of the District's investments by maturity or earliest call for June 30, 2017:

Investment Type	Less than 12 Months	12 to 72 Months	72 to 120 Months	More than 120 Months	Maturity not Determined	Total
Asset Backed Securities		\$10,005	\$2,950	\$2,089		\$15,044
Equity Securities	\$950,846					950,846
Collateralized Bonds			410			410
Commercial Mortgage - Backed Securities			130	7698		7,828
Corporate Bonds	15,867	38,417	13,548	11204		79,036
Government Agencies	219	5,484	5,256	544		11,503
Government Bonds	1,186	7,584	6,758	4210		19,738
Government Mortgage - Backed Securities			594	26305		26,899
Government Issued Commercial Mortgage -Backed Securities	82	120				202
Non-Government Backed Collateralized Mortgage Obligation					\$914	914
Index Linked Government Bonds		1,835	5,417	1353		8,605
Municipal Bonds		426		1709		2,135
Mutual Funds					391647	391,647
Real Estate					34674	34,674
Other Fixed Income	136	14,361				14,497
Total System Investments	\$968,336	\$78,232	\$35,063	\$55,112	\$427,235	\$1,563,978

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

The District and System are participants in the Local Agency Investment Fund (LAIF) that is regulated by California Government Code Section 16429 under the oversight of the Treasurer of the State of California. They report their investment in LAIF at the market value amount provided by LAIF, which is the same as the value of the pool share. The balance available for withdrawal is based on the accounting records maintained by LAIF, which are recorded on an amortized cost basis. Included in LAIF's investment portfolio are collateralized mortgage obligations, mortgage-backed securities, other asset-backed securities, loans to certain state funds, and floating rate securities issued by federal agencies, government-sponsored enterprises, United States Treasury Notes and Bills, and corporations. On June 30, 2018, these investments matured in an average of 193days.

The System's investments include the following investments that are highly sensitive to interest rate fluctuations to a greater degree than already indicated above as of June 30, 2018 and 2017:

Highly Sensitive Investments	Fair Value at Year End
Government Mortgage - Backed Securities	\$30,117
Commercial Mortgage - Backed Securities	9,808
Government Issued Commercial Mortgage - Backed Securities	44
Highly Sensitive Investments	Fair Value at Year End
Government Mortgage - Backed Securities	\$26,899
Commercial Mortgage - Backed Securities	7,828
Government Issued Commercial Mortgage - Backed Securities	202

G. Credit Risk

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical credit rating organization.

EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 2 - CASH AND INVESTMENTS (Continued)

District Enterprise Funds:

Presented below is the actual rating as of June 30, 2018 for each investment type as provided by Moody's.

Investment Type	Aaa	Aa1	Aa2	Aa3	Total
U.S. Government-Sponsored					
Non-Callable	\$55,381				\$55,381
Callable	400,091				400,091
Corporate Securities	11,143	\$2,968		\$7,186	21,297
Municipal Bonds	2,616		\$496	5,241	8,353
Mutual Funds (U.S. Securities)	8,676				8,676
Totals	<u>\$477,907</u>	<u>\$2,968</u>	<u>\$496</u>	<u>\$12,427</u>	<u>493,798</u>
<i>Not rated:</i>					
Municipal Bonds					17,575
California Asset Management Program					10,542
California Local Agency Investment Fund					60,372
Cash in Banks					<u>21,354</u>
Total District Cash and Investments					<u>\$603,641</u>

Presented below is the actual rating as of June 30, 2017 for each investment type as provided by Moody's.

Investment Type	Aaa	Aa2	Aa3	Total
U.S. Government-Sponsored				
Non-Callable	\$67,945			\$67,945
Callable	311,351			311,351
Corporate Securities	3,515			3,515
Municipal Bonds	250	\$2,923	\$8,217	11,390
Mutual Funds (U.S. Securities)	43,285			43,285
Totals	<u>\$426,346</u>	<u>\$2,923</u>	<u>\$8,217</u>	<u>437,486</u>
<i>Not rated:</i>				
Municipal Bonds				4,557
California Local Agency Investment Fund				60,373
California Asset Management Program				155,098
Cash in Banks				<u>10,302</u>
Total District Cash and Investments				<u>\$667,816</u>

EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 2 - CASH AND INVESTMENTS (Continued)

System Pension Trust Fund:

Presented below is the actual rating as of June 30, 2018 for each investment type as provided by Moody's.

Investment Type	Aaa	Aa	A	Baa	Ba	U.S. Government Guaranteed	Not Rated	Total
Asset Backed Securities	\$8,280	\$499	\$630	\$189	\$184		\$5,856	\$15,638
Equity Securities							633,809	633,809
Commercial Mortgage								
-Backed Securities	5,094			513			4,201	9,808
Commercial paper							5,340	5,340
Corporate Bonds	3,390	11,789	45,581	23,965	2,255		429	87,409
Government Agencies	33,643			1,333		\$1,663		36,639
Government Bonds	35,917	315	808	314				37,354
Government Mortgage								
-Backed Securities			217			29,505	395	30,117
Government Issued Commercial Mortgage								
-Backed Securities						44		44
Non-Government Backed								
Collateralized Mortgage Obligation	1,517		88	349			20	1,974
Index Linked Government Bonds	1,542							1,542
Municipal Bonds		2,333					130	2,463
Mutual Funds							809,119	809,119
Real Estate							37,231	37,231
Other Fixed Income							8,146	8,146
Short Term Bills and Notes						1,765		1,765
Total System Investments	<u>\$89,383</u>	<u>\$14,936</u>	<u>\$47,324</u>	<u>\$26,663</u>	<u>\$2,439</u>	<u>\$32,977</u>	<u>\$1,504,676</u>	<u>\$1,718,398</u>

Presented below is the actual rating as of June 30, 2017 for each investment type as provided by Moody's.

Investment Type	Aaa	Aa	A	Baa	B	Ba	U.S. Government Guaranteed	Not Rated	Total
Asset Backed Securities	\$9,885	\$490	\$445	\$629	225			\$3,370	\$15,044
Equity Securities								950,846	950,846
Collateralized Bonds	410								410
Commercial Mortgage									0
-Backed Securities	4,101							3,727	7,828
Corporate Bonds	1,252	13,487	38,059	23,791	1306	20		1,121	79,036
Government Agencies	10,176			1,108			\$219		11,503
Government Bonds	18,133		646				959		19,738
Government Mortgage									
-Back Securities			369				26,064	466	26,899
Government Issued Commercial									
Mortgage - Backed Securities							202		202
Index Linked Government Bonds	8,605								8,605
Municipal Bonds		2,135							2,135
Non-Government Backed									0
Commercial Mortgage Obligation	366	319		153				76	914
Mutual Funds								391,647	391,647
Real Estate								34,674	34,674
Other Fixed Income								14,497	14,497
Total System Investments	<u>\$52,928</u>	<u>\$16,431</u>	<u>\$39,519</u>	<u>\$25,681</u>	<u>\$1,531</u>	<u>\$20</u>	<u>\$27,444</u>	<u>\$1,400,424</u>	<u>\$1,563,978</u>

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 2 - CASH AND INVESTMENTS (Continued)

H. Concentration Risk

Significant District investments in the securities of any individual issuers, other than U. S. Treasury securities, LAIF, and mutual funds, are set forth below as of June 30, 2018:

Reporting Unit	Issuer	Investment Type	Reported Amount
District-Wide			
	FHLMC	Federal Agency Securities	\$206,007
	FNMA	Federal Agency Securities	89,818
	FHLB	Federal Agency Securities	88,663
	FFCB	Federal Agency Securities	69,271
Major Funds:			
Water System			
	FHLMC	Federal Agency Securities	184,926
	FHLB	Federal Agency Securities	83,082
	FNMA	Federal Agency Securities	72,607
	FFCB	Federal Agency Securities	66,975
Wastewater System			
	FHLMC	Federal Agency Securities	21,081
	FNMA	Federal Agency Securities	17,212
	FHLB	Federal Agency Securities	5,580

Significant District investments in the securities of any individual issuers, other than U. S. Treasury securities, LAIF, and mutual funds, are set forth below as of June 30, 2017:

Reporting Unit	Issuer	Investment Type	Reported Amount
District-Wide			
	FHLMC	Federal Agency Securities	\$178,900
	FNMA	Federal Agency Securities	93,317
	FHLB	Federal Agency Securities	85,512
Major Funds:			
Water System			
	FHLMC	Federal Agency Securities	155,891
	FHLB	Federal Agency Securities	77,032
	FNMA	Federal Agency Securities	73,128
Wastewater System			
	FHLMC	Federal Agency Securities	23,009
	FNMA	Federal Agency Securities	20,189
	FHLB	Federal Agency Securities	8,480

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 2 - CASH AND INVESTMENTS (Continued)

System Pension Trust Fund:

As of June 30, 2018, the District did not have investments in any one organization exceeding 5% of the System's investments.

The District held demand deposits (overdrafts) amounting to \$4,793 and \$2,340 on behalf of the System as of June 30, 2018 and 2017, respectively. The financial institution which holds these deposits is required by state law to maintain collateral pools against all public deposits they hold.

I. Foreign Currency Risk

System Pension Trust Fund:

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair values of an investment or deposit.

Presented below in US dollars is the fair market value of the System's foreign investments at June 30, 2018:

<u>Foreign Currency</u>	<u>Equity Securities Investment Type</u>
Euro	\$91,660
British Pound Sterling	35,464
Japanese Yen	30,051
Hong Kong Dollar	18,447
Swiss Franc	10,609
South Korean Won	9,355
Canadian Dollar	7,864
Danish Krone	5,611
Singapore Dollar	1,614
Australian Dollar	3,160
Norwegian Krone	4,272
Indonesian Rupiah	1,597
Swedish Krona	1,080
Thai Baht	1,591
Mexican Peso	861
Total	<u><u>\$223,236</u></u>

The Fund's investment policy permits it to invest 20% of total investment on foreign currency-denominated investments. The Fund's current position is 13%.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 2 - CASH AND INVESTMENTS (Continued)

Presented below in US dollars is the fair market value of the System's foreign investments at June 30, 2017:

<u>Foreign Currency</u>	<u>Equity Securities Investment Type</u>
Euro	\$73,391
British Pound Sterling	30,432
Japanese Yen	23,772
Hong Kong Dollar	14,874
South Korean Won	11,768
Swiss Franc	10,324
Canadian Dollar	7,427
Danish Krone	3,579
Singapore Dollar	2,697
Australian Dollar	2,625
Norwegian Krone	2,100
Indonesian Rupiah	1,845
Swedish Krona	1,338
Thai Baht	1,322
Mexican Peso	1,015
Brazilian Real	701
New Israeli Shekel	85
	<hr/>
Total	<u>\$189,295</u>

The Fund's investment policy permits it to invest 20% of total investment on foreign currency-denominated investments. The Fund's prior year position is 12.1%.

J. Custodial Credit Risk

Custodial credit risk for *cash on deposits* is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the District or System will not be able to recover the value of its investment or collateral securities that are in the possession of another party.

California Law requires banks and savings and loan institutions to pledge government securities with a market value of 110% of the District's cash on deposit, or first trust deed mortgage notes with a market value of 150% of the deposit, as collateral for these deposits. Under California Law this collateral is held in a separate investment pool by another institution in the District's name and places the District ahead of general creditors of the institution.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 2 - CASH AND INVESTMENTS (Continued)
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The District and System invest in individual investments and in investment pools. Individual investments are evidenced by specific identifiable *securities instruments*, or by an electronic entry registering the owner in the records of the institution issuing the security, called the *book entry* system. In order to increase security, the District and System employ the Trust Department of a bank or trustee as the custodian of certain District and System managed investments, regardless of their form.

As of June 30, 2018 and 2017, the System's brokers/dealers held \$0 in cash exposed to custodial credit risk.

K. Joint Powers Authority

DSRSD/EBMUD Regional Water Authority - On June 28, 1995, the Dublin San Ramon Service District (DSRSD) and East Bay Municipal Utility District (District) entered into a Joint Powers Agreement (JPA) and established the DSRSD/EBMUD Recycled Water Authority (DERWA) with the purpose of creating a recycled water program in the San Ramon and Livermore-Amador Valleys. The JPA governing body is not substantially the same as the District and its independent Board consists of two directors each from the DSRSD and District. The JPA books and records are being maintained separately from DSRSD and the District. The DSRSD and District made member contributions to fund the JPA start-up and continue to fund capital projects at the request of the JPA on an as needed basis. Although DERWA has a significant relationship with the District, DERWA does not provide services solely to the District, and therefore is not considered a component unit of the District.

Freeport Regional Water Authority - The Freeport Regional Water Project (FRWP) is a regional water supply project undertaken by the District in partnership with the Sacramento County Water Agency (SCWA). In February 2002, with the support of the United States Bureau of Reclamation, the District and SCWA formed the Freeport Regional Water Authority (FRWA) under a joint powers agreement to develop the FRWP. The FRWP provides the permanent infrastructure to allow the District to receive water deliveries pursuant to the Long-Term Renewal Central Valley Project Contract at a new point of diversion along the Sacramento River. In addition to providing the District up to 100 MGD of supplemental water in dry years, the FRWP can provide up to 85 MGD to SCWA in all years. The District's share of the facilities is recorded as Investment in JPA and is presented on the balance sheet. To increase the District's reserve of water supply due to the recent drought, the District activated the pumping of water from the Sacramento River via the Freeport facility during Fiscal Year 2015.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 3 – CAPITAL ASSETS

A. Summary

The District capitalizes all assets with a historical cost of at least \$5 and a useful life of at least three years. Contributed capital assets are valued at their estimated acquisition value on the date contributed.

The purpose of depreciation is to spread the cost of capital assets equitably among all customers over the life of these assets, so that each customer's bill includes a pro rata share of the cost of these assets. The amount charged to depreciation expense each year represents that year's pro rata share of depreciable capital assets.

Depreciation of all capital assets in service, excluding land, is charged as an expense against operations each year and the total amount of depreciation taken over the years, called accumulated depreciation, is reported on the balance sheet as a reduction in the book value of the capital assets.

Capital assets are depreciated using the straight line method of depreciation, which means the cost of the asset is divided by its expected useful life in years and the result is charged to expense each year until the asset is fully depreciated. The District has assigned the useful lives listed below to capital assets:

Utility plant:	Years
Source of supply	25-100
Raw water transmission and storage	20-100
Interception and outfall	60-75
Pumping	25-75
Treatment	20-75
Distribution	25-75
Power Generation	25-75
Equipment	5-20
Plant Structures	25-75
Other	5-40

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 3 – CAPITAL ASSETS (Continued)

B. Additions and Retirements

Capital assets activity for all business-type activities for the year ended June 30, 2018 was as follows:

	Balance at June 30, 2017	Additions and Transfers, net	Retirements and Transfers, net	Balance at June 30, 2018
<i>Water System:</i>				
Capital assets, not being depreciated:				
Land	\$61,465	\$495	(\$2)	\$61,958
Rights-of-way	3,043			3,043
Construction in progress - Land/Rights of Way	178	495	(495)	178
Construction in progress	405,179	321,703	(254,614)	472,268
Total capital assets, not being depreciated	469,865	322,693	(255,111)	537,447
Capital assets, being depreciated:				
Buildings and improvements	242,094	2,306		244,400
System and improvements	4,917,929	240,949	(17,994)	5,140,884
Machinery and equipment	104,516	11,359	(3,425)	112,450
Total capital assets, being depreciated:	5,264,539	254,614	(21,419)	5,497,734
Less accumulated depreciation for:				
Buildings and improvements	(106,756)	(5,617)		(112,373)
System and improvements	(1,622,401)	(96,103)	2,643	(1,715,861)
Machinery and equipment	(64,754)	(5,173)	3,000	(66,927)
Total accumulated depreciation	(1,793,911)	(106,893)	5,643	(1,895,161)
Total capital assets, being depreciated, net	3,470,628	147,721	(15,776)	3,602,573
Water System capital assets, net	\$3,940,493	\$470,414	(\$270,887)	\$4,140,020
<i>Wastewater System:</i>				
Capital assets, not being depreciated:				
Land	\$21,094	\$72		\$21,166
Rights-of-way	191			191
Construction in progress - Land/Rights of Way	311	88	(\$72)	327
Construction in progress	56,924	30,026	(43,331)	43,619
Total capital assets, not being depreciated	78,520	30,186	(43,403)	65,303
Capital assets, being depreciated:				
Buildings and improvements	85,248	2,274		87,522
System and improvements	974,957	40,130	(2,271)	1,012,816
Machinery and equipment	13,290	927		14,217
Total capital assets, being depreciated	1,073,495	43,331	(2,271)	1,114,555
Less accumulated depreciation for:				
Buildings and improvements	(38,193)	(1,658)		(39,851)
System and improvements	(394,562)	(20,128)		(414,690)
Machinery and equipment	(8,516)	(914)		(9,430)
Total accumulated depreciation	(441,271)	(22,700)		(463,971)
Total capital assets, being depreciated, net	632,224	20,631	(2,271)	650,584
Wastewater System capital assets, net	\$710,744	\$50,817	(\$45,674)	\$715,887
Business-type activities capital assets, net	\$4,651,237	\$521,231	(\$316,561)	\$4,855,907

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)

NOTE 3 – CAPITAL ASSETS (Continued)

Capital assets activity for all business-type activities for the year ended June 30, 2017 was as follows:

	Balance at June 30, 2016	Additions and Transfers, net	Retirements and Transfers, net	Balance at June 30, 2017
<i>Water System:</i>				
Capital assets, not being depreciated:				
Land	\$55,704	\$5,875	(\$114)	\$61,465
Rights-of-way	3,029	14		3,043
Construction in progress - Land/Rights of Way	813	5,255	(5,890)	178
Construction in progress	302,160	259,995	(156,976)	405,179
Total capital assets, not being depreciated	361,706	271,139	(162,980)	469,865
Capital assets, being depreciated:				
Buildings and improvements	240,086	2,008		242,094
System and improvements	4,792,810	142,242	(17,123)	4,917,929
Machinery and equipment	98,216	12,726	(6,426)	104,516
Total capital assets, being depreciated:	5,131,112	156,976	(23,549)	5,264,539
Less accumulated depreciation for:				
Buildings and improvements	(101,173)	(5,583)		(106,756)
System and improvements	(1,529,384)	(93,864)	847	(1,622,401)
Machinery and equipment	(66,101)	(4,449)	5,796	(64,754)
Total accumulated depreciation	(1,696,658)	(103,896)	6,643	(1,793,911)
Total capital assets, being depreciated, net	3,434,454	53,080	(16,906)	3,470,628
Water System capital assets, net	\$3,796,160	\$324,219	(\$179,886)	\$3,940,493
<i>Wastewater System:</i>				
Capital assets, not being depreciated:				
Land	\$21,000	\$94		\$21,094
Rights-of-way	191			191
Construction in progress - Land/Rights of Way	259	146	(\$94)	311
Construction in progress	63,146	41,588	(47,810)	56,924
Total capital assets, not being depreciated	84,596	41,828	(47,904)	78,520
Capital assets, being depreciated:				
Buildings and improvements	76,481	8,767		85,248
System and improvements	938,508	38,316	(1,867)	974,957
Machinery and equipment	12,600	727	(37)	13,290
Total capital assets, being depreciated	1,027,589	47,810	(1,904)	1,073,495
Less accumulated depreciation for:				
Buildings and improvements	(36,770)	(1,423)		(38,193)
System and improvements	(374,142)	(20,420)		(394,562)
Machinery and equipment	(7,731)	(823)	38	(8,516)
Total accumulated depreciation	(418,643)	(22,666)	38	(441,271)
Total capital assets, being depreciated, net	608,946	25,144	(1,866)	632,224
Wastewater System capital assets, net	\$693,542	\$66,972	(\$49,770)	\$710,744
Business-type activities capital assets, net	\$4,489,702	\$391,191	(\$229,656)	\$4,651,237

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 3 – CAPITAL ASSETS (Continued)

C. Construction in Progress

Construction in Progress in fiscal 2017-2018 comprises:

	Expended to Date
<i>Water System:</i>	
Pipeline Infrastruct Renewals	\$56,876
WTTIP WTP Improvements	55,006
Reservoir Rehab/Maintenance	37,941
Summit Pressure Zone Improve	32,622
Open Cut Reservoir Rehab	31,781
Pumping Plant Rehabilitation	28,598
Large Diameter Pipelines	24,565
Addl Supplemental Supply Projs	15,857
Faria PZI (formerly Purdue)	14,737
Treatment Plant Upgrades	14,410
Reservoir Tower Modifications	13,595
Raw Water Studies and Improves	12,652
Water Conservation Project	9,249
Service Lateral Replacements	8,157
SRV Recycled Water Program	7,199
Water Capital Costs Misc.	6,658
Pipeline Relocations	6,235
West of Hills Master Plan	6,167
Trench Soils Storage Sites	5,203
Mok Aqu No 2 & 3 Relining Proj	4,235
Other Construction Projects	80,703
	<u>\$472,446</u>
<i>Wastewater System:</i>	
Treatment Plant Infrastructure	\$7,679
3rd St Sewer Interceptor Rehab	5,989
PS Q FM Dual-Mode Operation	4,863
Treatment Plant Infra Ph 2	4,073
Digester Upgrade	3,804
Infiltration/Inflow Contrl Prj	2,873
Routine Cap Equip Replacement	2,538
Resource Recovery Project	2,092
MWWTP Master Planning	1,968
Concrete Rehab at SD1	1,638
MWWTP Pwr Dist Sys Upgrade	1,146
Interceptor Corrosion Prevent	923
Outfall Investigation Project	728
PGS Engine Overhaul	581
So Interceptor Reloc High St	540
Other Construction Projects	2,511
	<u>\$43,946</u>
Total District Construction in Progress	<u><u>\$516,392</u></u>

