



**BOARD OF DIRECTORS  
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

**Notice of Location and Time Change**

**REGULAR CLOSED SESSION  
AND  
REGULAR BUSINESS MEETINGS**

**Tuesday, May 28, 2019**

Notice is hereby given that the Regular Closed Session and Regular Business Meetings of the Board of Directors scheduled for Tuesday, May 28, 2019 will be held at the Castro Valley Library, Chabot/Canyon Room, 3600 Norbridge Avenue, Castro Valley, CA 94546.

The Regular Closed Session meeting has been rescheduled from 11:00 a.m. to 2:00 p.m. and the Regular Business meeting has been rescheduled from 1:15 p.m. to 2:30 p.m.

Dated: May 23, 2019

  
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Rischa S. Cole, Secretary of the District





**BOARD OF DIRECTORS  
EAST BAY MUNICIPAL UTILITY DISTRICT**

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375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

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**AGENDA  
Tuesday, May 28, 2019**

**REGULAR CLOSED SESSION  
2:00 p.m., Chabot/Canyon Room  
Castro Valley Library  
3600 Norbridge Avenue, Castro Valley, California 94546**

**ROLL CALL:**

**PUBLIC COMMENT:** The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

**ANNOUNCEMENT OF CLOSED SESSION AGENDA:**

1. Existing litigation pursuant to Government Code section 54956.9(a):
  - a. *Woodbridge Irrigation District v. East Bay Municipal Utility District*  
Sacramento County Superior Court, Case No. 34-2018-00232142-CU-CO-GDS

*(The Board will hold Closed Session in the Chabot/Canyon Room)*

**REGULAR BUSINESS MEETING  
2:30 p.m., Chabot/Canyon Room  
Castro Valley Library  
3600 Norbridge Avenue, Castro Valley, California 94546**

**ROLL CALL:**

**BOARD OF DIRECTORS:**

- Pledge of Allegiance

**ANNOUNCEMENTS FROM CLOSED SESSION:**

**PUBLIC COMMENT:** The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

**CONSENT CALENDAR:** (Single motion and vote approving 12 recommendations.)

1. Approve the Regular Meeting Minutes of May 14, 2019.
2. File correspondence with the Board.
3. Award a contract to the lowest responsive/responsible bidder Chain Link Fence and Supply, Inc., in an amount, after the addition of taxes, not to exceed \$101,600 for supplying and installing approximately 620 linear feet of fence around the Amito Pumping Plant site beginning on or after May 28, 2019 under Request for Quotation No. 1914.
4. Award a contract to the lowest responsive/responsible bidder Ferguson Waterworks in an amount, after the addition of taxes, not to exceed \$151,530 for supplying two large-diameter valves and one actuator for the Maloney Pumping Plant and La Honda Rate Control Station, beginning on or after May 28, 2019 under Request for Quotation No. 1915.
5. Award a contract to the lowest responsive/responsible bidder F.D. Thomas, Inc., in the amount of \$531,445 for construction of the Main Wastewater Treatment Plant Oxygen Plant Recoat Project under SD-411.
6. Authorize actions related to Camanche Reservoir Recreation Area.
  - 6.1. Authorize an agreement beginning on or after July 1, 2019 with Calaveras County in an amount not to exceed \$258,000 annually for law enforcement services at Camanche Reservoir Recreation Area and on adjacent District watershed lands for three years with one option to renew for an additional three-year period for a total cost of \$1,629,000.
  - 6.2. Amend the contract with Urban Park Concessionaires (UPC) for the Camanche Reservoir Recreation Area to exercise an optional five-year extension and decrease the franchise fee payments from eight percent to six percent for a period of 24 months. In exchange, the concessionaire will fully fund the replacement of four lodging units at Camanche North Shore Recreation Area.
7. Authorize an agreement beginning on or after May 28, 2019 with G4S Secure Integration, LLC, in an amount not to exceed \$493,389 for upgrading the District's centralized security system's software and hardware.
8. Authorize an agreement beginning on or after May 28, 2019 with Terraphase Engineering, Inc., in an amount not to exceed \$149,700 to prepare a trench soils master plan.
9. Authorize an amendment to the agreement with Brown and Caldwell beginning on or after May 28, 2019 to increase the agreement amount by \$1,