At June 30, 2018, the District's remaining current major project commitments are estimated to be \$52,328 for the Water System and \$14,130 for the Wastewater System.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 3 – CAPITAL ASSETS (Continued)

Construction in Progress in fiscal 2016-2017 comprises:

	Expended to Date
<i>Water System:</i>	
Pumping Plant Rehabilitation	\$49,610
Treatment Plant Upgrades	47,236
Pipeline Infrastruct Renewals	44,253
Reservoir Rehab/Maintenance	34,142
Summit Pressure Zone Improve	28,153
Dam Seismic Upgrades	23,531
Open Cut Reservoir Rehab	16,630
Addl Supplemental Supply Projs	14,566
WTTIP WTP Improvements	11,174
Raw Water Studies and Improves	9,479
SRV Recycled Water Program	8,322
Water Conservation Project	8,101
Pipeline Infra Renew Historic	7,631
Large Diameter Pipelines	7,205
Reservoir Tower Modifications	6,091
Pipeline Relocations	5,850
Faria PZI (formerly Purdue)	5,608
Service Lateral Replacements	5,340
West of Hills Master Plan	4,972
Water Capital Costs Misc.	3,960
Other Construction Projects	63,503
	<u>\$405,357</u>
<i>Wastewater System:</i>	
Treatment Plant Infrastructure	\$10,436
Digester Upgrade	8,213
Odor Control Improvements	7,389
Routine Cap Equip Replacement	5,327
Resource Recovery Project	4,558
Infiltration/Inflow Contrl Prj	4,325
DCS Upgrades	4,303
PS Q FM Dual-Mode Operation	3,075
3rd St Sewer Interceptor Rehab	2,212
MWWTP Master Plan	1,670
MWWTP Pwr Dist Sys Upgrade	1,083
Treatment Plant Infra Ph 2	772
Concrete Rehab at SD1	724
Interceptor Corrosion Prevent	635
Outfall Investigation Project	622
Other Construction Projects	1,891
	<u>\$57,235</u>
Total District Construction in Progress	<u><u>\$462,592</u></u>

At June 30, 2017, the District's remaining current major project commitments are estimated to be \$78,785 for the Water System and \$5,454 for the Wastewater System.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 4 – ACCOUNTS PAYABLE & ACCRUED EXPENSES

Accounts payable and accrued expenses at June 30, 2018 and 2017 consist of:

	Water System		Wastewater System		Total	
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017
Accounts payable	\$35,966	\$19,340	\$3,304	\$4,365	\$39,270	\$23,705
Accrued salaries	2,965	2,360	548	394	3,513	2,754
Accrued compensated absences	28,506	26,545	4,827	4,130	33,333	30,675
Other	21,689	20,607	951	453	22,640	21,060
Total	<u>\$89,126</u>	<u>\$68,852</u>	<u>\$9,630</u>	<u>\$9,342</u>	<u>\$98,756</u>	<u>\$78,194</u>

NOTE 5 – EXTENDABLE COMMERCIAL PAPER NOTES

The District's Board of Directors has authorized the issuance of short-term indebtedness of the District in a maximum principal amount of up to the lesser of either the average of the total annual revenue for the three preceding years or 25% of the District's total outstanding bonds. Under this authority the District has established two commercial paper programs: an extendable commercial paper program and a traditional commercial paper program. The proceeds from the issuance of commercial paper under these programs are restricted as to use. Under the programs, which must be authorized by the Board of Directors every seven years by resolution subject to the right of referendum, the Water System or the Wastewater System may issue commercial paper and bank notes at prevailing interest rates for periods of not more than 270 days from the date of issuance. The programs were last authorized on April 28, 2015.

The District initially established its extendable commercial paper program in March 2009. Under the extendable commercial paper program, no liquidity support agreement with a commercial bank is needed. Instead, the District limits the term of the extendable commercial paper to 120 days, and the investor agrees to extend the maturity of their investment by 150 days at a higher interest rate in the event of a failed remarketing, giving the District sufficient time to find a replacement investor or refund the extendable commercial paper with a different form of debt to repay the investor.

As of June 30, 2018, \$0 million in Water Series and \$15.0 million in Wastewater Series extendable commercial paper notes were outstanding under this program. The Wastewater Series included the term of 58 days and an interest rate of 1.28% as of June 30, 2018, and the term of 61 days and an interest rate of 0.91% as of June 30, 2017.

The District established its current traditional commercial paper program in December 2015. As of June 30, 2018, \$359.8 million in Water Series and \$0 in Wastewater Series commercial paper notes were outstanding under this program. The Water Series commercial paper notes included the terms of 26 to 146 days and interest rates ranging from 1.19% to 1.69% as of June 30, 2018, and the terms of 30 to 123 days and interest rates ranging from 0.78% to 0.97% as of June 30, 2017.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 5 – COMMERCIAL PAPER NOTES (Continued)
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To provide liquidity for the Water Series notes issued under the traditional commercial paper program, the District maintains two liquidity support facilities with commercial banks: a standby letter of credit in the amount of \$200,000,000 and a revolving credit agreement in the amount of \$160,000,000. Borrowings by the Water System for commercial paper notes and bank notes under the traditional commercial paper program cannot exceed the aggregate amount available under these agreements. Drawings under the liquidity support facilities are restricted to pay principal on maturing Water Series commercial paper notes. There were no borrowings under the liquidity support facilities as of June 30, 2018. The liquidity support facilities expire on December 1, 2020 and November 30, 2018, respectively, and are subject to extension at the request of the District upon agreement by the issuing bank.

There were no unused proceeds of commercial paper notes as of June 30, 2018. It is the District's practice to use the commercial paper programs as a portion of the District's long-term variable rate debt exposure.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 6 – LONG-TERM DEBT

A. Composition and Changes

The District generally incurs long-term debt to finance projects or purchase assets which will have useful lives equal to or greater than the related debt. The District's debt issues and transactions are summarized below and discussed in detail thereafter.

The District's debt issues and transactions during fiscal year 2017-2018 are summarized below.

	Original Issue Amount	Balance June 30, 2017	Additions	Retirements	Balance June 30, 2018	Amount due within one year
<i>Water System Revenue Bonds:</i>						
Subordinated Series 2008 A						
1.31 variable rate, due 6/1/38	\$322,525	\$105,250			\$105,250	
Subordinated Series 2010 A						
3.00 - 5.00%, due 6/1/36	192,830	7,020		\$2,540	4,480	\$2,390
Subordinated Series 2010 B						
5.87%, due 6/1/40	400,000	400,000			400,000	
Series 2012 A						
5.00%, due 6/1/37	191,750	81,750			81,750	
Series 2012 B						
1.00-5.00%, due 6/1/26	358,620	249,450		34,600	214,850	36,110
Series 2013 A						
5.00%, due 6/1/21	48,670	28,065		6,465	21,600	6,820
Series 2014 A						
3.00-5.00%, due 6/1/35	128,315	128,315			128,315	
Series 2014 B						
2.00-5.00%, due 6/1/30	242,730	233,450		8,040	225,410	8,425
Series 2014 C						
5.00%, due 6/1/44	75,000	75,000			75,000	
Series 2015 A						
4.00-5.00%, due 6/1/37	429,360	429,360			429,360	
Series 2015 B						
4.00-5.00%, due 6/1/45	74,335	74,335			74,335	
Series 2015 C						
4.00-5.00%, due 6/1/45	110,715	110,715			110,715	
Series 2017 A						
3.00-5.00%, due 6/1/45	185,355	185,355			185,355	
Series 2017 B						
3.00-5.00%, due 6/1/37	309,665	309,665		6,190	303,475	6,345
Total water long-term bonds		2,417,730		57,835	2,359,895	60,090

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 6 - LONG TERM DEBT (Continued)

	Original Issue Amount	Balance June 30, 2017	Additions	Retirements	Balance June 30, 2018	Amount due within one year
<i>Wastewater System General Obligation Bonds:</i>						
Series G						
5.00%, due 4/1/18	\$14,160	\$3,515		\$3,515		
<i>Wastewater System Revenue Bonds</i>						
Subordinated Series 2010 A						
2.00-5.00%, due 6/1/29	58,095	7,805		2,510	\$5,295	\$2,615
Subordinated Series 2010 B						
5.03-5.18%, due 6/1/40	150,000	150,000			150,000	
Series 2012 A						
5.00%, due 6/1/37	20,000	20,000			20,000	
Series 2014A						
2.00-5.00%, due 6/1/31	82,150	72,040		4,470	67,570	4,635
Series 2015 A-1						
5.00%, due 6/1/37	54,805	54,805			54,805	
Series 2015 A-2						
5.00%, due 6/1/38	13,565	13,565			13,565	
Series 2015 B						
2.10-3.35%, due 6/1/30	2,795	2,475		165	2,310	165
Series 2017 A						
4.00-5.00%, due 6/1/37	69,420	69,420		2,890	66,530	2,955
Total wastewater long-term bonds		393,625		13,550	380,075	10,370
Total long-term bonds		2,811,355		71,385	2,739,970	70,460
<i>Water Loans:</i>						
<i>State Water Resources Control Board</i>						
2004 Upper San Leandro Reservoir Project						
2.51%, due 1/1/24	\$2,188	\$833		\$120	\$713	\$123
2008 East Bayshore, Recycled Water Project						
2.40%, due 4/1/28	20,100	12,058		971	11,087	994
2018 South Reservoir Replacement Project						
1.70%, due 7/1/48	2,260		\$2,260		2,260	58
Total water loans		12,891	2,260	1,091	14,060	1,175
Total long-term loans		12,891	2,260	1,091	14,060	1,175
<i>Commercial Paper (see Note 5)</i>					12,885	
Water System Commercial Paper:		359,800	2,043,600	2,043,600	359,800	
Wastewater System Commercial Paper:		15,000	76,500	76,500	15,000	
Total commercial paper		374,800	2,120,100	2,120,100	374,800	
Amount due within one year		(72,476)	841		(71,635)	
Less: Unamortized premium, net		286,067		25,962	260,105	
Amount due in more than one year		\$601,282	\$2,123,201	\$2,147,153	\$577,330	\$71,635

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 6 - LONG TERM DEBT (Continued)

The District's debt issues and transactions during fiscal year 2016-2017 are summarized below.

	Original Issue Amount	Balance June 30, 2016	Additions	Retirements	Balance June 30, 2017	Amount due within one year
<i>Water System Revenue Bonds:</i>						
Subordinated Series 2007 B						
3.75 - 5.00%, due 6/1/19	\$54,790	\$19,155		\$19,155		
Subordinated Series 2008 A						
.87% variable rate, due 6/1/38	322,525	105,250			\$105,250	
Subordinated Series 2010 A						
3.00 - 5.00%, due 6/1/36	192,830	183,400		176,380	7,020	\$2,540
Subordinated Series 2010 B						
5.87%, due 6/1/40	400,000	400,000			400,000	
Series 2012 A						
5.00% , due 6/1/37	191,750	191,750		110,000	81,750	
Series 2012 B						
1.00 -5.00%, due 6/1/26	358,620	278,810		29,360	249,450	34,600
Series 2013 A						
5.00%, due 6/1/21	48,670	34,200		6,135	28,065	6,465
Series 2014 A						
3.00-5.00%, due 6/1/35	128,315	128,315			128,315	
Series 2014 B						
2.00-5.00%, due 6/1/30	242,730	241,220		7,770	233,450	8,040
Series 2014 C						
5.00%, due 6/1/44	75,000	75,000			75,000	
Series 2015 A						
4.00-5.00%, due 6/1/37	429,360	429,360			429,360	
Series 2015 B						
4.00-5.00%, due 6/1/45	74,335	74,335			74,335	
Series 2015C						
4.00-5.00%, due 6/1/45	110,715	110,715			110,715	
Series 2017 A						
3.00 - 5.00%, due 6/1/45	185,355		\$185,355		185,355	
Series 2017 B						
3.00 - 5.00%, due 6/1/37	309,665		309,665		309,665	6,190
Total water long-term bonds		2,271,510	495,020	348,800	2,417,730	57,835

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 6 - LONG TERM DEBT (Continued)

	Original Issue Amount	Balance June 30, 2016	Additions	Retirements	Balance June 30, 2017	Amount due within one year
<i>Wastewater System General</i>						
<i>Obligation Bonds:</i>						
Series G						
5.00%, due 4/1/18	\$14,160	\$7,345		\$3,830	\$3,515	\$3,515
<i>Wastewater System Revenue Bonds:</i>						
Subordinated Series 2007 B						
3.75 - 5.00%, due 6/1/26	46,670	26,920		26,920		
Subordinated Series 2010 A						
2.00 - 5.00%, due 6/1/29	58,095	44,295		36,490	7,805	2,510
Subordinated Series 2010 B						
5.03 - 5.18%, due 6/1/40	150,000	150,000			150,000	
Series 2012 A						
5.00% , due 6/1/37	20,000	20,000			20,000	
Series 2014 A						
2.00 - 5.00%, due 6/1/31	82,150	76,310		4,270	72,040	4,470
Series 2015 A-1						
5.00%, due 6/1/37	54,805	54,805			54,805	
Series 2015 A-2						
5.00%, due 6/1/38	13,565	13,565			13,565	
Series 2015 B						
2.10 - 3.35% , due 6/1/30	2,795	2,635		160	2,475	165
Series 2017 A						
4.00 - 5.00%, due 6/1/37	69,420		\$69,420		69,420	2,890
Total wastewater long-term bonds		395,875	69,420	71,670	393,625	13,550
Total long-term bonds		2,667,385	564,440	420,470	2,811,355	71,385
<i>Water Loans:</i>						
<i>State Water Resources Control Board</i>						
2004 Upper San Leandro Reservoir Project						
2.51%, due 1/1/24	\$2,188	\$950		\$117	\$833	\$120
2008 East Bayshore, Recycled Water Project						
2.40%, due 4/1/28	20,100	13,006		948	12,058	971
Total water loans		13,956		1,065	12,891	1,091
Total long-term loans		13,956		1,065	12,891	1,091
<i>Commercial Paper (see Note 5)</i>						
Water System Commercial Paper		359,800	1,837,700	1,837,700	359,800	
Wastewater System Commercial Paper		15,000	106,500	106,500	15,000	
Total commercial paper		374,800	1,944,200	1,944,200	374,800	
Amount due within one year		(66,515)	(5,961)		(72,476)	
Add: Unamortized premium, net		184,011	124,801	22,745	286,067	
Total long-term liabilities, net		<u>\$3,173,637</u>	<u>\$2,627,480</u>	<u>\$2,388,480</u>	<u>\$3,412,637</u>	<u>\$72,476</u>

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 6 - LONG TERM DEBT (Continued)

B. Description of the District's Long-Term Debt Issues

General obligation and revenue bonds are generally callable at future dates. The general obligation bonds are repaid from property taxes levied on property within the District.

Revenue-supported debt can be authorized by the District's Board of Directors, subject to a referendum process.

The net revenues of the Water System are pledged toward the repayment of the Water Revenue Bonds and the State Water Resources Control Board Parity Loans of the Water System. The net revenues of the Wastewater System are pledged toward the repayment of the Wastewater Revenue Bonds of the Wastewater System.

The District is subject to certain revenue bond covenants on outstanding debt which require the setting of rates and charges to yield net revenues of the respective Water System or Wastewater System, as applicable, equal to at least 110% of the current annual debt service requirements for all revenue bonds and other parity obligations of the respective Water System or Wastewater System. The District has designated \$119.1 million (\$95.0 million for the Water System and \$24.1 million for the Wastewater System) of operating reserves as a rate stabilization fund, which is available to satisfy the coverage requirements for debt service in future years. There have never been any draws for this purpose.

2018 South Reservoir Replacement Project Loan – The District entered into a \$18.9 million loan agreement with the State Water Resources Control Board (SWRCB) to fund construction for the South Reservoir Replacement Project. The project will replace the existing South Reservoir with 8.5 MG partially buried concrete reservoir to meet demand and increase system reliability. As of June 30, 2018, the District received \$2.3 million out of \$18.9 million from SWRCB. The loan repayments are payable solely from Operating Revenues. Interest payments commenced on July 1, 2018 and principal payments commenced on January 1, 2019, and are payable semi-annually thereafter.

C. Debt Service Requirements

Annual debt service requirements for fiscal year 2017-2018, including the swap payments discussed in F., are shown below for the above debt issues:

For the Year Ending June 30	Water System		Wastewater System		Total	
	Principal	Interest	Principal	Interest	Principal	Interest
2019	\$61,265	\$116,440	\$10,370	\$18,851	\$71,635	\$135,291
2020	64,368	113,511	10,860	18,364	75,228	131,875
2021	66,057	110,427	10,955	17,875	77,012	128,302
2022	68,851	107,357	11,480	17,329	80,331	124,686
2023	72,176	104,069	12,010	16,757	84,186	120,826
2024 - 2028	407,873	464,798	68,635	74,231	476,508	539,029
2029 - 2033	513,362	353,576	86,495	55,490	599,857	409,066
2034 - 2038	648,068	218,294	110,325	31,696	758,393	249,990
2039 - 2043	374,689	66,196	56,790	4,877	431,479	71,073
2044 - 2045	97,246	5,812	2,155	123	99,401	5,935
Totals	\$2,373,955	\$1,660,480	\$380,075	\$255,593	\$2,754,030	\$1,916,073

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 6 - LONG TERM DEBT (Continued)

Annual debt service requirements for fiscal year 2016-2017, including the swap payments discussed in F., are shown below for the above debt issues:

For the Year Ending June 30	Water System		Wastewater System		Total	
	Principal	Interest	Principal	Interest	Principal	Interest
2018	\$58,926	\$113,291	\$13,550	\$19,339	\$72,476	\$132,630
2019	61,207	110,779	10,370	18,851	71,577	129,630
2020	64,309	107,852	10,860	18,364	75,169	126,216
2021	65,996	104,769	10,955	17,875	76,951	122,644
2022	68,790	101,700	11,480	17,329	80,270	119,030
2023 - 2027	391,088	456,726	65,720	77,510	456,808	534,238
2028 - 2032	488,991	354,478	82,410	59,588	571,401	414,066
2033 - 2037	617,745	234,433	104,970	36,934	722,715	271,367
2038 - 2042	461,710	84,907	80,140	8,896	541,850	93,803
2043 - 2045	151,860	11,456	3,170	246	155,030	11,702
Totals	\$2,430,622	\$1,680,391	\$393,625	\$274,932	\$2,824,247	\$1,955,327

Interest payments on debt subject to swap agreements were calculated using the variable rates at June 30, 2018 and 2017, respectively.

D. Prior-Year Defeasances

In prior years, the District defeased certain debt issues by placing proceeds of new bonds in an irrevocable trust to provide for all future debt service payments on the refunded bonds. Accordingly, the trust account assets and the liability for the defeased debt are not included in the District's financial statements. As of June 30, 2018 and 2017, \$318 million and \$355 million of the bonds outstanding are considered defeased, respectively.

E. Variable Rate Debt

The District has a number of bond issues with variable interest rates. The Water Series 2008A Bonds are subject to purchase on the demand of the holder with seven days prior notice at a price equal to the principal plus accrued interest. The remarketing agent is authorized to use its best efforts to sell the repurchased bonds at a price equal to 100 percent of the principal amount by adjusting the interest rate. In the event that they are not sold, under Standby Bond Purchase Agreements (SBPAs) issued by banks for the above variable rate debt issues, the trustee or the remarketing agent is entitled to draw an amount sufficient to pay the purchase price of delivered bonds. The District is required to pay an annual commitment fee to the banks issuing SBPAs. Expiration dates of these SBPAs are presented below by debt issue. In addition, the remarketing agent receives an annual fee of seven basis points of the outstanding principal amount of the bonds.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
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NOTE 6 - LONG TERM DEBT (Continued)

Issue	Standby Purchase Agreement Terms		
	Expiration Date	Interest Rate	Interest Rate Swap
Water System Revenue Subordinated Bonds:			
Series 2008A-1	12/9/2019	Reset Weekly	See below
Series 2008A-2	11/24/2021	Reset Weekly	See below
Series 2008A-3	11/24/2021	Reset Weekly	See below
Series 2008A-4	12/9/2019	Reset Weekly	See below

F. Interest Rate Swap Agreements

The District has entered into a number of matched interest rate swap contracts with providers in which the District contracted to pay a fixed rate on the nominal amount of outstanding bonds, in exchange for a floating rate payment, set monthly on the first day of each calendar month for its LIBOR based swaps. The combination of variable rate bonds and a floating-rate swap creates synthetic fixed-rate debt for the District. The synthetic fixed rate on the bonds protects the District against increases in short-term interest rates. The terms, fair value, and credit risk of each of the swap agreements are discussed below.

Term and credit risks. The terms and credit ratings of the outstanding swaps, as of June 30, 2018, are included below. The District's swap agreements contain scheduled reductions to outstanding notional amounts that are expected to follow scheduled reductions in the associated bonds.

Related Bond Issue	Notional Amount	Effective Date	Counterparty	Counterparty Credit Ratings	Issuer Pays	Issuer Receives	Maturity/ Termination Date
2008A Water System Refunding Bonds	37,240	6/2/2005	JP Morgan Chase & Co.	Aa3/A+	3.115%	62.3% of 30-day LIBOR	6/1/2038
2008A Water System Refunding Bonds	37,240	6/1/2011	Bank of America, National Assoc.	Aa3/A+	3.115%	62.3% of 30-day LIBOR	6/1/2038
2008A Water System Refunding Bonds	16,195	6/1/2012	Merrill Lynch Capital Services	A3/A-	3.115%	62.3% of 30-day LIBOR	6/1/2038
2008A Water System Refunding Bonds	14,575	9/25/2008	Bank of New York Mellon	Aa2/AA-	3.115%	62.3% of 30-day LIBOR	6/1/2038

The effect of these transactions is structured to result in the approximate equivalent of the District paying a fixed rate on the bonds, since the inflow of payments from the LIBOR based swaps are anticipated to approximate the outflow of payments on the variable rate bonds. Only the net difference in interest payments to the swap providers is made under the swap contracts.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 6 - LONG TERM DEBT (Continued)

Fair value. The fair value of the swaps takes into consideration the prevailing interest rate environment, the specific terms and conditions of a given transaction and any upfront payments that may have been received. The fair value was estimated using the zero-coupon discounting method. This method calculates the future payments required by the swap, assuming that the current forward rates implied by the LIBOR swap yield curve are the market's best estimate of future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for a hypothetical zero-coupon rate bond due on the date of each future net settlement on the swaps. The fair values of each swap at June 30, 2018 and 2017, are included below:

Related Bond Issue	Fair Value	
	2018	2017
Water		
2008A Water System Refunding Bonds	(\$18,256)	(\$24,777)

Credit risk. As of June 30, 2018, the District was not exposed to credit risk on its outstanding swaps because the swaps had a negative fair value of \$18.3 million. The District faces a maximum possible loss equivalent to the swaps' fair value. However, if interest rates increase and the fair value of the swaps were to become positive, the District would be exposed to credit risk.

The District will be exposed to interest rate risk only if the counterparty to the swap defaults or if the swap is terminated. The swap agreements contain provisions that determine if and when the District or the counterparty must provide collateral. The agreements require full collateralization of the fair value of the swap should the counterparty's credit rating fall below a certain threshold. As of June 30, 2018, the District was not required to provide collateral to any swap counterparty.

Basis risk. Basis risk is the risk that the interest rate paid by the District on underlying variable rate bonds to bondholders temporarily differs from the variable swap rate received from the applicable counterparty. The District is exposed to basis risk as the District receives payments based on LIBOR rates to offset the actual variable interest rate the District pays on its bonds. The District is exposed to basis risk should the floating rate that it receives on a swap be less than the actual variable rate the District pays on the bonds. Depending on the magnitude and duration of any basis risk shortfall, the expected cost of the basis risk may vary. As of June 30, 2018, the District has a basis difference on its swaps of a positive 11 basis points (the District receives less from its swap floating rate payment than it pays out on its variable rate debt).

Termination risk. The District or the counterparty may terminate if the other party fails to perform under the terms of the swap contract. The District will be exposed to variable rates if the providers to the swap contracts default or if the swap contracts are terminated as it will lose the hedge provided by the swap. A termination of the swap contracts may also result in the District's making or receiving a termination payment based on market interest rates at the time of the termination. If at the time of termination the swap has a negative fair value, the District would be liable to the counterparty for a payment equal to the swap's fair value.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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(Dollars in Thousands)**

NOTE 6 – LONG-TERM DEBT (Continued)

Swap payments and associated debt. Using rates as of June 30, 2018, debt service requirements of the District's outstanding variable-rate debt and net swap payments are as follows. As rates vary, variable-rate bond interest payments and net swap payments will vary. These payments below are included in the Debt Service Requirements at C. above:

For the Year Ending June 30	Variable-Rate Bonds		Interest Rate Swaps, Net	Total
	Principal	Interest	Interest	
2019		\$1,384	\$1,908	\$3,292
2020		1,384	1,908	3,292
2021		1,384	1,908	3,292
2022		1,383	1,908	3,291
2023		1,383	1,908	3,291
2024 - 2028		6,918	9,540	16,458
2029 - 2033	\$36,225	5,976	8,241	50,442
2034 - 2038	69,025	1,876	2,588	73,489
Totals	<u>\$105,250</u>	<u>\$21,688</u>	<u>\$29,909</u>	<u>\$156,847</u>

NOTE 7 – NET POSITION

Net Position is the excess of all the District's assets and deferred outflows over all its liabilities and deferred inflows, regardless of fund. Net Position is divided into three captions. These captions apply only to Net Position and are described below:

Net Investment in Capital Assets describes the portion of Net Position which is represented by the current net book value of the District's capital assets, less the outstanding balance of any debt issued to finance these assets and any related deferred outflows and inflows.

Restricted describes the portion of Net Position which is restricted as to use by the terms and conditions of agreements with outside parties, governmental regulations, laws, or other restrictions which the District cannot unilaterally alter. These principally include developer fees received for use on capital projects, debt service requirements, and fees charged for the provision of future water resources.

Unrestricted describes the portion of Net Position which is not restricted to use.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 8 – EMPLOYEES’ RETIREMENT PLAN
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A. Description

The Employees’ Retirement System is a single-employer, contributory, defined benefit pension plan (the Plan) which provides retirement, disability, survivorship, and post-employment healthcare benefits for eligible directors, officers, and employees of the District. The Plan is administered by a Retirement Board composed of three members appointed by the District’s Board of Directors and two members elected by and from the active membership of the Plan, and a nonvoting member elected by the retirees of the Plan. Retirement Ordinance No. 40 assigns the authority to establish Plan benefit provisions to the District’s Board of Directors. A stand-alone financial report of the Employees’ Retirement System is available. Please send request to the Controller, Accounting Division, P.O. Box 24055, Oakland, CA 94623-1055 or visit the District website at <http://www.ebmud.com>.

All regular full-time employees of the District are members of the Plan in addition to certain job share and intermittent employees. In accordance with the ordinance governing the System, eligible employees become members on the first day they are physically on the job. Members become vested in the Plan after five years of continuous full-time employment. Vested members who terminate employment may elect a refund of their contributions or leave them in the Plan until eligible to receive benefits.

The Plan is funded by contributions from its members and from the District. District contribution percentages are recommended by the Retirement Board; employee contribution rates are established by the Board of Directors pursuant to the Ordinance, giving consideration to actuarial recommendations and prospective changes in factors which affect funding.

B. Retirement Benefits and Allowances

There are two tiers in effect currently, the 1980 Plan and the 2013 Plan. Employees who became Members of the retirement system prior to January 1, 2013, or who have reciprocal Membership are in the 1980 Plan, Employees who became Members on or after January 1, 2013 are in the 2013 Plan.

1980 Plan Members may elect voluntary reduced service retirement upon attaining the age of 54 and completing 5 years of continuous full-time employment. Members may elect voluntary unreduced service retirement upon attaining the age of 62 and completing 5 years of continuous full-time employment or age 65 without restriction. Members who continue to work upon attaining the normal retirement age of 65 continue to contribute to the Plan, and at the time they retire, computation of their retirement allowance is based upon their compensation and length of service as of the date of retirement. Service retirement allowances are computed by formulas specified in the Ordinance and are based on date of employment, length of employment, age at date of retirement, and compensation earned during employment.

2013 Plan Members may elect voluntary reduced service upon attaining the age of 52 and completing 5 years of continuous full-time employment. Members may elect voluntary unreduced service retirement upon attaining the age of 67, and completing 5 years of continuous full-time employment. Members who continue to work upon attaining the normal retirement age of 67 continue to contribute to the Plan, and at the time they retire, computation of their allowance is based upon their compensation and length of service as of the date of retirement. Service retirement allowances are computed by formulas specified in the Ordinance and are based on length of service, age at retirement, and compensation earned during employment.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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(Dollars in Thousands)**

NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)
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C. Post-employment Healthcare Cost

In addition to retirement benefits, the District provides post-employment health benefits assistance (administered by the Employees’ Retirement System) for employees who retire from the District or their surviving spouses. As of June 30, 2018, there were 1,548 participants receiving these health care benefits.

Effective July 1, 1996, a 20-year vesting schedule for full benefits was implemented for all new participants. Effective January 1, 1999, retired members who had separated from the District prior to their retirement who has at least 10 years of service also became eligible for the post-employment health benefits based on the same sliding scale. The scale provides for 25% of healthcare benefits for service from 5 through 10 years, 50% of healthcare benefits for service from 10 through 15 years, 75% of healthcare benefits for service from 15 through 20 years, and 100% of healthcare benefits for service of 20 years or more. Effective July 1, 2003, the District reimbursed up to \$450 per month (\$550 per month effective July 1, 2004, for membership of a spouse or registered domestic partner) for any health, dental, or long-term care insurance premiums paid by the retiree for themselves, current spouse, or domestic partner, or any health, dental, or long-term care insurance premiums paid by the eligible surviving spouse of a retiree. These benefits are paid from a separate post-employment healthcare benefits fund which up until June 17, 2002, was advance funded entirely by the District on an actuarially determined basis. Cash reimbursement of these benefits totaled \$8,315 in the year ended June 30, 2018. Effective June 18, 2002, a portion of the post-employment healthcare benefits costs is recovered through employee contributions.

Through June 30, 1999, the medical premium subsidy was not a vested benefit and the District reserved the right to modify or terminate the benefit at any time. If the medical subsidy were terminated, assets accumulated from contributions made for the subsidy would be used to provide other pension benefits. Effective July 1, 1999, the medical premium subsidy became a vested benefit to a maximum of \$200 per month, was changed effective October 1, 2000, to a maximum of \$250 per month, and was changed effective July 1, 2002, to a maximum of \$400 per month per month, and was changed effective July 1, 2003, to a maximum of \$450 per month, and was changed again effective July 1, 2004, to a maximum of \$450 per month and \$550 per month for membership of a spouse or registered domestic partner.

D. Actuarial Assumptions and Funding Policy

The Plan’s funding policy provides for periodic District contributions at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due as specified by ordinance. The individual entry age normal method is used to determine the normal cost for other post-employment benefits (OPEB) and service cost for pension, and the OPEB unfunded actuarial accrued liability (past service liability) is amortized as a level percentage of future payroll over 30 years open period.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)
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District contributions for the year ended June 30, 2018 are as follows:

1980 Plan:

Pension plan:

Employer service cost	15.57%
Toward unfunded pension liability	22.35%

Other post-employment benefits:

Employer normal cost	1.16%
Unfunded actuarial accrued liability	4.10%

2013 Plan:

Pension plan:

Employer service cost	8.95%
Toward unfunded pension liability	22.35%

Other post-employment benefits:

Employer normal cost	0.76%
Unfunded actuarial accrued liability	4.10%

Effective June 30, 2018, contributions for fiscal year 2018/2019 are as follows:

1980 Plan:

Pension plan:

Employer service cost	15.56%
Toward unfunded pension liability	21.10%

Other post-employment benefits:

Employer normal cost	1.14%
Unfunded actuarial accrued liability	4.18%

2013 Plan:

Pension plan:

Employer service cost	8.81%
Toward unfunded pension liability	21.10%

Other post-employment benefits:

Employer normal cost	0.74%
Unfunded actuarial accrued liability	4.18%

Actuarial calculations reflect a long-term perspective and actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of each valuation and on the pattern of sharing the costs between the employer and plan members to that point.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)
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Significant assumptions used to compute contribution requirements from the latest unaudited actuarial are as follows:

Valuation date	June 30, 2017
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	Plan changes are amortized over separate decreasing 15-year periods; assumptions changes are amortized over separate decreasing 25-year periods; experience gains/losses are amortized over separate decreasing 20-year periods.
Assets valuation method	Market value of assets less unrecognized returns in each last five years. Unrecognized return is equal to the difference between the actual market return and the of the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value.
Actuarial assumptions:	
Net Investment Return	7.25%, net of investment and administrative expenses.
Average projected salary increases*	Ranges from 4.00% to 9.50% based on years of service*
Inflation rate	3.00%
Cost-of-living adjustments	3.00% per annum
Mortality	<i>Pre-retirement:</i> Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Service Retirement and All Beneficiaries:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Disability Retirement:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females

** Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases*

EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

E. Contributions Required and Contributions Made

Contributions for the years ended June 30, 2018 and June 30, 2017, based on the June 30, 2017, actuarial valuation (latest available and includes amounts for post-employment healthcare benefits), were as follows:

	2018		2017
	Pension	Healthcare Benefit Plan	Totals
Regular contributions:			
District contributions	\$71,220	\$9,875	\$81,095
Member contributions	16,807	177	16,984
	<u>88,027</u>	<u>10,052</u>	<u>98,079</u>
Other contributions:			
Member buybacks	53	42	95
	<u>\$88,080</u>	<u>\$10,094</u>	<u>\$98,174</u>
			<u>\$92,878</u>

Regular District and member contributions in fiscal 2018 represent an aggregate of 41.70% and 8.78% of covered payroll, respectively. The District’s contributions include amounts for post-employment healthcare benefits at a rate of 5.36% of covered payroll, determined by the actuarial dated June 30, 2017. The actual payroll for the District employees covered by the Plan for the year ended June 30, 2018, was \$194,498, which was 91.10% of the total District payroll of \$213,505.

The total District contribution of \$81,095 in regular contributions (\$29,576 for normal cost and service cost; also includes \$51,520 for amortization of the unfunded actuarial accrued liability).

Regular District and member contributions in fiscal 2017 represent an aggregate of 42.10% and 8.77% of covered payroll, respectively. The District’s contributions include amounts for post-employment healthcare benefits at a rate of 5.32% of covered payroll, determined by the actuarial dated June 30, 2016. The actual payroll for the District employees covered by the Plan for the year ended June 30, 2017, was \$182,548, which was 90.60% of the total District payroll of \$201,483.

The total District contribution of \$77,235 for the year ended June 30, 2017, consisted of \$76,860 regular contributions (\$26,532 for normal cost and \$50,328 for amortization of the unfunded actuarial accrued liability and payment to reduces the net pension liability) and \$375 of interest on contributions.

Member buyback contributions relate to prior years’ service credits for Plan participants. The Plan was amended in 1998 for limited temporary construction workers and in 2003 for intermittent employees to allow current members, who previously worked for the District in a status which did not qualify for membership in the System, to establish retirement service credit for prior service with payments over a period of two to eight years.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

F. Schedule of Employer Contributions

The annual required contributions for fiscal years ended include amounts for the pay-as-you-go amounts for post-employment healthcare benefits.

Schedule of Employer’s Contributions:

Year ended June 30	Actuarially determined contributions	Contributions in relation to the actuarially determined contributions	Contributions deficiency (excess)	Covered payroll *	Contributions as a percentage of covered employee payroll
2008	\$7,216	\$7,216	\$0	\$152,538	4.73%
2009	6,318	6,318	0	158,193	3.99%
2010	7,725	7,725	0	161,641	4.78%
2011	7,494	7,494	0	160,336	4.67%
2012	7,495	7,495	0	158,481	4.73%
2013	7,772	7,772	0	153,707	5.06%
2014	8,457	8,457	0	159,513	5.30%
2015	8,964	8,964	0	166,886	5.37%
2016	9,454	9,454	0	174,586	5.42%
2017	9,764	9,764	0	182,032	5.36%

* Derived by dividing the contributions in relation to the actuarial determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the District. However, in accordance with GASB 82, the covered payroll amounts for the actuarial valuations for fiscal year 2013 through current are defined as the payroll on which contributions to the pension plan are based.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)
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Health Insurance Benefit Plan:

During the fiscal year ended June 30, 2017, the District made contributions to the Health Insurance Benefit Plan toward the Annual Required Contribution (ARC) amounting to \$9,764 which represented 4.85% of the \$201,483 total District payroll. During the fiscal year ended June 30, 2016, the District made contributions toward the ARC amounting to \$9,764 to the plan which represented 4.86% of the \$194,432 total District payroll. As a result, the District has recorded the Net OPEB Obligation (NOO), representing the difference between the ARC and actual contributions, as presented below:

Net OPEB obligation at June 30, 2015		\$23,651
Annual required contribution (ARC)	\$11,590	
Interest on net OPEB obligation	1,671	
Adjustments to the ARC	(1,719)	
Annual OPEB cost - fiscal 2014/2015	<u>11,542</u>	
Less contributions made during fiscal year:		
Contributions to Northern Trust	(9,454)	
Interest on Contributions to Northern Trust	<u>(417)</u>	
Contributions	(9,871)	
Contributions less than ARC		<u>1,671</u>
Net OPEB obligation at June 30, 2016		25,322
Annual required contribution (ARC)	12,019	
Interest on net OPEB obligation	1,794	
Adjustments to the ARC	(1,846)	
Annual OPEB cost - fiscal 2016/2017	<u>11,967</u>	
Less contributions made during fiscal year:		
Contributions to Northern Trust	(9,764)	
Interest on Contributions to Northern Trust	<u>(375)</u>	
Contributions	(10,139)	
Increase in net OPEB obligations		<u>1,828</u>
Net OPEB obligation at June 30, 2017		<u><u>\$27,150</u></u>

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

A schedule of funding progress for the pension and post-employment healthcare plans presenting multiple-year trend information as to whether the actuarial value of plan assets is increasing or decreasing relative to the actuarial accrued liability for benefits over time is presented immediately following the notes to basic financial statements in the Required Supplementary Information Section.

G. Net Pension Liability

The net pension liability (i.e., the Plan’s liability determined in accordance with GASB No. 68 less the fiduciary net position) as of June 30, 2018 and 2017 is as shown below:

	2018	2017
Total Pension Liability	\$2,068,015	\$1,995,863
Plan Fiduciary Net Position	(1,580,556)	(1,391,771)
Employer Net Pension Liability	<u>\$487,459</u>	<u>\$604,092</u>
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	76.43%	69.73%
Covered payroll	\$182,032	\$174,586
Liability as a Percentage of Covered payroll	267.79%	346.01%

Actuarial valuation of the ongoing System involve estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The Schedule of Employers’ net pension liability presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary Information section. The net pension liabilities was measured as of June 30, 2017 and 2016 and are not adjusted or rolled forward to the June 30, 2018 and 2017 reporting dates, respectively.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

For the year ended June 30, 2018, the District recognized pension expense as follows:

	Water	Wastewater	Total
Contributions made after measurement date	(\$60,802)	(\$10,418)	(\$71,220)
Current year changes in the net pension liability:			
Service cost	35,094	6,011	41,105
Interest on total pension liability	123,277	21,116	144,393
Member contributions	(13,506)	(2,313)	(15,819)
Projected earning on investments	(85,862)	(14,707)	(100,569)
Difference in expected and actual earnings	(16,632)	(2,849)	(19,481)
Other	10,937	471	11,408
Total current year activity	53,308	7,729	61,037
Total pension expense	(7,494)	(2,689)	(10,183)

At June 30, 2018, the District reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
	Water	Wastewater	Water	Wastewater
Pension contributions subsequent to measurement date	\$60,802	\$10,418		
Differences between expected and actual experience	2,866	491	\$16,144	\$2,765
Changes of assumptions	30,900	5,293		
Change in proportion and differences between employer contributions and proportionate share of contributions	2,608			2,608
Net difference between projected and actual earnings on pension plan investments			29,273	5,014
Total	\$97,176	\$16,202	\$45,417	\$10,387

A total of \$71,220 was reported as deferred outflows of resources related to contributions subsequent to the measurement date and will be recognized as a reduction of the net pension liability in the year ended June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows:

Year Ended	Deferred Outflows of Resources		Deferred Inflows of Resources	
June 30	Water	Wastewater	Water	Wastewater
2019	\$6,915	\$1,100	\$13,916	3,686
2020	6,915	1,100	(4,829)	(31)
2021	6,915	1,100	2,131	775
2022	6,915	1,100	24,569	4,371
2023	8,714	1,384	9,630	1,586

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Large Cap Equity	36%	5.78%
Domestic Small Cap Equity	4%	6.45%
Developed International Equity	12%	7.03%
Emerging Markets Equity	3%	9.46%
Domestic Bonds	10%	0.99%
Non-Core Fixed Income	10%	3.46%
Real Estate	5%	4.50%
Covered Calls	20%	5.00%
Total	100%	

The discount rates used to measure the total pension liability were 7.25% and 7.25% as of June 30, 2018 and June 30, 2017, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on Pension Plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of both June 30, 2018 and June 30, 2017.

In accordance with GASB 68 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the following table presents the net pension liability of the Plan as of June 30, 2018, calculated using the discount rate of 7.25%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount (7.25%)	1% Increase (8.25%)
Net Pension Liability	\$751,606	\$487,459	\$267,390

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

H. Net OPEB Liability

The net OPEB liability (The Plan’s liability determined according to GASB 75) as of June 30, is shown below:

	2018	2017
Total OPEB Liability	\$167,894	\$171,443
Plan Fiduciary Net Position	(32,088)	(26,358)
Employer Net OPEB Liability	<u>\$135,806</u>	<u>\$145,085</u>
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	19.11%	15.37%

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an experience study for the period from July 1, 2012 through June 30, 2017. They are the same as the assumptions used in the June 30, 2017 funding actuarial valuation except the discount rate is calculated as a blend of the investment return on plan assets and municipal bond rate in accordance with GASB 74, and implicit subsidy benefit payments are based on the age-based costs shown in the June 30, 2017 GASB 43/45 valuation report. The net OPEB liability measured as of June 30, 2018 and 2017 have been determined by rolling forward. The results of the actuarial valuations as of June 30, 2017 and 2016, respectively. A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)
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Valuation date	June 30, 2017
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	Plan changes, assumption changes, and experience gains/losses prior to July 1, 2011 are amortized over separate decreasing 30-year amortization periods. On or after July 1, 2011, plan changes are amortized over separate decreasing 15-year periods; assumption changes are amortized over separate decreasing 25-year periods; and experience gains/losses are amortized over separate decreasing 20-year periods.
Assets valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value.
Actuarial assumptions:	
Net Investment Return	5.53%, net of investment and administrative expenses.
Average projected salary increases*	Ranges from 4.00% to 9.50% based on years of service*
Inflation rate	3.00%
Health Care Trend	Non-Medicare: 7% graded to ultimate 4.50% over 10 years Medicare: 6.50% graded to ultimate 4.50% over 8 years
HIB increases	0.00%
Mortality	<i>Pre-retirement:</i> Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Service Retirement and All Beneficiaries:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Disability Retirement:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females

* Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases

EAST BAY MUNICIPAL UTILITY DISTRICT
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin.

The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Large Cap Equity	36%	5.78%
Domestic Small Cap Equity	4%	6.45%
Developed International Equity	12%	7.03%
Emerging Markets Equity	3%	9.46%
Domestic Bonds	10%	0.99%
Non-Core Fixed Income	10%	3.46%
Real Estate	5%	4.50%
Covered Calls	20%	5.00%
Total	100%	

The municipal bond rates used to determine the blended discount rate, as discussed above, were 3.58% and 2.85%, which are based on the 20-year municipal bond rate for the Bond Buyer 20-Bond GO Index as of June 30, 2018 and June 30, 2017, respectively.

The discount rates used to measure the total OPEB liability were 5.53% and 5.12% as of June 30, 2018 and June 30, 2017, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates for the \$450/\$550 HIB Subsidy excluding the implicit subsidy that will continue to be paid on a pay-as-you-go basis. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the OPEB Plan's fiduciary net position was projected to be available to make projected future benefit payments for current plan members through June 30, 2042. Therefore, the long-term expected rate of return on OPEB Plan investments (7.25%) was applied to periods of projected benefit payments through June 30, 2042, and the 20-year municipal bond rate (3.58%) to determine the total OPEB liability as of June 30, 2018.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

Change in Net OPEB liability for fiscal year 2017-18 were as follows:

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(Asset)
	(a)	(b)	(c) = (a) - (b)
Beginning Balance	\$171,443	\$26,358	\$145,085
Changes Recognized for the Measurement Period:			-
Service Cost	5,276	-	5,276
Interest on the total OPEB liability	8,797	-	8,797
Changes in benefit terms	-	-	-
Difference between expected and actual experience	(1,711)	-	(1,711)
Changes of assumptions	(6,107)	-	(6,107)
Contributions from the employer	-	9,764	(9,764)
Contributions from the employee	-	198	(198)
Net investment income	-	3,706	(3,706)
Administrative expenses	-	(26)	26
Benefit payments, including implicit subsidies *	(9,804)	(9,804)	-
Other **	-	1,892	(1,892)
Net Changes	(3,549)	5,730	(9,279)
Ending Balance	\$167,894	\$32,088	\$135,806

* Sum of cash benefit payments (\$7,912) and estimated implicit subsidy benefit payments (\$1,892)

** The total employer contributions for estimated implicit subsidy

In accordance with GASB 75 regarding the disclosure of the sensitivity of the net OPEB liability to changes in the discount rate, the following table presents the net OPEB liability of the Plan as of June 30, 2018, calculated using the discount rate of 5.53%, as well as what the Plan’s net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.53%) or 1-percentage point higher (6.53%) than the current rate:

	1% Decrease (4.53%)	Current Discount (5.53%)	1% Increase (6.53%)
Net OPEB Liability	\$152,786	\$135,806	\$121,246

Additionally, in accordance with GASB 75 regarding disclosure of the sensitivity of the net OPEB liability to changes in the trend rate (only applied to implicit subsidy and not the \$450/\$550 cash subsidy), the following table presents the net OPEB liability of the Plan as of June 30, 2018, calculated using the trend rate of 7.00% graded down to 4.50% over 10 years for non-Medicare medical plan costs; 6.50% graded down to 4.50% over 8 years for Medicare medical plan costs.

	1% Decrease	Current Trend	1% Increase
Net OPEB Liability	\$133,262	\$135,806	\$138,661

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
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NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

Components of OPEB Expense for fiscal year 2017-18 were as follows:

	<u>Water</u>	<u>Wastewater</u>	<u>Total</u>
Contributions made after the measurement date:	(\$8,431)	(\$1,444)	(\$9,875)
Change in the current year activity			
Service Cost	4,504	772	5,276
Interest on the Total OPEB Liability	7,509	1,287	8,796
Expensed portion of current-period changes in proportion and differences between entity's contributions and proportion share of contributions	40	(40)	
Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability	(266)	(46)	(312)
Expensed portion of current-period changes of assumptions or other inputs	(950)	(163)	(1,113)
Member contributions	(169)	(29)	(198)
Projected earnings on plan investments	(1,196)	(205)	(1,401)
Expensed portion of current-period differences between actual and projected earnings on plan investments	(393)	(67)	(460)
Administrative expense	22	4	26
Other	(1,615)	(277)	(1,892)
Total current year activity	<u>7,486</u>	<u>1,236</u>	<u>8,722</u>
Total OPEB expense	<u>(\$945)</u>	<u>(\$208)</u>	<u>(\$1,153)</u>

Components of deferred outflows and resources and deferred inflows of resources related to OPEB at June 30, 2018 were as follows:

	<u>Deferred Outflows of Resources</u>		<u>Deferred Inflows of Resources</u>	
	<u>Water</u>	<u>Wastewater</u>	<u>Water</u>	<u>Wastewater</u>
Employer contributions made subsequent to the measurement date	\$8,431	\$1,444		
Change in proportion and differences between employer contributions and proportionate share of contributions	180			\$180
Differences between expected and actual experience			\$1,195	205
Changes of assumptions			4,263	731
Net excess of projected over actual earnings on OPEB Plan investments (if any)			1,574	270
Deferred Inflows of Resources	<u>\$8,611</u>	<u>\$1,444</u>	<u>\$7,032</u>	<u>\$1,386</u>

\$9,875 reported as deferred outflows of resources related to contributions subsequent to the measurement date will be recognized as a reduction of the OPEB liability in the year ended June 30, 2019. Amounts reported as deferred outflows and resources and deferred inflows of resources related to OPEB will be recognized as future OPEB expense as follows:

	<u>Water System</u>	<u>Wastewater System</u>
2019	(\$1,569)	(\$316)
2020	(1,569)	(316)
2021	(1,569)	(316)
2022	(1,569)	(316)
2023	(576)	(122)

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 8 – EMPLOYEES’ RETIREMENT PLAN (Continued)

I. Public Employees’ Pension Reform Act (PEPRA)

Assembly Bill 340 (AB 340) created the Public Employees’ Pension Reform Act (PEPRA) that implemented new benefit formulas and final compensation periods, as well as new contribution requirements for new employees hired on or after January 1, 2013, who meet the definition of new member under PEPRA.

The table below provides the details of the new provisions.

Benefit Formula	2.5% at Age 67
Final Compensation Period	Average of last 3 years
Employer Contribution Rate as a percentage of payroll	36.16% of Reportable Compensation
Member Contribution Rate as a percentage of payroll	8.84% of Reportable Compensation

The employer contribution rate listed above was in effect until June 30, 2018. In accordance with the provisions of AB 340, the member contribution rate shown above was set at 50 percent of the expected total normal cost rate for the benefits that will apply to new members on January 1, 2013. The total normal cost rate used for this calculation is 45% of payroll for new members.

NOTE 9 – RISK MANAGEMENT

The District has purchased commercial insurance for general, property, public officials’ liability and workers’ compensation. During the fiscal year ended June 30, 2018, the District paid \$1,535 for current year coverage.

The District’s liability, property, and workers’ compensation risks are insured by commercial insurance carriers, all of which are subject to the District’s self-insurance retentions, which vary by type of coverage.

Selected other coverages are:

Coverage	Policy limit	Self-insurance retention
Workers' compensation	Statutory Limit	\$5,000
All risk property (except flood)	\$200,000	500
Flood	25,000	1,500
Liability	90,000	10,000 Water/ 10,000 Wastewater
Crime	10,000	25
Boiler and Machinery	10,000	25
Pardee and Camanche Dams	25,000	25
Main Wastewater Treatment Plant	25,000	25

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 9 – RISK MANAGEMENT (Continued)

Settled claims have not exceeded the District's policy limits in any of the past five fiscal years.

Claim expenses and liabilities are recorded when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. As of June 30, 2018, the amount of these liabilities was \$51,001. This amount (which has not been discounted) has been actuarially determined and includes an estimate of incurred but not reported losses. Changes in the reported liability are as follows:

	2018	2017
Liability at beginning of year	\$47,454	\$47,777
Current year claims and changes in estimates	8,735	7,618
Payments of claims	(5,188)	(7,941)
Liability at end of year	<u>\$51,001</u>	<u>\$47,454</u>
Estimated Liability:		
Due within one year	\$9,725	\$10,096
Due in more than one year	<u>41,276</u>	<u>37,358</u>
	<u>\$51,001</u>	<u>\$47,454</u>

NOTE 10 – KNOWN ENVIRONMENTAL LIABILITIES

GASB Statement No. 49, Accounting and Financial Reporting for Pollution Remediation Obligations, provides guidance on accounting and financial reporting for pollution remediation obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities. Pollution remediation activities include: pre-cleanup activities, cleanup activities, external government oversight and enforcement, and operation and maintenance of the remedy. The following is a summary of the District's known environmental liabilities as of July 26, 2018, that may meet the requirements of GASB Statement No. 49:

- Under a NPDES permit issued by the San Francisco Regional Water Quality Control Board, discharges from the District's wet weather facilities are prohibited. In 2014, the District signed a Consent Decree on this matter that focuses on the excess wet weather flow entering the District's system and allows discharges to continue while work to reduce them is performed. The Consent Decree requires the District and its seven satellite agencies to do a range of work to reduce flows, including working with property owners to address leaks in their private sewer laterals. The Consent Decree is expected to be in place until 2036, at which time discharges will have ceased. The District's cost to meet the requirements in the Consent Decree is approximately \$5M/year.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 10 – KNOWN ENVIRONMENTAL LIABILITIES (Continued)

- In summer 2016, the Central Valley Regional Water Quality Control Board (CVRWQCB) requested that the District produce a technical report to reexamine the groundwater network at the Camanche North Shore (CANS) and Camanche South Shore (CASS) Wastewater Treatment Plants including the effectiveness of existing monitoring wells and hydraulic connections between the wastewater ponds and the aquifers. The technical report was provided in March 2017. The CVRWQCB stated in its winter 2018 response that it agreed with the CANS recommendations in the technical report and subsequently required the District to submit a work plan for new well installations and to conduct additional monitoring. In May 2018, the District submitted its response to the CVRWQCB, including the work plan for the new CANS wells. The CVRWQCB requested additional analysis for the CASS facility which is ongoing. It is possible that future analysis and communication with the CVRWQCB could mandate the District to construct wastewater treatment pond upgrades. At this preliminary planning stage, it is estimated that the cost would be approximately \$6.6M to upgrade the existing facilities or, alternatively, approximately \$7.8M to construct a joint wastewater project with Amador County.
- The Alameda County Environmental Health Agency (County) requested that the District conduct site investigations at the Adeline Maintenance Center (AMC) Shops to define the extent of petroleum hydrocarbons in soil and groundwater associated with former USTs. The District completed site investigations in accordance with an approved work plan in 2009. The results indicated that elevated concentrations of petroleum hydrocarbons remain in onsite soil and groundwater in localized areas near the former USTs. In June 2016 the County then requested that the District conduct a Sensitive Receptor Survey for the AMC Shops parcel as well as a Site Conceptual Model for the Anderson Building (located within the AMC complex parcel) and that all environmental data collected during previous investigations be posted to the State's GeoTracker website in electronic format, followed by a meeting with the County to agree upon final actions necessary to obtain regulatory closure of the site under the State Water Resource Control Board's Low Threat Closure Policy. The District has submitted the requested Sensitive Receptor Survey, Site Conceptual Model and a Site Investigation Work Plan for the Anderson Building for the AMC Shops parcel. The County met with the District in July 2018 to discuss next steps towards site closure. The County concurred with the work plans with conditions and additional sampling will be performed as requested. A final report on the work that is completed will be submitted to the County by October 11, 2018.
- On April 8, 2015, approximately 170 cubic yards of cellular concrete being used at a District construction site was accidentally released into a storm drain in Oakland, CA. The incident occurred when cellular concrete was being added to a 1,500 foot segment of an abandoned 24-inch water main line. The cellular concrete flowed through enclosed storm drain pipes and open creek channels following the release. District staff immediately initiated emergency response and an incident command structure to commence cleanup of the creek; the cleanup took approximately 4 weeks. The cleanup phase then transitioned into a long term restoration phase which is nearing completion. Enforcement negotiation is complete; the finale penalty amount was \$426. The District has been monitoring the creek annually since the spill occurred and the last round of sampling for water quality, streambed elevation, and biota was completed in May and June of 2018. In July 2018 the District requested closure on the remaining permits related to this spill since the creek has rebounded to its pre-incident condition.

**EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017
(Dollars in Thousands)**

NOTE 10 – KNOWN ENVIRONMENTAL LIABILITIES (Continued)

- The District operates many facilities throughout Northern California that have NPDES permits, waste discharge requirements, and air permits. The total estimated liability for all known violations, excluding the items detailed above, is less than \$350.

NOTE 11 - CONTINGENT LIABILITIES

The District is a defendant in a number of lawsuits which have arisen in the normal course of business including challenges over certain rates and charges. The ultimate outcome of these matters is not presently determinable. In the opinion of the District, these actions when finally adjudicated will not have a material adverse effect on the financial position of the District.

NOTE 12 – COMMITMENTS AND CONTINGENCIES

Central Valley Project

In December 1970, the District entered into a contract with the US Bureau of Reclamation for access to up to 150,000 acre feet per year of Central Valley Project (CVP) water from a diversion point on the American River. The successor contract, the Long Term Renewal Contract, was executed in April 2006 with a 40 year term. The Long Term Renewal Contract provides for delivery of up to 133,000 acre feet per year of CVP water in dry years to supplement the District's surface water supplies. Deliveries to the District are limited to a 165,000 acre foot total over any three successive dry years. In years in which the District takes delivery of CVP water, the District's allocated CVP capital cost and the District's operations and maintenance deficit balance will be paid down commensurately with the quantity of water delivered. For example, if the District had to take delivery of 80,000 acre feet in fiscal year 15, the District's CVP capital and deficit balances would each be reduced by approximately 20%. The balances must be paid off by 2030.

REQUIRED SUPPLEMENTAL INFORMATION

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EAST BAY MUNICIPAL UTILITY DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)

(1) Pension Plan

Schedule of Changes in Employer's Net Pension Liability (in thousands):

	2018	2017	2016	2015	2014
Total pension liability					
Service cost	\$41,106	\$37,828	\$36,791	\$34,987	\$34,857
Interest	144,392	138,135	131,595	127,558	120,810
Change of benefit terms					
Differences between expected and actual experience	(22,641)	5,278	(1,390)	438	(402)
Changes of assumptions		52,596		18,421	
Benefit payments, including refunds of employee contributions	(90,705)	(83,886)	(77,790)	(71,232)	(65,427)
Net change in total pension liability	72,152	149,951	89,206	110,172	89,838
Total pension liability - beginning	1,995,863	1,845,912	1,756,706	1,646,534	1,556,696
Total pension liability - ending (a)	<u>\$2,068,015</u>	<u>\$1,995,863</u>	<u>\$1,845,912</u>	<u>\$1,756,706</u>	<u>\$1,646,534</u>
Plan fiduciary net position					
Contributions - employer	\$67,096	\$65,218	\$64,177	\$61,660	\$53,795
Contributions - employee	15,820	14,741	13,260	11,963	10,427
Net investment income	197,977	13,934	59,288	216,601	136,630
Benefit payments, including refunds of employee contributions	(90,705)	(83,886)	(77,790)	(71,232)	(65,427)
Administrative expense	(1,403)	(1,289)	(1,269)	(1,233)	(1,200)
Net change in plan fiduciary net position	188,785	8,718	57,666	217,759	134,225
Plan fiduciary net position - beginning	1,391,771	1,383,053	1,325,387	1,107,628	973,403
Plan fiduciary net position - ending (b)	<u>\$1,580,556</u>	<u>\$1,391,771</u>	<u>\$1,383,053</u>	<u>\$1,325,387</u>	<u>\$1,107,628</u>
Plan's net pension liability - ending (a) - (b)	<u>\$487,459</u>	<u>\$604,092</u>	<u>\$462,859</u>	<u>\$431,319</u>	<u>\$538,906</u>

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

Unaudited

**EAST BAY MUNICIPAL UTILITY DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)**

(2) Pension Plan

Schedule of Employer's Net Pension Liability (in thousands):

	2018	2017	2016	2015	2014
Total pension liability	\$2,068,015	\$1,995,863	\$1,845,912	\$1,756,706	\$1,646,534
Plan fiduciary net position	(1,580,556)	(1,391,771)	(1,383,053)	(1,325,387)	(1,107,628)
Net pension liability	<u>\$487,459</u>	<u>\$604,092</u>	<u>\$462,859</u>	<u>\$431,319</u>	<u>\$538,906</u>
Plan fiduciary net position as a percentage of total pension liability	76.43%	69.73%	74.93%	75.45%	67.27%
Covered payroll *	\$182,032	\$174,586	\$166,886	\$159,513	\$153,707
Plan net pension liability as percentage of covered employee payroll	267.79%	346.01%	277.35%	270.40%	350.61%

* In accordance with GASB 82, the covered payroll amounts are defined as the payroll on which contributions to a pension plan are based. The covered payroll amounts for fiscal year 2014 through fiscal year 2016, were updated to adopt the provisions of GASB 82.

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

(3) Pension Plan

Schedule of Employer's Contributions (in thousands):

Year ended June 30	Actuarially determined contributions	Contributions in relation to the actuarially determined contributions	Contributions deficiency (excess)	Covered-employee payroll *	Contributions as a percentage of covered employee payroll
2008	\$37,387	\$37,387	\$0	\$152,538	24.51%
2009	39,485	39,485	0	158,193	24.96%
2010	44,031	44,031	0	161,641	27.24%
2011	50,987	50,987	0	160,336	31.80%
2012	52,156	52,156	0	158,481	32.91%
2013	53,795	53,795	0	153,707	35.00%
2014	61,660	61,660	0	159,513	38.66%
2015	64,177	64,177	0	166,886	38.46%
2016	65,218	65,218	0	174,586	37.36%
2017	67,096	67,096	0	182,032	36.86%

* Derived by dividing the contributions in relation to the actuarial determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the District. However, in accordance with GASB 82, the covered payroll amounts for the actuarial valuations for fiscal year 2013 through current are defined as the payroll on which contributions to the pension plan are based.

Unaudited

**EAST BAY MUNICIPAL UTILITY DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)**

(4) Pension Plan

Schedule of Investment Returns:

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money weighted rate of return, net of investment expense	16.46%	19.72%	4.46%	6.67%	19.42%

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

(5) Post-Employment Healthcare Plan

Schedule of Changes in Employer's Net OPEB Liability (in thousands):

	<u>2018</u>	<u>2017</u>	<u>2016</u>
Total OPEB liability			
Service cost	\$5,276	\$4,514	\$4,460
Interest	8,797	9,374	9,159
Change of benefit terms			
Difference between actual and expected experience	(1,711)	(3,286)	(309)
Change of assumptions	(6,107)	12,471	
Benefit payments - cash*		(7,685)	(7,394)
Benefit payments - estimated implicit subsidy	(9,804)	(2,164)	(2,241)
Net change in total OPEB liability	(3,549)	13,224	3,675
Total OPEB liability - beginning	171,443	158,219	154,544
Total OPEB liability - ending (a)	<u>\$167,894</u>	<u>\$171,443</u>	<u>\$158,219</u>
Plan fiduciary net position			
Employer contributions - cash	\$9,764	\$9,454	\$8,964
Employer contributions - estimated implicit subsidy		2,164	2,241
Employer contributions - total	\$9,764	\$11,618	\$11,205
Employee contributions	198	184	167
Net investment income	3,706	271	938
Benefit payments - cash*		(7,685)	(7,394)
Benefit payments - estimated implicit subsidy	(9,804)	(2,164)	(2,241)
Administrative expense	(26)	(22)	(20)
Other	1,892		
Net change in plan fiduciary net position	5,730	2,202	2,655
Plan fiduciary net position - beginning	26,358	24,156	21,501
Plan fiduciary net position - ending (b)	<u>\$32,088</u>	<u>\$26,358</u>	<u>\$24,156</u>
Plan's net OPEB liability - ending (a) - (b)	<u>\$135,806</u>	<u>\$145,085</u>	<u>\$134,063</u>

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

* Benefit Payments and Employer contributions - cash and estimated implicit subsidy report together in FY 18

Unaudited

**EAST BAY MUNICIPAL UTILITY DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)**

(6) Post-Employment Healthcare Plan

Schedule of Employer's Net OPEB Liability (in thousands):

	2018	2017	2016
Total OPEB liability	\$167,894	\$171,443	\$158,219
Plan fiduciary net position	(32,088)	(26,358)	(24,156)
Employer net OPEB liability	<u>\$135,806</u>	<u>\$145,085</u>	<u>\$134,063</u>
Plan fiduciary net position as a percentage of total OPEB liability	19.11%	15.37%	15.27%
Covered payroll	\$182,032	\$174,586	\$166,886
Plan net OPEB liability as a percentage of covered payroll	74.61%	83.10%	80.33%

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

(7) Post-Employment Healthcare Plan

Schedule of Employer's Contributions (in thousands):

Year ended June 30	Actuarially determined contributions	Contributions in relation to the actuarially determined contributions	Contributions deficiency (excess)	Covered payroll *	Contributions as a percentage of covered employee payroll
2008	\$7,216	\$7,216	\$0	\$152,538	4.73%
2009	6,318	6,318	0	158,193	3.99%
2010	7,725	7,725	0	161,641	4.78%
2011	7,494	7,494	0	160,336	4.67%
2012	7,495	7,495	0	158,481	4.73%
2013	7,772	7,772	0	153,707	5.06%
2014	8,457	8,457	0	159,513	5.30%
2015	8,964	8,964	0	166,886	5.37%
2016	9,454	9,454	0	174,586	5.42%
2017	9,764	9,764	0	182,032	5.36%

* Derived by dividing the contributions in relation to the actuarial determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the District. However, in accordance with GASB 82, the covered payroll amounts for the actuarial valuations for fiscal year 2013 through current are defined as the

Unaudited

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)

(8) Notes to Required Supplementary Information

The pension-related information presented in the required supplementary schedules was determined as part of the Pension actuarial valuation at the date indicated. Additional information as of the latest Pension actuarial valuation is as follows:

Valuation date	June 30, 2017
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	Plan changes are amortized over separate decreasing 15-year periods; assumptions changes are amortized over separate decreasing 25-year periods; experience gains/losses are amortized over separate decreasing 20-year periods.
Assets valuation method	Market value of assets less unrecognized returns in each last five years. Unrecognized return is equal to the difference between the actual market return and the of the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value.
Actuarial assumptions:	
Net Investment Return	7.25%, net of investment and administrative expenses.
Average projected salary increases*	Ranges from 4.00% to 9.50% based on years of service*
Inflation rate	3.00%
Cost-of-living adjustments	3.00% per annum
Mortality	<i>Pre-retirement:</i> Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Service Retirement and All Beneficiaries:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Disability Retirement:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females

* Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases

Unaudited.

EAST BAY MUNICIPAL UTILITY DISTRICT
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEAR ENDED JUNE 30, 2018
(Dollars in thousands)

(8) Notes to Required Supplementary Information (Continued)

The OPEB-related information presented in the required supplementary schedules was determined as part of the OPEB actuarial valuation at the date indicated. Additional information as of the latest OPEB actuarial valuation is as follows:

Valuation date	June 30, 2017
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	Plan changes, assumption changes, and experience gains/losses prior to July 1, 2011 are amortized over separate decreasing 30-year amortization periods. On or after July 1, 2011, plan changes are amortized over separate decreasing 15-year periods; assumption changes are amortized over separate decreasing 25-year periods; and experience gains/losses are amortized over separate decreasing 20-year periods.
Assets valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five year period, further adjusted, if necessary, to be within 30% of the market value.
Actuarial assumptions:	
Net Investment Return	5.53%, net of investment and administrative expenses.
Average projected salary increases*	Ranges from 4.00% to 9.50% based on years of service*
Inflation rate	3.00%
Health Care Trend	Non-Medicare: 7% graded to ultimate 4.50% over 10 years Medicare: 6.50% graded to ultimate 4.50% over 8 years
HIB increases	0.00%
Mortality	<i>Pre-retirement:</i> Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Service Retirement and All Beneficiaries:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward two years for males and one year for females <i>After Disability Retirement:</i> Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional improvement scale MP-2015, set forward nine years for males and females

* Includes inflation of 3.00% plus across the board salary increases of 0.50% plus merit and promotional increases

Unaudited.

SUPPLEMENTAL INFORMATION

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EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEE RETIREMENT SYSTEM TRUST FUND
COMBINING BALANCE SHEET

June 30, 2018

(With summarized comparative financial information as of June 30, 2017)

(DOLLARS IN THOUSANDS)

	2018			2017
	Pension plan	Post-employment	Total	Total
	benefits	healthcare		
	benefits	benefits	Total	Total
Assets:				
Cash and cash equivalents, at fair value	\$40,348	\$848	\$41,196	\$48,988
Invested securities lending collateral	46,134	970	47,104	108,858
Prepaid expenses		536	536	518
Receivables:				
Brokers, securities sold	2,374	50	2,424	4,449
Employer	1,190	170	1,360	1,043
Plan members	288		288	220
Interest and dividends	2,618	55	2,673	2,341
Total receivables	6,470	275	6,745	8,053
Investments, at fair value:				
U.S. government obligations	105,251	2,213	107,464	66,948
Municipal bonds	2,413	51	2,464	2,135
Domestic corporate bonds	297,256	6,250	303,506	166,149
International bonds	17,899	376	18,275	16,628
Domestic stocks	762,454	16,030	778,484	1,005,785
International stocks	409,957	8,619	418,576	222,051
Real estate	87,784	1,845	89,629	84,282
Total investments	1,683,014	35,384	1,718,398	1,563,978
Total assets	1,775,966	38,013	1,813,979	1,730,395
Liabilities:				
Accounts payable and accrued expenses	2,122	45	2,167	2,061
Payables to brokers, securities purchased	11,232	236	11,468	6,832
Securities lending collateral	46,134	970	47,104	108,858
Total liabilities	59,488	1,251	60,739	117,751
Net position held in trust for pension benefits and post-employment healthcare benefits.	\$1,716,478	\$36,762	\$1,753,240	\$1,612,644

EAST BAY MUNICIPAL UTILITY DISTRICT
EMPLOYEES' RETIREMENT SYSTEM TRUST FUND
COMBINING STATEMENT OF CHANGES IN NET POSITION

For the Year Ended June 30, 2018

(With summarized comparative financial information for the year ended June 30, 2017)

(DOLLARS IN THOUSANDS)

	2018			2017
	Pension plan	Post-employment healthcare	Total	Total
	benefits	benefits		
Additions:				
Contributions:				
Employer	\$71,221	\$9,875	\$81,096	\$76,860
Plan members	16,860	219	17,079	16,018
Total contributions	88,081	10,094	98,175	92,878
Investment income:				
Net (depreciation)				
in fair value of investments:				
Traded securities	120,700	2,396	123,096	176,883
Real estate	1,365	27	1,392	1,329
Interest	7,826	155	7,981	6,731
Dividends	21,786	432	22,218	21,014
Real estate operating (loss), net	1,143	23	1,166	1,120
	152,820	3,033	155,853	207,077
Less:				
Investment expense	(3,958)	(79)	(4,037)	(4,607)
Borrowers' rebates and other				
agent fees on securities				
lending transactions	(1,438)	(29)	(1,467)	(787)
Net investment (loss)	147,424	2,925	150,349	201,683
Total additions, net	235,505	13,019	248,524	294,561
Deductions:				
Benefits paid	97,669	8,315	105,984	98,152
Refund of contributions	393		393	465
Administrative expenses	1,521	30	1,551	1,429
Total deductions	99,583	8,345	107,928	100,046
Change in net position	135,922	4,674	140,596	194,515
Net position:				
Beginning of year	1,580,556	32,088	1,612,644	1,418,129
End of year	<u>\$1,716,478</u>	<u>\$36,762</u>	<u>\$1,753,240</u>	<u>\$1,612,644</u>

**INDEPENDENT AUDITOR'S 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***

Board of Directors
East Bay Municipal Utility District
Oakland, California

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 basic financial statements of the East Bay Municipal Utility District, as of and for the year ended June 30, 2018 and have issued our report thereon dated August 27, 2018. Our report included an emphasis of a matter paragraph disclosing the implementation of a new accounting principle.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District'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 District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District'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 District'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 District'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 that are required to be reported under *Government Auditing Standards*.

We have also issued a separate Memorandum on Internal Control dated August 27, 2018 which is an integral part of our audit and should be read in conjunction with this report.

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 District'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 District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "Maze + Associates". The signature is written in a cursive, flowing style.

Pleasant Hill, California
August 27, 2018

APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

The following is a summary of certain provisions of the Indenture. This summary is not to be considered a full statement of the terms of the Indenture and accordingly is qualified by reference thereto and is subject to the full text thereof. Capitalized terms not defined in this summary or elsewhere in the Official Statement have the respective meanings set forth in the Indenture.

There are no senior Water Bonds outstanding, and the District has covenanted in the Indenture not to issue any senior Water Bonds in the future. Therefore, all references hereto to “Water Bonds” may be disregarded.

Certain Definitions

“Accreted Value” means, with respect to any Capital Appreciation Indebtedness, the principal amount thereof plus the interest accrued thereon, compounded at the interest rate thereon on each date as specified in the Indenture.

“Act” means the Municipal Utility District Act, constituting Division 6 of the Public Utilities Code of the State of California, and all laws of the State of California amendatory thereof or supplemental thereto, including the Revenue Bond Law of 1941, as made applicable by Article 6a of Chapter 6 of said Division 6, and Article 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the Government Code of the State of California.

“Annual Debt Service” (I) prior to the Effective Date, means, for any Fiscal Year the aggregate amount of principal and interest on all Water Bonds, Bonds and Parity Debt becoming due and payable during such Fiscal Year calculated using the principles and assumptions set forth under the definition of Maximum Annual Debt Service; and

(II) on and after the Effective Date, means, for any Fiscal Year, the aggregate amount of principal and interest on all Water Bonds, Bonds and Parity Debt becoming due and payable during such Fiscal Year calculated using the principles and assumptions set forth under the definition of Debt Service.

“Assumed Debt Service” (I) prior to the Effective Date, means, for any Fiscal Year the aggregate amount of principal and interest which would be payable on all Water Bonds, Bonds and Parity Debt if each Excluded Principal Payment were amortized for a period specified by the District (but no longer than thirty (30) years from the date of the issuance of the Water Bonds, Bonds or Parity Debt to which such Excluded Principal Payment relates) on a substantially level debt service basis, calculated based on a fixed interest rate equal to the rate at which the District could borrow for such period, as certified by a certificate of a financial advisor or investment banker delivered to the Trustee, who may rely conclusively on such certificate, within thirty (30) days of the date of calculation; and

(II) on and after the Effective Date, means, for any Fiscal Year, the aggregate amount of principal and interest which would be payable on all Water Bonds, Bonds and Parity Debt if each Excluded Principal Payment were amortized for a period specified by the District (but no longer than thirty (30) years from the date of the issuance of the Water Bonds, Bonds or Parity Debt to which such Excluded Principal Payment relates) on a substantially level debt service basis or other amortization basis provided by the District, calculated based on a fixed interest rate equal to the rate at which the District could borrow for such period, as certified by a certificate of a financial advisor or investment banker delivered

to the Trustee, who may rely conclusively on such certificate, within thirty (30) days of the date of calculation.

“Bond Obligation” means, as of any given date of calculation, (1) with respect to any Outstanding Bond or Water Bond which is Current Interest Indebtedness, the principal amount thereof, and (2) with respect to any Outstanding Bond or Water Bond which is Capital Appreciation Indebtedness, the Accreted Value thereof.

“Bonds” means the bonds authorized by, and at any time Outstanding pursuant to, the Indenture.

“Business Day” means any day other than (1) a Saturday, Sunday, or a day on which banking institutions in the State of California or the State of New York are authorized or obligated by law or executive order to be closed, and (2) for purposes of payments and other actions related to Bonds secured by a letter of credit, a day upon which commercial banks in the city in which is located the office of the issuing bank at which demands for payment under the letter of credit are to be presented are authorized or obligated by law or executive order to be closed.

“Capital Appreciation Indebtedness” means Water Bonds, Bonds and Parity Debt on which interest is compounded and paid less frequently than annually.

“Code” means the Internal Revenue Code of 1986, and the regulations applicable thereto or issued thereunder, as amended from time to time.

“Current Interest Indebtedness” means the Water Bonds, Bonds and Parity Debt on which interest is paid at least annually.

“Debt Service” (I) prior to the Effective Date, means, the amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt provided, however, that for the purposes of computing Debt Service:

(a) Excluded Principal Payments shall be excluded from such calculation and Assumed Debt Service shall be included in such calculation;

(b) if the Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness, the interest rate thereon for periods when the actual interest rate cannot yet be determined shall be assumed to be twelve percent (12%) per annum;

(c) principal and interest payments on Water Bonds, Bonds and Parity Debt shall be excluded to the extent such payments are to be paid from amounts on deposit with the Trustee or another fiduciary in escrow specifically therefor and to the extent that such interest payments are to be paid from the proceeds of Water Bonds, Bonds or Parity Debt held by the Trustee or another fiduciary as capitalized interest;

(d) in determining the principal amount, payment shall (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including any Mandatory Sinking Account Payments or any scheduled redemption or payment of Water Bonds, Bonds or Parity Debt on the basis of Accreted Value, and for such purpose, the redemption payment or payment of Accreted Value shall be deemed a principal payment and interest that is compounded and paid as Accreted Value shall be deemed due on the scheduled redemption or payment date of such Capital Appreciation Indebtedness;

(e) if any interest rate swap agreement is in effect with respect to, and is payable on a parity with, the Water Bonds, Bonds or Parity Debt to which it relates, no amounts payable under such interest rate swap agreement shall be included in the calculation of Debt Service unless the sum of (i) interest payable on such Water Bonds, Bonds or Parity Debt, plus (ii) amounts payable by the District under such interest rate swap agreement, less (iii) amounts receivable by the District under such interest rate swap agreement are greater than the interest payable on the Water Bonds, Bonds or Parity Debt to which it relates, then, in such instance, the amount of such payments to be made that exceed the interest to be paid on the Water Bonds, Bonds or Parity Debt shall be included in such calculation. For such purposes, the variable amount under any such interest rate swap agreement shall be assumed to be equal to twelve percent (12%) per annum; and

(f) if any Water Bonds, Bonds or Parity Debt include an option or an obligation to tender all or a portion of such Water Bonds, Bonds or Parity Debt to the District, the Trustee or another fiduciary or agent and require that such Water Bonds, Bonds or Parity Debt or portion thereof be purchased if properly presented, then for purposes of determining the amounts of principal and interest due, the options or obligations to tender shall be treated as a principal maturity occurring on the first date on which holders or owners thereof may or are required to tender, except that any such option or obligation to tender shall be ignored and not treated as a principal maturity, if (1) such Water Bonds, Bonds or Parity Debt are in one of the two highest Rating Categories by Moody's and by Standard & Poor's or such Water Bonds, Bonds or Parity Debt are rated in the highest short-term, note or commercial paper Rating Categories by Moody's and by Standard & Poor's and (2) funds for the purchase price are to be provided by a letter of credit or standby bond purchase agreement and the obligation of the District with respect to the provider of such letter of credit or standby bond purchase agreement, other than its obligations on such Water Bonds, Bonds or Parity Debt, shall be subordinated to the obligation of the District on the Bonds and Parity Debt or, if not subordinate, shall be incurred (assuming such immediate tender) under the conditions and meeting the tests for the issuance of Parity Debt set forth in the Indenture; and

(II) on and after the Effective Date, means, the amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt provided, however, for the purpose of computing Debt Service:

(a) Excluded Principal Payments shall be excluded from such calculation and Assumed Debt Service shall be included in such calculation;

(b) if the Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness, the interest rate thereon for periods when the actual interest rate cannot yet be determined shall be assumed to be equal to the average of the SIFMA Municipal Swap Index for the five (5) years preceding such date of calculation (provided, however, that if such index is no longer published, the interest rate on such Water Bonds, Bonds or Parity Debt shall be calculated based upon such similar index as the District shall designate in writing to the Trustee) (the "Assumed SIFMA-based Rate");

(c) principal and interest payments on Water Bonds, Bonds and Parity Debt shall be excluded to the extent such payments are to be paid from amounts on deposit with the Trustee or another fiduciary in escrow or trust specifically therefor and to the extent that such interest payments are to be paid from the proceeds of Water Bonds, Bonds or Parity Debt held by the Trustee or another fiduciary as capitalized interest;

(d) in determining the principal amount, payment shall (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including any Mandatory Sinking Account Payments or any scheduled redemption or payment of Water Bonds, Bonds or Parity Debt on the basis of Accreted Value, and for such purpose, the redemption payment or payment of Accreted Value shall be deemed a principal payment and interest that is compounded and paid as Accreted Value shall be deemed due on the scheduled redemption or payment date of such Capital Appreciation Indebtedness;

(e) if any interest rate swap agreement is in effect with respect to, and the regularly scheduled payments thereunder are payable on a parity with, the Water Bonds, Bonds or Parity Debt to which it relates, interest deemed to be payable on any such Water Bonds, Bonds or Parity Debt with respect to which an interest rate swap agreement is in effect shall be based on the net economic effect expected by the District to be produced by the terms of such Water Bonds, Bonds or Parity Debt and such interest rate swap agreement, including but not limited to the effects that (i) such Water Bonds, Bonds or Parity Debt would, but for such interest rate swap agreement, be treated as Variable Rate Indebtedness instead shall be treated as Water Bonds, Bonds or Parity Debt bearing interest at a fixed interest rate, and (ii) such Water Bonds, Bonds or Parity Debt would, but for such interest rate swap agreement, be treated as Water Bonds, Bonds or Parity Debt bearing interest at a fixed interest rate instead shall be treated as Variable Rate Indebtedness; and accordingly, the amount of interest deemed to be payable on any Water Bonds, Bonds or Parity Debt with respect to which an interest rate swap agreement is in force shall be an amount equal to the amount of interest that would be payable at the rate or rates stated in such Water Bonds, Bonds or Parity Debt plus the amounts payable by the District under such interest rate swap agreement, minus the amounts receivable by the District under such interest rate swap agreement, and for the purpose of calculating as nearly as practicable such amounts, the following assumptions shall be made:

(1) if an interest rate swap agreement has been entered into by the District with respect to Water Bonds, Bonds or Parity Debt providing for the payment of a net variable interest rate under such interest rate swap agreement with respect to such Water Bonds, Bonds or Parity Debt by the District, the interest rate on such Water Bonds, Bonds or Parity Debt for future periods when the actual interest rate cannot yet be determined shall be assumed (but only during the period the interest rate swap agreement is in effect) to be equal to the sum of (A) the fixed rate or rates stated in such Water Bonds, Bonds or Parity Debt minus (B) the fixed rate paid by the counterparty of such interest rate swap agreement to the District, plus (C) the lesser of (x) the interest rate cap, if any, provided by a counterparty with respect to such interest rate swap agreement (but only during the period that such interest rate cap is in effect) and (y) the applicable variable interest rate calculated in accordance with paragraph (b) above; and

(2) if an interest rate swap agreement has been entered into by the District with respect to Water Bonds, Bonds or Parity Debt providing for the payment of a fixed rate of interest to maturity or for a specific term under such interest rate swap agreement with respect to such Water Bonds, Bonds or Parity Debt by the District, the interest on such Water Bonds, Bonds or Parity Debt shall be included in the calculation of payments (but only during the period the interest rate swap agreement is in effect) by including for each period of calculation an amount equal to the amount of interest payable at the fixed interest rate pursuant to such interest rate swap agreement.

Notwithstanding any other paragraph of this definition of Debt Service, except as set forth in this paragraph (e), no amounts payable under any interest rate swap agreement (including termination payments) shall be included in the calculation of Debt Service;

(f) if any Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness subject to tender for purchase and funds for the purchase price may be provided by a letter of credit, line of credit, revolving credit agreement, standby bond purchase agreement or other liquidity facility which, if drawn upon, could create a repayment obligation which has a lien on Subordinated Water Revenues on parity with the lien of the Water Bonds, Bonds or Parity Debt, then for purposes of determining the amounts of principal due in any Fiscal Year on such Water Bonds, Bonds or Parity Debt, (i) the options or obligations of the owners of such Water Bonds, Bonds or Parity Debt to tender the same for purchase or payment prior to the stated maturity or maturities shall be ignored and not treated as a principal maturity; and (ii) any repayment obligations of the District to the provider of such letter of credit, line of credit, revolving credit agreement, standby bond purchase agreement or other liquidity facility, other than its obligations on such Water Bonds, Bonds or Parity Debt, shall be treated as Excluded Principal Payments; and

(g) if interest on any Water Bonds, Bonds or Parity Debt is reasonably anticipated to be reimbursed to the District by the United States of America pursuant to Section 54AA of the Code, or any future similar program, then interest payments with respect to such Water Bonds, Bonds or Parity Debt shall be reduced by the amount of such interest reasonably anticipated to be paid or reimbursed by the United States of America.

“Effective Date” means the earlier to occur of: (i) the first date upon which all of the Outstanding Series 2001 Bonds, Series 2002 Bonds, Series 2003 Bonds, Series 2005A Bonds, Series 2007A Bonds, Series 2007B Bonds, Series 2008A Bonds, Series 2008B Bonds and Series 2009A Bonds have been paid or discharged in accordance with their terms and shall no longer be Outstanding for purposes of the Indenture and all obligations of the District under any interest rate swap agreements and any standby bond purchase agreements or other liquidity facilities relating thereto shall have been discharged and satisfied, or (ii) the first date upon which the District has filed with the Trustee the written consents to the amendments to the Indenture set forth in the Sixteenth Supplemental Indenture of (a) the Owners of a majority in aggregate principal amount of Bond Obligation then Outstanding and (b) the providers of any interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements relating to such Bond Obligation then Outstanding to the extent the consent thereof shall be required by the terms of such interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements.

“Excluded Principal Payments” means each payment of principal (or the principal component of lease or installment purchase payments) of Water Bonds, Bonds or Parity Debt which the District determines on a date not later than the date of issuance thereof that the District intends to pay with moneys which are not Water Revenues or Subordinated Water Revenues but from the proceeds of future debt obligations of the District and the Trustee may rely conclusively on such determination of the District.

“Fiscal Year” means the period beginning on July 1 of each year and ending on the next succeeding June 30, or any other twelve-month period selected and designated as the official fiscal year period of the District, which designation shall be provided to the Trustee in a certificate of the District.

“Indenture” means the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the Trustee and the District, as originally executed or as it may from time

to time be supplemented or amended by any Supplemental Indenture delivered pursuant to the provisions thereof.

“Investment Securities” means the following:

(i) any bonds or other obligations which as to principal and interest constitute direct obligations of, or are unconditionally guaranteed by, the United States of America, including obligations of any of the Federal agencies and Federally sponsored entities set forth in clause (iii) below to the extent unconditionally guaranteed by the United States of America;

(ii) any certificates, receipts, securities or other obligations evidencing ownership of, or the right to receive, a specified portion of one or more interest payments or principal payments, or any combination thereof, to be made on any bond, note, or other obligation described above in clause (i);

(iii) obligations of the Federal National Mortgage Association, the Government National Mortgage Association, Federal Home Loan Banks and Federal Home Loan Mortgage Corporation;

(iv) obligations of any state, territory or commonwealth of the United States of America or any political subdivision thereof or any agency or department of the foregoing; provided that at the time of their purchase such obligations are rated not lower than their respective ratings on the Bonds by Moody’s (if Moody’s is then rating the Bonds) and Standard & Poor’s (if Standard & Poor’s is then rating the Bonds);

(v) any bonds or other obligations of any state of the United States of America or any political subdivision thereof (a) which are not callable prior to maturity or as to which irrevocable instructions have been given to the trustee of such bonds or their obligations by the obligor to give due notice of redemption and to call such bonds for redemption on the date or dates specified in such instructions, (b) which are secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or bonds or other obligations of the character described above in clause (i), (ii) or (iii) which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the interest payment dates and the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, (c) as to which the principal of and interest on the bonds and obligations of the character described above in clause (i), (ii) or (iii) which have been deposited in such fund along with any cash on deposit in such fund are sufficient to pay the principal of and interest and redemption premium, if any, on the bonds or other obligations described in this clause (v) on the interest payment dates and the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (a) of this clause (v), as appropriate, and (d) which have been rated not lower than their respective ratings on the Bonds by Moody’s (if Moody’s is then rating the Bonds) and Standard & Poor’s (if Standard & Poor’s is then rating the Bonds);

(vi) bonds, notes, debentures or other evidences of indebtedness issued or guaranteed by any corporation which are, at the time of purchase, rated by Moody’s (if Moody’s is then rating the Bonds) and Standard & Poor’s (if Standard & Poor’s is then rating the Bonds) in their respective highest short-term Rating Categories, or, if the term of such indebtedness is longer than three (3) years, rated not lower than their respective ratings on the Bonds by Moody’s (if Moody’s is then rating the Bonds) and Standard & Poor’s (if Standard & Poor’s is then rating the Bonds);

(vii) demand or time deposits or certificates of deposit, whether negotiable or nonnegotiable, issued by any bank or trust company organized under the laws of any state of the United States of America or any national banking association (including the Trustee), provided that such certificates of deposit shall be purchased directly from such a bank, trust company or national banking association and shall be either (1) continuously and fully insured by the Federal Deposit Insurance Corporation, or (2) continuously and fully secured by such securities and obligations as are described above in clauses (i) through (iv), inclusive, which shall have a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such certificates of deposit and shall be lodged with the Trustee, as custodian, by the bank, trust company or national banking association issuing such certificates of deposit, and the bank, trust company or national banking association issuing each such certificate of deposit required to be so secured shall furnish the Trustee with an undertaking satisfactory to it that the aggregate market value of all such obligations securing each such certificate of deposit will at all times be an amount equal to the principal amount of each such certificate of deposit and the Trustee shall be entitled to rely on each such undertaking;

(viii) taxable commercial paper or tax-exempt commercial paper rated in their respective highest Rating Categories by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds);

(ix) variable rate obligations required to be redeemed or purchased by the obligor or its agent or designee upon demand of the holder thereof secured as to such redemption or purchase requirement by a liquidity agreement with a corporation and as to the payment of interest and principal either upon maturity or redemption (other than upon demand by the holder thereof) thereof by an unconditional credit facility of a corporation, provided that the variable rate obligations themselves are rated in their respective highest Rating Categories for its short-term rating, if any, and not lower than their respective ratings on the Bonds for its long-term rating, if any, by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds), and that the corporations providing the liquidity agreement and credit facility have, at the date of acquisition of the variable rate obligation by the Trustee, an outstanding issue of unsecured, uninsured and unguaranteed debt obligations rated not lower than their respective ratings on the Bonds by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds);

(x) any repurchase agreement with any bank or trust company organized under the laws of any state of the United States or any national banking association (including the Trustee) having a minimum permanent capital of one hundred million dollars (\$100,000,000) and with short-term debt rated by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds) in their respective four highest short-term rating categories or government bond dealer reporting to, trading with, and recognized as a primary dealer by the Federal Reserve Bank of New York, which agreement is secured by any one or more of the securities and obligations described in clauses (i), (ii) or (iii) above, which shall have a market value (exclusive of accrued interest and valued at least monthly) at least equal to the principal amount of such investment and shall be lodged with the Trustee or other fiduciary, as custodian for the Trustee, by the bank, trust company, national banking association or bond dealer executing such repurchase agreement, and the entity executing each such repurchase agreement required to be so secured shall furnish the Trustee with an undertaking satisfactory to it that the aggregate market value of all such obligations securing each such repurchase agreement (as valued at least monthly) will be an amount equal to the principal amount of each such repurchase agreement and the Trustee shall be entitled to rely on each such undertaking;

(xi) any cash sweep or similar account arrangement of or available to the Trustee, the investments of which are limited to investments described in clauses (i), (ii), (iii), (iv) and (x) of this definition of Investment Securities and any money market fund, the entire investments of which are limited to investments described in clauses (i), (ii), (iii), (iv) and (x) of this definition of Investment Securities and which money market fund is rated in their respective highest Rating Categories by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds); provided that as used in this clause (xi) and clause (xii) investments will be deemed to satisfy the requirements of clause (x) if they meet the requirements set forth in clause (x) ending with the words "clauses (i), (ii) or (iii) above" and without regard to the remainder of such clause (x);

(xii) a guaranteed investment contract with a financial institution or insurance company which has at the date of execution thereof an outstanding issue of unsecured, uninsured and unguaranteed debt obligations or a claims paying ability rated not lower than their respective ratings on the Bonds by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds);

(xiii) shares of beneficial interest in diversified management companies investing exclusively in securities and obligations described in clauses (i) through (xii) of this definition of Investment Securities and which companies are rated in their respective highest Rating Categories by Moody's (if Moody's is then rating the Bonds) and Standard & Poor's (if Standard & Poor's is then rating the Bonds) or have an investment advisor registered with the Securities and Exchange Commission with not less than five years' experience investing in such securities and obligations and with assets under management in excess of \$500,000,000; and

(xiv) any investment approved by the Board for which confirmation is received from each rating agency then rating any of the Bonds that such investment will not adversely affect such agency's rating on such Bonds.

"Mandatory Sinking Account Payment" means the amount required to be deposited by the District in a sinking account for the payment of term Bonds.

"Maximum Annual Debt Service" (I) prior to the Effective Date, means, the greatest amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt in the Fiscal Year in which the calculation is made or any subsequent Fiscal Year; provided, however, that for the purposes of computing Maximum Annual Debt Service:

(a) Excluded Principal Payments shall be excluded from such calculation and Assumed Debt Service shall be included in such calculation;

(b) if the Water Bonds, Bonds or Parity Debt are Variable Rate Indebtedness, the interest rate thereon for periods when the actual interest rate cannot yet be determined shall be assumed to be twelve percent (12%) per annum;

(c) principal and interest payments on Water Bonds, Bonds and Parity Debt shall be excluded to the extent such payments are to be paid from amounts on deposit with the Trustee or another fiduciary in escrow specifically therefor and to the extent that such interest payments are to be paid from the proceeds of Water Bonds, Bonds or Parity Debt held by the Trustee or another fiduciary as capitalized interest;

(d) in determining the principal amount due in each Fiscal Year, payment shall (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including any Mandatory Sinking Account Payments or any scheduled redemption or payment of Water Bonds, Bonds or Parity Debt on the basis of Accreted Value, and for such purpose, the redemption payment or payment of Accreted Value shall be deemed a principal payment and interest that is compounded and paid as Accreted Value shall be deemed due on the scheduled redemption or payment date of such Capital Appreciation Indebtedness;

(e) if any interest rate swap agreement is in effect with respect to, and is payable on a parity with, the Water Bonds, Bonds or Parity Debt to which it relates, no amounts payable under such interest rate swap agreement shall be included in the calculation of Maximum Annual Debt Service unless the sum of (i) interest payable on such Water Bonds, Bonds or Parity Debt, plus (ii) amounts payable by the District under such interest rate swap agreement, less (iii) amounts receivable by the District under such interest rate swap agreement are greater than the interest payable on the Water Bonds, Bonds or Parity Debt to which it relates, then, in such instance, the amount of such payments to be made that exceed the interest to be paid on the Water Bonds, Bonds or Parity Debt shall be included in such calculation. For such purposes, the variable amount under any such interest rate swap agreement shall be assumed to be equal to twelve percent (12%) per annum; and

(f) if any Water Bonds, Bonds or Parity Debt include an option or an obligation to tender all or a portion of such Water Bonds, Bonds or Parity Debt to the District, the Trustee or another fiduciary or agent and require that such Water Bonds, Bonds or Parity Debt or portion thereof be purchased if properly presented, then for purposes of determining the amounts of principal and interest due in any Fiscal Year, the options or obligations to tender shall be treated as a principal maturity occurring on the first date on which holders or owners thereof may or are required to tender, except that any such option or obligation to tender shall be ignored and not treated as a principal maturity, if (1) such Water Bonds, Bonds or Parity Debt are rated not lower than their respective ratings on the Bonds by Moody's (if Moody's is then rating the Bonds) and by Standard & Poor's (if Standard and Poor's is then rating the Bonds) or such Water Bonds, Bonds or Parity Debt are rated in the highest short-term note or commercial paper Rating Categories by Moody's (if Moody's is then rating the Bonds) and by Standard & Poor's (if Standard and Poor's is then rating the Bonds) and (2) funds for the purchase price are to be provided by a letter of credit or standby bond purchase agreement and the obligation of the District with respect to the provider of such letter of credit or standby bond purchase agreement, other than its obligations on such Water Bonds, Bonds or Parity Debt, shall be subordinated to the obligation of the District on the Bonds and Parity Debt or, if not subordinate, shall be incurred (assuming such immediate tender) under the conditions and meeting the tests for the issuance of Parity Debt set forth in the Indenture; and

(II) on and after the Effective Date, means, the greatest amount of principal and interest becoming due and payable on all Water Bonds, Bonds and Parity Debt in the Fiscal Year in which the calculation is made or any subsequent Fiscal Year calculated using the principles and assumptions set forth under the definition of Debt Service.

“Moody’s” means Moody’s Investors Service, a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, and its successors and assigns, except that if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, then the term “Moody’s” shall be deemed to refer to any other nationally recognized securities rating agency selected by the District and not objected to by the Trustee.

“Opinion of Bond Counsel” means a written opinion of a law firm of national standing in the field of public finance selected by the District and not objected to by the Trustee.

“Outstanding,” when used at any particular time with reference to Bonds, means (subject to the provisions relating to disqualified bonds) all Bonds theretofore, or thereupon being, authenticated and delivered by the Trustee under the Indenture except (1) Bonds theretofore cancelled by the Trustee or surrendered to the Trustee for cancellation; (2) Bonds with respect to which all liability of the District shall have been discharged under the Indenture; and (3) Bonds for the transfer or exchange of or in lieu of or in substitution for which other Bonds shall have been authenticated and delivered by the Trustee pursuant to the Indenture.

“Owner” or “Bondholder” or “Bondowner,” whenever used with respect to a Bond, means the person in whose name such Bond is registered.

“Parity Debt” means any indebtedness, installment sale obligation, lease obligation or other obligation of the District for borrowed money or interest rate swap agreement having an equal lien and charge upon the Subordinated Water Revenues and therefore payable on a parity with the Bonds (whether or not any Bonds are Outstanding).

“Person” means a corporation, firm, association, partnership, trust, or other legal entity or group of entities, including a governmental entity or any agency or political subdivision thereof.

“Rating Category” means (i) with respect to any long-term rating category, all ratings designated by a particular letter or combination of letters, without regard to any numerical modifier, plus or minus sign or other modifier and (ii) with respect to any short-term or commercial paper rating category, all ratings designated by a particular letter or combination of letters and taking into account any numerical modifier, but not any plus or minus sign or other modifier.

“Redemption Price” means with respect to any Bond (or portion thereof) the principal amount of such Bond (or portion thereof) plus the applicable premium, if any, payable upon redemption thereof pursuant to the provisions of such Bond and the Indenture.

“Revenue Fund” means the fund held in trust by the District to which the Subordinated Water Revenues are required to be deposited.

“Series” whenever used with respect to Bonds, means all of the Bonds designated as being of the same series, authenticated and delivered in a simultaneous transaction, regardless of variations in maturity, interest rate, redemption and other provisions, and any Bonds thereafter authenticated and delivered upon transfer or exchange or in lieu of or in substitution for (but not to refund) such Bonds as provided in the Indenture.

“SIFMA Municipal Swap Index” means, on any date, a rate determined on the basis of the seven-day high grade market index of tax-exempt variable rate demand obligations, as produced by Municipal Market Data and published or made available by the Securities Industry & Financial Markets Association (formerly the Bond Market Association) (“SIFMA”) or by any Person acting in cooperation with or under the sponsorship of SIFMA and effective from such date.

“Standard & Poor’s” means Standard & Poor’s Corporation, a corporation duly organized and existing under and by virtue of the laws of the State of New York, and its successors and assigns, except that if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a

securities rating agency, then the term “Standard & Poor’s” shall be deemed to refer to any other nationally recognized securities rating agency selected by the District and not objected to by the Trustee.

“Subordinated Water Revenues” for any fiscal period means the sum of (a) the Water Revenues for such fiscal period plus (b) the amounts, if any, withdrawn by the District from the Rate Stabilization Fund created in the Water Bond Resolution for treatment as Water Revenues for such fiscal period, less the sum of (c) all Water Operation and Maintenance Costs for such fiscal period, (d) the amounts, if any, withdrawn by the District from Water Revenues for such fiscal period for deposit in such Rate Stabilization Fund, and (e) all amounts required to be paid under the Water Bond Resolution for principal, interest, reserve fund and any other debt service requirements on the Water Bonds as the same become due and payable.

“Variable Rate Indebtedness” means any indebtedness the interest rate on which is not fixed at the time of incurrence of such indebtedness, and has not at some subsequent date been fixed, at a single numerical rate for the entire term of the indebtedness.

“Water Bond Resolution” means Resolution No. 30050 of the District, adopted on January 26, 1982, as amended and supplemented from time to time. All obligations of the District under the Water Bond Resolution have ceased and been discharged; provided, however, that the Rate Stabilization Fund created thereunder shall continue.

“Water Bonds” means all bonds and other obligations of the District issued pursuant to the Water Bond Resolution.

“Water Operation and Maintenance Costs” means the reasonable and necessary costs of maintaining and operating the Water System, calculated on sound accounting principles, including (among other things) the reasonable expenses of management, repair and other expenses necessary to maintain and preserve the Water System in good repair and working order, and reasonable amounts for administration, overhead, insurance, taxes and other similar costs, but excluding in all cases depreciation and obsolescence charges or reserves therefor and amortization of intangibles or other bookkeeping entries of a similar nature, and excluding all costs paid from the proceeds of taxes received by the District.

“Water Revenues” (I) prior to the Effective Date, means, all charges received for, and all other income and receipts derived by the District from, the operation of the Water System, or arising from the Water System, together with income from the investment of any moneys in any fund or account established under the Water Bond Resolution or the Indenture; and

(II) from and after the Effective Date, means, all charges received for, and all other income and receipts derived by the District from, the operation of the Water System, or arising from the Water System, together with income from the investment of any moneys in any fund or account established under the Water Bond Resolution or the Indenture; provided, however, there shall be excluded therefrom any amounts reimbursed to the District by the United States of America pursuant to Section 54AA of the Code, or any future similar program.

“Water System” means the entire water system of the District and all of the facilities thereof, including all facilities for the storage, transmission or distribution of water or the generation or transmission of hydroelectric power, together with all additions, betterments, extensions and improvements to said system or any part thereof. The term “Water System” does not include the sewage disposal system or facilities of Special District No. 1 of the District (including any power generation facilities constituting a part of said system).

Pledge of Revenues

The Bonds are revenue obligations of the District and are payable as to both principal and interest, and any premium upon redemption thereof, exclusively from the Subordinated Water Revenues and other amounts held by the Trustee (except for amounts held in the Rebate Fund). The Subordinated Water Revenues are pledged to the payment of Bonds and Parity Debt without priority or distinction of one over the other. Said pledge constitutes a first lien on the Subordinated Water Revenues and such other amounts referred to in this paragraph.

Allocation of Subordinated Water Revenues

The District is to transfer the moneys in the Revenue Fund, into the following respective funds, in the following amounts, in the following order of priority, the requirements of each such fund (including the making up of any deficiencies in any such fund resulting from lack of Subordinated Water Revenues sufficient to make any earlier required deposit) at the time of deposit to be satisfied before any deposit is made to any fund subsequent in priority.

(1) Interest Fund. The District shall transfer to the Trustee and the Trustee shall set aside in the Interest Fund on or before the Business Day prior to each interest payment date therefor an amount equal to the interest becoming due and payable on the Outstanding Bonds which are Current Interest Indebtedness (excluding any interest for which there are moneys on deposit in the Interest Fund from the proceeds of any Series of Bonds or other source to pay such interest).

(2) Principal Fund; Sinking Accounts. The District shall transfer to the Trustee and the Trustee shall set aside in the Principal Fund on or before the Business Day prior to each principal or Sinking Account payment date therefor an amount equal to (a) the amount of Bond Obligation becoming due and payable on the Outstanding Serial Bonds, plus (b) the Mandatory Sinking Account Payments to be paid into the respective Sinking Accounts for the Term Bonds; provided that if the District certifies to the Trustee that any principal payments are expected to be refunded on or prior to their respective due dates or paid from excess amounts on deposit in a bond reserve fund upon such payment, no amounts need be set aside towards such principal to be so refunded or paid. All of the aforesaid Mandatory Sinking Account Payments shall be made without priority of any payment into any one such Sinking Account over any other such payment.

(3) Bond Reserve Funds. Upon the occurrence of any deficiency in any Bond Reserve Fund established under the Indenture for any Series of Bonds, the District shall transfer to the Trustee and the Trustee shall set aside in such Bond Reserve Fund an amount equal to the aggregate amount of each unreplenished prior withdrawal from the Bond Reserve Fund until there is on deposit in such Bond Reserve Fund an amount equal to the respective reserve requirement.

Any Subordinated Water Revenues remaining after the foregoing transfers shall be held free and clear of the Indenture by the District and it may use and apply such Subordinated Water Revenues for any lawful purpose of the District, including the redemption and purchase of Bonds.

If on any principal payment date, interest payment date or mandatory redemption date the amounts on deposit in the Interest Fund and Principal Fund, including the Sinking Accounts therein are insufficient to make such payments, the Trustee shall immediately notify the District of such deficiency and direct that the District transfer the amount of such deficiency to the Trustee on such payment date. The District covenants and agrees to transfer to the Trustee from any Subordinated Water Revenues in its

possession the amount of such deficiency on the principal, interest or mandatory redemption date referenced in such notice.

Investments

All moneys in any of the funds and accounts held by the Trustee shall be invested, as directed by the District, solely in Investment Securities.

The District may and the Trustee shall, upon the Request of the District, enter into a financial futures or financial option contract with an entity the debt securities of which are rated in their respective highest short-term Rating Categories by Moody's and Standard & Poor's.

The District may and the Trustee shall, upon the Request of the District, and provided that the Trustee is supplied with an Opinion of Bond Counsel to the effect that such action is permitted under the laws of the State of California, enter into an interest rate swap agreement corresponding to the interest rate or rates payable on a Series of Bonds or any portion thereof and the amounts received by the District or the Trustee, if any, pursuant to such a swap agreement may be applied to the deposits required hereunder; in which case, the entity with which the District or the Trustee may contract for an interest rate swap is limited to entities the debt securities of which are rated in their respective highest short-term debt Rating Categories by Moody's and Standard & Poor's. If the District so designates, amounts payable under the interest rate swap agreement shall be secured by Subordinated Water Revenues and other assets pledged hereunder to the Bonds on a parity basis therewith and, in such event, the District shall pay to the Trustee for deposit in the Interest Fund, at the times and in the manner provided in the Indenture, the amounts to be paid under such interest rate swap agreement, as if such amounts were additional interest due on the Bonds to which such interest rate swap agreement relates, and the Trustee shall pay to the other party to the interest rate swap agreement, to the extent required thereunder, amounts deposited in the Interest Fund for the payment of interest on the Bonds with respect to which such agreement was entered into.

Additional Bonds; Parity Debt

The issuance of additional Water Bonds was not initially limited by the Indenture. *However, the District has covenanted pursuant to the Eighteenth Supplemental Indenture that it will not issue any senior Water Bonds in the future.*

The District may issue Bonds and Parity Debt payable from Subordinated Water Revenues and secured equally and ratably with Bonds previously issued, subject to the following specific conditions precedent to the issuance of any such additional Bonds or Parity Debt:

- (a) No Event of Default shall have occurred and then be continuing.
- (b) The aggregate principal amount of Bonds or Parity Debt shall not exceed any limitation imposed by law or by any Supplemental Indenture.
- (c) The District shall have placed on file with the Trustee a Certificate of the District certifying that the sum of: (1) the Subordinated Water Revenues plus all amounts required to be paid under the Water Bond Resolution for principal, interest, reserve fund and any other debt service requirements on the Water Bonds for any period of 12 consecutive months during the 18 months immediately preceding the date on which such additional Bonds or Parity Debt will become Outstanding; plus (2) 90% of the amount by which the District projects Subordinated Water Revenues for such period of 12 months would have been increased had increases in rates,

fees and charges during such period of 12 months been in effect throughout such period of 12 months; plus (3) 75% of the amount by which the District projects Subordinated Water Revenues will increase during the period of 12 months commencing on the date of issuance of such additional Series of Bonds due to improvements to the Water System under construction (financed from any source) or to be financed with the proceeds of such additional Series of Bonds, shall (4) have been at least equal to 1.1 times the amount of Maximum Annual Debt Service on all Water Bonds, Bonds and Parity Debt then Outstanding and the additional Bonds or Parity Debt then proposed to be issued.

Refunding Bonds

Refunding Bonds may be authorized and issued by the District without compliance with the provisions described above under “Additional Bonds; Parity Debt,” provided that Maximum Annual Debt Service on all Water Bonds, Bonds and Parity Debt Outstanding following the issuance of such refunding Bonds is less than or equal to Maximum Annual Debt Service on all Water Bonds, Bonds and Parity Debt Outstanding prior to the issuance of such refunding Bonds.

Covenants

Among other covenants the District has agreed as follows:

The District will not create any pledge, lien or charge upon any of the Subordinated Water Revenues having priority over or having parity with the lien of the Bonds except only as described above. The District will not amend or change the Water Bond Resolution in any manner which would permit the issuance of additional Water Bonds in a greater principal amount than would have been permitted thereunder prior to such amendment or change or reduce the debt service percentage or coverage requirements contained therein. The District will not issue Water Bonds pursuant to the Water Bond Resolution in such amount as would cause the District to fail to be in compliance with the rate covenant described in the second succeeding paragraph hereof.

The District will not take any action, or fail to take any action, if any such action or failure to take action would adversely affect the exclusion from gross income of the interest on the Bonds under Section 103 of the Code, if applicable. The District will not directly or indirectly use or permit the use of any proceeds of the Bonds or any other funds of the District, or take or omit to take any action that would cause the Bonds to be “arbitrage bonds” within the meaning of Section 148(a) of the Code, if applicable. To that end, the District will comply with all requirements of Section 148 of the Code to the extent applicable to the Bonds.

The District will, at all times while any of the Bonds remain Outstanding, fix, prescribe and collect rates, fees and charges in connection with the services and facilities furnished by the Water System so as to yield Water Revenues in each Fiscal Year sufficient so that the sum of the Subordinated Water Revenues for such year plus all amounts required to be paid under the Water Bond Resolution for such year for principal, interest, reserve fund and any other debt service requirements on the Water Bonds shall be at least equal to 1.1 times the amount of Debt Service on all Water Bonds, Bonds and Parity Debt Outstanding for such Fiscal Year.

The District will maintain and preserve the Water System in good repair and working order at all times, and will operate the Water System in an efficient and economical manner. Subject in each case to the condition that insurance is obtainable at rates deemed reasonable by the District and upon terms and conditions deemed reasonable by the District, the District will procure and maintain at all times: (a) insurance on the Water System against such risks as and in such amounts as the District deems prudent

taking into account insurance coverage for similar utilities, and (b) public liability insurance in such amounts as the District deems prudent taking into account insurance coverage for similar utilities.

Events of Default; Remedies

The following events are Events of Default under the Indenture:

(a) default in the due and punctual payment of the principal or Redemption Price of any Bond when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for redemption, by declaration or otherwise, or default in the redemption from any Sinking Account of any Bonds in the amounts and at the times provided therefor;

(b) default in the due and punctual payment of any installment of interest on any Bond when and as such interest installment shall become due and payable;

(c) if the District shall fail to observe or perform any covenant, condition, agreement or provision in the Indenture on its part to be observed or performed, other than as referred to in subsection (a) or (b), for a period of sixty (60) days after written notice, specifying such failure and requesting that it be remedied, has been given to the District by the Trustee; except that, if such failure can be remedied but not within such sixty (60) day period and if the District has taken all action reasonably possible to remedy such failure within such sixty (60) day period, such failure shall not become an Event of Default for so long as the District shall diligently proceed to remedy the same in accordance with and subject to any directions or limitations of time established by the Trustee;

(d) if any default shall exist under any agreement governing any Parity Debt and such default shall continue beyond the therein stated grace period, if any, with respect to such default;

(e) if any default shall exist under the Water Bond Resolution and such default shall continue beyond the therein stated grace period, if any, with respect to such default;

(f) if the District files a petition in voluntary bankruptcy, for the composition of its affairs or for its corporate reorganization under any state or Federal bankruptcy or insolvency law, or makes an assignment for the benefit of creditors, or admits in writing to its insolvency or inability to pay debts as they mature, or consents in writing to the appointment of a trustee or receiver for itself;

(g) if a court of competent jurisdiction shall enter an order, judgment or decree declaring the District insolvent, or adjudging it bankrupt, or appointing a trustee or receiver of the District, or approving a petition filed against the District seeking reorganization of the District under any applicable law or statute of the United States of America or any state thereof, and such order, judgment or decree shall not be vacated or set aside or stayed within 60 days from the date of the entry thereof; and

(h) if, under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the District or of the Subordinated Water Revenues, and such custody or control shall not be terminated within 60 days from the date of assumption of such custody or control.

If an Event of Default shall occur and be continuing, the District is to immediately transfer to the Trustee all Subordinated Water Revenues held by it and received thereafter and the Trustee shall apply all Subordinated Water Revenues and any other funds then held or thereafter received by the Trustee under any of the provisions of the Indenture (except as otherwise provided in the Indenture) as follows and in the following order:

(1) To the payment of any expenses necessary in the opinion of the Trustee to protect the interests of the Owners of the Bonds and Parity Debt, including the costs and expenses of the Trustee and the Bondholders in declaring such Event of Default, and payment of reasonable fees and expenses of the Trustee (including reasonable fees and disbursements of its counsel and other agents) incurred in and about the performance of its powers and duties under the Indenture;

(2) To the payment of the whole amount of Bond Obligation then due on the Bonds and Parity Debt (upon presentation of the Bonds and Parity Debt to be paid, and stamping thereon of the payment if only partially paid, or surrender thereof if fully paid) subject to the provisions of the Indenture, with interest on such Bond Obligation, at the rate or rates of interest borne by the respective Bonds and Parity Debt, to the payment to the persons entitled thereto of all installments of interest then due and the unpaid principal or Redemption Price of any Bonds and Parity Debt which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, with interest on the overdue Bond Obligation and Parity Debt at the rate borne by the respective Bonds and Parity Debt, and, if the amount available shall not be sufficient to pay in full all the Bonds and Parity Debt due on any date, together with such interest, then to the payment thereof ratably, according to the amounts of principal or interest or Accreted Value (plus accrued interest) due on such date to the persons entitled thereto, without any discrimination or preference.

In each and every such case during the continuance of such Event of Default, the Owners of not less than a majority in aggregate principal amount of the Bonds at the time Outstanding shall be entitled, upon notice in writing to the District, to declare the principal of all of the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable.

This provision, however, is subject to the condition that if, at any time after the principal of the Bonds shall have been so declared due and payable, the District shall pay to or shall deposit with the Trustee a sum sufficient to pay all principal on such Bonds matured prior to such declaration and all matured installments of interest (if any) upon all the Bonds, and the reasonable expenses of the Trustee, and any and all other defaults known to the Trustee (other than in the payment of principal of and interest on the Bonds due and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Trustee, or provision deemed by the Trustee to be adequate shall have been made therefor, then, and in every such case, the Owners of not less than a majority in aggregate principal amount of the Bonds at the time Outstanding, by written notice to the District and to the Trustee, may, on behalf of the Owners of all the Bonds, rescind and annul such declaration and its consequences; but no such rescission and annulment shall extend to or shall affect any subsequent default, or shall impair or exhaust any right or power consequent thereon.

The Trustee is appointed (and the successive respective Owners of the Bonds, by taking and holding the same, shall be conclusively deemed to have so appointed the Trustee) to represent the Owners in the matter of exercising and prosecuting on their behalf such rights and remedies as may be available to such Owners under the provisions of the Bonds, the Indenture, the Act and applicable provisions of any other law. Upon any default or other occasion, giving rise to a right in the Trustee to represent the Bondholders, the Trustee may take such action as may seem appropriate and, upon the request in writing

of Owners of not less than twenty-five percent (25%) in aggregate principal amount of Bonds then Outstanding, and upon being indemnified to its satisfaction therefor, shall proceed to protect or enforce its rights or the rights of such Owners by such appropriate actions as it shall deem most effectual to protect and enforce any such right.

No remedy conferred upon or reserved to the Trustee or to the Owners of the Bonds is intended to be exclusive of any other remedy or remedies, and each and every such remedy to the extent permitted by law, shall be cumulative and in addition to any other remedy given under the Indenture or now or hereafter existing at law or in equity or otherwise.

Amendments

The Indenture and the rights and obligations of the District, the Owners of the Bonds and the Trustee may be modified or amended at any time by a Supplemental Indenture, with the written consent of the Owners of a majority in the aggregate amount of Bonds then Outstanding. No such modification or amendment shall (a) extend the fixed maturity of any Bond or reduce the amount of principal thereof, or extend the time of payment or reduce the amount of any Mandatory Sinking Account Payment provided for the payment of any Bonds, or reduce the rate of interest thereon, or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof, without the consent of the Owner of each Bond so affected, or (b) reduce the aforesaid percentage of Bond Obligation the consent of the Owners of which is required to effect any such modification or amendment, or permit the creation of any lien on the Subordinated Water Revenues and other assets pledged under the Indenture, or deprive the Owners of the Bonds of the lien created by the Indenture on such Subordinated Water Revenues and other assets, without the consent of the Owners of all of the Bonds then Outstanding.

The Indenture may also be modified or amended at any time with the written consents of each provider of a letter of credit or a policy of bond insurance for the Bonds, provided that at such time the payment of all the principal of and interest on all Outstanding Bonds shall be insured by a policy or policies of municipal bond insurance or payable under a letter of credit the provider of which shall be a financial institution or association having unsecured debt obligations rated, or insuring or securing other debt obligations rated on the basis of such insurance or letters of credit, rated not lower than the respective ratings on the Bonds by Moody's (if Moody's is then rating the Bonds) or Standard & Poor's (if Standard & Poor's is then rating the Bonds).

The Indenture and the rights and obligations of the District, of the Trustee and the Owners of the Bonds may also be modified or amended at any time by a Supplemental Indenture, without the consent of any Bondholders but only to the extent permitted by law and only for any one or more of the following purposes:

- (1) to add to the covenants and agreements of the District or to surrender any right or power reserved to or conferred upon the District;
- (2) to make such provisions for the purpose of curing any omission or ambiguity, or of curing or correcting any defective provision contained in the Indenture, or in regard to questions arising under the Indenture, as the District may deem necessary or desirable, and which shall not materially and adversely affect the interests of the Owners of the Bonds;
- (3) to modify the Indenture in such manner as to permit qualification under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect, and to add such other terms, conditions and provisions as may be permitted by said act or similar federal

statutes and which shall not materially and adversely affect the interests of the Owners of the Bonds;

(4) to make modifications or adjustments necessary or desirable to provide for the issuance of Variable Rate Indebtedness, Capital Appreciation Indebtedness or Parity Debt, with such interest rate, payment, maturity and other terms as the District may deem desirable, subject to the provisions of the Indenture;

(5) to provide for the issuance of Bonds in book-entry form or bearer form, provided that such provisions shall not materially and adversely affect the interest of the Owners of the Bonds;

(6) if the District agrees in a Supplemental Indenture to maintain the exclusion of interest on a Series of Bonds from gross income for purposes of federal income taxation, to make such provisions as are necessary or appropriate to ensure such exclusion;

(7) to provide for the issuance of an additional Series of Bonds pursuant to provisions of the Indenture; and

(8) for any other purpose that does not materially and adversely affect the interests of the Owners of the Bonds.

Defeasance

Bonds may be paid by the District in any of the following ways:

(a) by paying or causing to be paid the Bond Obligations of and interest on such Outstanding Bonds, as and when the same become due and payable;

(b) by depositing with the Trustee, an escrow agent or other fiduciary, in trust, at or before maturity, money or securities in the necessary amount to pay or redeem such Outstanding Bonds; or

(c) by delivering to the Trustee, for cancellation by it, such Outstanding Bonds.

Upon the deposit with the Trustee, escrow agent or other fiduciary, in trust, at or before maturity, of money or securities in the necessary amount to pay or redeem any Outstanding Bond (whether upon or prior to its maturity or the redemption date of such Bond), provided that, if such Bond is to be redeemed prior to maturity, notice of such redemption shall have been given or provision satisfactory to the Trustee shall have been made for the giving of such notice, then all liability of the District in respect of such Bond shall cease, terminate and be completely discharged, provided that the Owner thereof shall thereafter be entitled to the payment of the principal of and premium, if any, and interest on the Bonds, and the District shall remain liable for such payment, but only out of such money or securities deposited with the Trustee as aforesaid for their payments.

The District may at any time surrender to the Trustee for cancellation by it any Bonds previously issued and delivered, which the District may have acquired in any manner whatsoever, and such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

Whenever in the Indenture it is provided or permitted that there be deposited with or held in trust by the Trustee money or securities in the necessary amount to pay or redeem any Bonds, the money or

securities so to be deposited or held may include money or securities held by the Trustee in the funds and accounts established pursuant to the Indenture and shall be:

(a) lawful money of the United States of America in an amount equal to the principal amount of such Bonds and all unpaid interest thereon to maturity, except that, in the case of Bonds which are to be redeemed prior to maturity and in respect of which notice of such redemption shall have been given or provision satisfactory to the Trustee shall have been made for the giving of such notice, the amount to be deposited or held shall be the principal amount or Redemption Price of such Bonds and all unpaid interest thereon to the redemption date; or

(b) Investment Securities described in clauses (i), (ii) or (v) of the definition thereof, the principal of and interest on which when due will, in the opinion of an independent certified public accountant delivered to the Trustee (upon which opinion the Trustee may conclusively rely), provide money sufficient to pay the principal or Redemption Price of and all unpaid interest to maturity, or to the redemption date, as the case may be, on the Bonds to be paid or redeemed, as such principal or Redemption Price and interest become due, provided that, in the case of Bonds which are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as required by the Indenture or provision satisfactory to the Trustee shall have been made for the giving of such notice; provided, in each case, that the Trustee shall have been irrevocably instructed (by the terms of the Indenture or by Request of the District) to apply such money to the payment of such principal or Redemption Price and interest with respect to such Bonds.

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APPENDIX D

PROPOSED FORM OF CO-BOND COUNSEL OPINIONS

Upon the delivery of the Series 2019A Bonds, Norton Rose Fulbright US LLP, Los Angeles, and Curls Bartling P.C., Oakland, California, Co-Bond Counsel, propose to render their final approving opinions with respect to the Series 2019A Bonds in substantially the following form:

[Closing Date]

East Bay Municipal Utility District
Oakland, California

\$ _____
EAST BAY MUNICIPAL UTILITY DISTRICT
(Alameda and Contra Costa Counties, California)
WATER SYSTEM REVENUE BONDS, SERIES 2019A
(GREEN BONDS)

Ladies and Gentlemen:

We have acted as co-bond counsel to the East Bay Municipal Utility District (the “District”) in connection with the issuance of its Water System Revenue Bonds, Series 2019A (Green Bonds) in the aggregate principal amount of \$_____ (the “Series 2019A Bonds”). The Series 2019A Bonds are being issued pursuant to the Municipal Utility District Act (constituting Division 6 of the Public Utilities Code of the State of California, as amended) and the Revenue Bond Law of 1941 as made applicable by Article 6a of Chapter 6 of Division 6 of the Municipal Utility District Act, as amended (collectively, the “Act”), and a Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the District and First Interstate Bank of California, which has been succeeded by The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019, providing for the issuance of the Series 2019A Bonds (collectively, the “Indenture”).

In our capacity as co-bond counsel, we have reviewed the Act, the Indenture, the Tax Certificate executed and delivered by the District in connection with the execution and delivery of the Series 2019A Bonds (the “Tax Certificate”), certifications of the District, the Trustee, and others, opinions of counsel to the District and the Trustee, and such other documents, opinions and instruments as we deemed necessary to render the opinions set forth herein. Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Indenture.

We have assumed the genuineness of all documents and signatures presented to us. We have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Indenture and the Tax Certificate. In addition, we call attention to the fact that the rights and obligations under the Series 2019A Bonds and the Indenture are subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other similar laws affecting creditors’ rights, to the application of equitable principles, to the possible unavailability of

specific performance or injunctive relief, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public agencies in the State of California. Furthermore, the imposition of certain fees and charges by the District relating to the Water System is subject to the provisions of Articles XIIC and XIID of the California Constitution.

Based upon the foregoing and subject to the limitations and qualifications herein specified, as of the date hereof, we are of the opinion, under existing law, that:

1. The Series 2019A Bonds constitute the valid and binding special limited obligations of the District.

2. The Indenture has been duly authorized, executed and delivered by, and constitutes the valid and binding obligation of, the District. The Indenture creates a valid pledge, to secure the payment of the principal of and interest on the Series 2019A Bonds, of the Subordinated Water Revenues of the District, and certain other amounts held by the Trustee under the Indenture, as and to the extent set forth in the Indenture and subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein.

3. The Series 2019A Bonds are special limited obligations of the District and are payable exclusively from and are secured by a pledge of Subordinated Water Revenues of the District and certain other amounts held by the Trustee under the Indenture, as and to the extent set forth in the Indenture and subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein. The general fund of the District is not liable, and neither the credit nor taxing power of the District is pledged, for the payment of the Series 2019A Bonds or the interest thereon.

4. Other bonds and parity debt of the District have been and may from time to time hereafter be issued under the Indenture which are payable from Subordinated Water Revenues on a parity basis with the Series 2019A Bonds.

5. Assuming continuing compliance by the District with certain covenants in the Indenture, the Tax Certificate and other documents pertaining to the Series 2019A Bonds and requirements of the Internal Revenue Code of 1986, as amended, regarding the use, expenditure and investment of proceeds of the Series 2019A Bonds and the timely payment of certain investment earnings to the United States, interest on the Series 2019A Bonds is not includable in the gross income of the owners of the Series 2019A Bonds for purposes of federal income taxation. Interest on the Series 2019A Bonds is not treated as an item of tax preference for purposes of computing the federal alternative minimum tax.

6. Under existing law, interest on the Series 2019A Bonds is exempt from personal income taxes of the State of California.

Other than as described herein, we have not addressed, and are not opining on, the tax consequences to any person of the investment in, or of the receipt or accrual of interest on, the Series 2019A Bonds. Further, certain requirements and procedures contained or referred to in the Indenture or in other documents pertaining to the Series 2019A Bonds may be changed, and certain actions may be taken, under the circumstances and subject to the terms and conditions set forth in such documents, upon the advice or with the approving opinion of counsel nationally recognized in the area of tax-exempt obligations. We express no opinion as to the effect of any change to any document pertaining to the Series 2019A Bonds or of any action taken or not taken where such change is made or action is taken or not taken without our approval or in reliance upon the advice of counsel other than ourselves with respect to

the exclusion from gross income of the interest on the Series 2019A Bonds for federal income tax purposes.

The opinions expressed and the statements made herein are based on an analysis of existing laws, regulations, rulings and court decisions. Such opinions and statements may be adversely affected by actions taken or events occurring, including a change in law, regulation or ruling (or in the application or official interpretation of any law, regulation or ruling) after the date hereof. We have not undertaken to determine, or to inform any person, whether such actions are taken or such events occur, and we have no obligation to update this letter in light of such actions or events or for any other reason. Moreover, our opinions are not a guarantee of result and represent our legal judgment based upon our review of existing law that we deem relevant to such opinions and in reliance upon the representations and covenants referenced above.

No opinion is expressed herein on the accuracy, completeness or sufficiency of the Official Statement or other offering material relating to the Series 2019A Bonds.

This opinion is limited to the laws of the State of California and the federal laws of the United States.

Respectfully submitted,

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APPENDIX E

DTC AND THE BOOK-ENTRY ONLY SYSTEM

The information in this Appendix E concerning The Depository Trust Company, New York, New York (“DTC”), and DTC’s book-entry system has been obtained from DTC and the District and the Trustee take no responsibility for the completeness or accuracy thereof. The District and the Trustee cannot and do not give any assurances that DTC, Direct Participants (as defined below) or Indirect Participants (as defined below) will distribute to the Beneficial Owners (a) payments of interest, principal or premium, if any, with respect to the Series 2019A Bonds, (b) certificates representing ownership interest in or other confirmation of ownership interest in the Series 2019A Bonds, or (c) redemption or other notices sent to DTC or Cede & Co., its nominee, as the registered owner of the Series 2019A Bonds, or that they will do so on a timely basis, or that DTC, Direct Participants or Indirect Participants will act in the manner described in this Appendix E. The District and the Trustee are not responsible or liable for the failure of DTC or any DTC Direct or Indirect Participant to make any payment or give any notice to a Beneficial Owner with respect to the Series 2019A Bonds or an error or delay relating thereto. The current “Rules” applicable to DTC are on file with the Securities and Exchange Commission and the current “Procedures” of DTC to be followed in dealing with DTC’s Direct and Indirect Participants are on file with DTC.

DTC will act as securities depository for the Series 2019A Bonds. The Series 2019A Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered certificate will be issued for each maturity of the Series 2019A Bonds, in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a S&P Global Ratings’ rating of AA+. The DTC Rules applicable to Direct and Indirect Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com. The information on such website is not incorporated herein by reference.

Purchases of Series 2019A Bonds under the DTC book-entry system must be made by or through Direct Participants, which will receive a credit for the Series 2019A Bonds on DTC’s records. The ownership interest of each actual purchaser of each Series 2019A Bond (“Beneficial Owner”) is in turn to

be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2019A Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2019A Bonds, except in the event that use of the book-entry system for the Series 2019A Bonds is discontinued.

To facilitate subsequent transfers, all Series 2019A 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 2019A Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2019A Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2019A Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series 2019A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2019A Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2019A Bond documents. For example, Beneficial Owners of the Series 2019A Bonds may wish to ascertain that the nominee holding the Series 2019A Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2019A Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2019A Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the District 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 2019A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments of principal of, premium, if any, and interest on the Series 2019A 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 District or the Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Direct or Indirect Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, or the District, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal of, premium, if any, and interest on the Series 2019A Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the District or the Trustee, disbursement of such payments

to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the Series 2019A Bonds at any time by giving notice to the Trustee and the District. Under certain circumstances, in the event that a successor depository is not obtained, Series 2019A Bond certificates are required to be printed and delivered.

The District may decide to discontinue use of the system of book-entry transfers for the Series 2019A Bonds through DTC (or a successor securities depository). In that event, Series 2019A Bond certificates will be printed and delivered as provided in the Indenture. In addition, the following provisions would apply: the principal or redemption price of the Series 2019A Bonds will be payable upon presentation thereof, at the principal corporate trust office of the Trustee, in San Francisco, California; interest on the Series 2019A Bonds will be payable by check mailed on each interest payment date to the registered owners thereof as shown on the registration books of the Trustee as of the close of business on the 15th day of the calendar month immediately preceding the applicable interest payment date (the “record date”), except that in the case of an owner of \$1,000,000 or more in aggregate principal amount of Series 2019A Bonds, upon written request of such owner to the Trustee received at least 10 days prior to the record date for the payment of interest, specifying the account or accounts to which such payment shall be made (which request shall remain in effect until revoked by such owner in a subsequent writing delivered to the Trustee), such interest shall be paid in immediately available funds by wire transfer to such account or accounts on the following interest payment date; and the Series 2019A Bonds will be transferable and exchangeable on the terms and conditions provided in the Indenture.

The information in this Appendix E concerning DTC and DTC’s book-entry system has been obtained from sources the District believes to be reliable, but the District takes no responsibility for the accuracy thereof.

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APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (this “Disclosure Agreement”), dated June __, 2019, is executed and delivered by the East Bay Municipal Utility District (the “District”) and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”) in connection with the issuance of \$_____ aggregate principal amount of Water System Revenue Bonds, Series 2019A (Green Bonds) (the “Bonds”). The Bonds are being issued pursuant to a Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the District and the Trustee, as amended and supplemented, including as amended and supplemented by the Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019, providing for the issuance of the Bonds (collectively, the “Indenture”). In connection therewith, the District and the Trustee covenant and agree as follows:

Section 1. Purpose of this Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the District and the Trustee for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriter (as defined herein) in complying with Securities and Exchange Commission Rule 15c2-12(b)(5).

Section 2. Definitions. In addition to the definitions set forth above and in the Indenture, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this section, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the District pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” shall mean any person who (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries); or (b) is treated as the owner of any Bonds for federal income tax purposes.

“Disclosure Representative” shall mean the Director of Finance or the Treasury Manager of the District or a designee of the Director of Finance, or such other officer or employee as the District shall designate in writing to the Trustee from time to time.

“Dissemination Agent” shall mean the Trustee, acting in its capacity as Dissemination Agent hereunder, or any successor Dissemination Agent designated in writing by the District and which has filed with the Trustee a written acceptance of such designation.

“Financial Obligation” shall mean a (a) debt obligation; (b) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (c) guarantee of a debt obligation or any such derivative instrument; provided that “financial obligation” shall not include municipal securities as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“Holder” shall mean either the registered owners of the Bonds or, if the Bonds are registered in the name of The Depository Trust Company or another recognized depository, any applicable participant in such depository system.

“Listed Event” shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board established pursuant to Section

15B(b)(1) of the Securities Exchange Act of 1934 or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at <http://emma.msrb.org>.

“Official Statement” shall mean the Official Statement for the Bonds dated _____, 2019, as it may be updated prior to the delivery of the Bonds.

“Participating Underwriter” shall mean any of the underwriters of the Bonds listed on the cover page of the Official Statement required to comply with the Rule in connection with offering of the Bonds.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the SEC under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

Section 3. Provision of Annual Reports.

(a) The District shall, or shall cause the Dissemination Agent to, not later than December 31 of each year in which the Bonds are outstanding, commencing with the Annual Report for the 2018-19 Fiscal Year (which is due not later than December 31, 2019), provide to the MSRB an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. The Annual Report must be submitted in electronic format, accompanied by such identifying information as prescribed by the MSRB. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of this Disclosure Agreement; *provided* that if the audited financial statements of the District are not available by the date required above for the filing of the Annual Report, the District shall submit the audited financial statements as soon thereafter as available. If the District’s Fiscal Year changes, the District shall give notice of such change in the same manner as for a Listed Event under Section 5(c) and the Annual Reports shall be provided to the MSRB no later than six months after the end of such Fiscal Year.

(b) If the District is unable to provide to the MSRB an Annual Report by the date required in subsection (a), the District shall send to the MSRB, in a timely manner, on or before such date a notice in substantially the form attached hereto as Exhibit A.

(c) The Dissemination Agent shall:

- (i) determine the electronic filing address of, and then-current procedures for submitting Annual Reports to, the MSRB each year prior to the date for providing the Annual Report; and
- (ii) file a report with the District and (if the Dissemination Agent is not the Trustee, the Trustee) certifying that the Annual Report has been provided to the MSRB pursuant to this Disclosure Agreement, and stating the date it was provided.

Section 4. Content of Annual Reports. The District’s Annual Report shall contain or include by reference the following categories or similar categories of information updated to incorporate information for the most recent fiscal or calendar year, as applicable (the tables referred to below are those appearing in the Official Statement relating to the Bonds):

(a) The audited financial statements of the District for the prior Fiscal Year, prepared in accordance with Generally Accepted Accounting Principles, as promulgated, to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the District's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available;

(b) A table showing the Water Production (including annual production and average production per day) for the preceding Fiscal Year;

(c) A table showing Water Sales Revenues, Consumption and Number of Connections by Customer Type for the preceding Fiscal Year;

(d) A table showing Water System Sources of Funds by Source;

(e) A table showing Water System Rates and Charges for the preceding Fiscal Year (as well as information regarding average rate increases);

(f) A table showing Outstanding Water System Debt as of the preceding Fiscal Year;

(g) A table showing water revenues, operating and maintenance expenses, debt service on water revenue bonds and debt service coverage for the water revenue bonds for the most recent Fiscal Year; and

(h) Any material changes in the sources of water supply.

Financial and operating information relating to the District referenced in items 3(b)-(h) above may be updated from time to time, and such updates may involve displaying data in a different format or table or eliminating data that is no longer material.

Any or all of the items listed above may also be included by specific reference to other documents, including official statements of debt issues of the District or related public entities, which have been submitted to the MSRB or the SEC. If any document included by reference is a final official statement, it must be available from the MSRB. The District shall clearly identify each such other document so included by reference.

Section 5. Reporting of Significant Events.

(a) Pursuant to the provisions of this section, upon the occurrence of any of the following events (in each case to the extent applicable) with respect to the Bonds, the District shall give, or cause to be given by so notifying the Dissemination Agent in writing and instructing the Dissemination Agent to give, notice of the occurrence of such event, in each case, pursuant to Section 5(c) hereof:

1. principal or interest payment delinquencies;
2. non-payment related defaults, if material;
3. modifications to the rights of the Bondholders, if material;
4. optional, contingent or unscheduled calls, if material, and tender offers;
5. defeasances;

6. rating changes;
7. adverse tax opinions or the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds or other material events affecting the tax status of the Bonds;
8. unscheduled draws on the debt service reserves reflecting financial difficulties;
9. unscheduled draws on the credit enhancements reflecting financial difficulties;
10. substitution of the credit or liquidity providers or their failure to perform;
11. release, substitution or sale of property securing repayment of the Bonds, if material;
12. bankruptcy, insolvency, receivership or similar proceedings of the District, which shall occur as described below;
13. appointment of a successor or additional trustee or the change of name of a trustee, if material;
14. the consummation of a merger, consolidation, or acquisition involving the District or the sale of all or substantially all of the assets of the Water System of the District other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
15. incurrence of a Financial Obligation of the District with respect to the Water System, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the District with respect to the Water System, any of which affects Holders of the Bonds, if material; or
16. default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the District with respect to the Water System, any of which reflect financial difficulties.

For these purposes, (i) any event described in item 12 of this Section 5(a) is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent, or similar officer for the District in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the District, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement, or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the District; and (ii) the District intends to comply with the provisions hereof for the Listed Events described in subparagraphs (15) and (16) of this Section 5(a), and the definition of the “Financial Obligation” in Section 2, with reference to the Rule, any other applicable federal securities laws and guidance provided by the SEC in its Release No. 34-83885 dated August 20, 2018 (the “2018 Release”), any further amendments or written guidance provided by the SEC or its staff with respect to

the amendments to the Rule effected by the 2018 Release.

(b) Upon receipt of notice from the District and instruction by the District to report the occurrence of any Listed Event, the Dissemination Agent shall provide notice thereof to the MSRB in accordance with Section 5(c) hereof. In the event the Dissemination Agent shall obtain actual knowledge of the occurrence of any of the Listed Events, the Dissemination Agent shall, immediately after obtaining such knowledge, contact the Disclosure Representative, inform such person of the event, and request that the District promptly notify the Dissemination Agent in writing whether or not to report the event pursuant to Section 5(c). For purposes of this Disclosure Agreement, “actual knowledge” of the occurrence of such Listed Event shall mean actual knowledge by the Dissemination Agent, if other than the Trustee, and if the Dissemination Agent is the Trustee, then by the officer at the corporate trust office of the Trustee with regular responsibility for the administration of matters related to the Indenture. The Dissemination Agent shall have no responsibility to determine the materiality, if applicable, of any of the Listed Events.

(c) The District, or the Dissemination Agent, if the Dissemination Agent has been instructed by the District to report the occurrence of a Listed Event, shall file a notice of such occurrence with the MSRB in a timely manner not more than ten (10) business days after the occurrence of the event.

Section 6. Termination of Reporting Obligation. The District’s obligations under this Disclosure Agreement shall terminate with respect to all Bonds upon the maturity, defeasance, prior redemption, acceleration or payment in full of all of the Bonds and with respect to any Bonds upon the maturity, defeasance, prior redemption or payment in full of such Bonds.

Section 7. Dissemination Agent. The District may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. If at any time there is not any other designated Dissemination Agent, the Trustee, upon notice from the District, shall be the Dissemination Agent. The initial Dissemination Agent shall be the Trustee. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the District pursuant to this Disclosure Agreement. The Dissemination Agent shall receive compensation for the services provided pursuant to this Disclosure Agreement.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the District and the Dissemination Agent may amend this Disclosure Agreement (and, to the extent that any such amendment does not materially change or increase its obligations hereunder, the Dissemination Agent shall agree to any amendment so requested by the District), and any provision of this Disclosure Agreement may be waived; *provided*, that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Section 3(a), Section 4 or Section 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the District shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the District. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5(c), and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Filings with the MSRB. All information, operating data, financial statements, notices and other documents provided to the MSRB in accordance with this Disclosure Agreement shall be provided in an electronic format prescribed by the MSRB and shall be accompanied by identifying information as prescribed by the MSRB.

Section 10. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the District from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the District chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the District shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

Section 11. Default. In the event of a failure of the District or the Dissemination Agent to comply with any provision of this Disclosure Agreement, the Trustee may (and, at the request of any Participating Underwriter or the Holders of at least 25% of the aggregate principal amount of Outstanding Bonds and upon provision of indemnification satisfactory to the Trustee, shall), or any Holder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the District or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Indenture, and the sole remedy under this Disclosure Agreement in the event of any failure of the District or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance hereunder.

Section 12. Duties, Immunities and Liabilities of Trustee and Dissemination Agent. Article VIII of the Indenture is hereby made applicable to this Disclosure Agreement as if the Disclosure Agreement were (solely for this purpose) contained in the Indenture. The Dissemination Agent shall be entitled to the protections and limitations on liability afforded to the Trustee thereunder. The Dissemination Agent (if other than the Trustee in its capacity as Dissemination Agent) shall have only such duties as are specifically set forth in this Disclosure Agreement, and the District agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys fees) of defending against any claim of liability, but excluding any loss, expense and liabilities due to the Dissemination Agent's negligence or willful misconduct. The obligations of the District under this Section 12 shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 13. Notices. Any notices or communications to or among any of the parties to this Disclosure Agreement may be given as follows:

To the District:

East Bay Municipal Utility District
375 Eleventh Street, MS 801
Oakland, California 94607-4240
Attention: Treasury Manager
Phone: 510-287-0248
Fax: 510-287-0555

To the Dissemination Agent:

The Bank of New York Mellon
Trust Company, N.A.
100 Pine Street, Suite 3150
San Francisco, California 94111
Phone: 415-263-2420
Fax: 415-399-1647

Section 14. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the District, the Trustee, the Dissemination Agent, the Participating Underwriter and the Holders and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Section 15. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

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IN WITNESS WHEREOF, this Disclosure Agreement has been executed on behalf of the District and the Trustee by their duly authorized representatives.

Dated: June ____, 2019

EAST BAY MUNICIPAL UTILITY DISTRICT

By: _____
Sophia D. Skoda
Director of Finance

Dated: June ____, 2019

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A., as Trustee

By: _____
Vice President

EXHIBIT A

NOTICE TO MSRB OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: EAST BAY MUNICIPAL UTILITY DISTRICT

Name of Bond Issue: \$ _____
Water System Revenue Bonds, Series 2019A (Green Bonds)

Date of Issuance: June _____, 2019

NOTICE IS HEREBY GIVEN that the East Bay Municipal Utility District (the "District") has not provided an Annual Report with respect to the above-named Bonds as required by Section 3(a) of the Continuing Disclosure Agreement, dated June _____, 2019, by and between the District and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee") and in accordance with Section 44.14 of the Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019, by and between the District and the Trustee, supplementing the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, as supplemented and amended, by and between the District and the Trustee, providing for the issuance of the Bonds. The District anticipates that the Annual Report will be filed by _____, 20__.

Dated: _____, 20__

THE BANK OF NEW YORK MELLON
TRUST COMPANY, N.A.,
as Trustee on behalf of the District

By: _____
Authorized Officer

cc: East Bay Municipal Utility District

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APPENDIX G

EXPECTED SERIES 2019A GREEN BOND PROJECTS

The District anticipates funding or reimbursing CIP expenditures for the following Water System projects using proceeds of the Series 2019A Bonds:

- Building Modifications
- Dam Operational Upgrades
- Dam Seismic Upgrades
- Dam Surveillance Improvements
- Distribution System Upgrades
- Distribution System Water Quality Upgrades
- Fish and Wildlife Projects
- Fueling Facility Upgrades
- Large Diameter Pipeline Replacement and Improvements
- Meter Replacements
- New Hydrants
- Pipeline Appurtenances
- Pipeline Infrastructure Renewals
- Pipeline System Improvements
- Powerhouse Improvements
- Pressure Zone Improvements
- Pumping Plant Rehabilitation
- Rate Control Station Rehab
- Raw Water Aqueduct Improvements
- Recycled Water Facility Improvements
- Regulator Rehabilitation
- Reservoir Rehabilitation and Maintenance
- Reservoir Tower Modifications
- Service Lateral Replacements
- Treatment Plant Upgrades
- Watershed and Recreational Area Improvement Projects
- Water Supply Monitoring Improvements

The proceeds of the Series 2019A Bonds (exclusive of amounts applied to pay costs of issuance) are to be allocated to costs of the projects identified above. The District does not anticipate providing any future information respecting the particular “green” projects for which the expenditure of proceeds of the Series 2019A Bonds will be made. See also “PLAN OF FINANCE” and “ESTIMATED SOURCES AND USES OF FUNDS” in the front part of this Official Statement and “THE WATER SYSTEM – Capital Improvement Program” in APPENDIX A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM)” to this Official Statement.

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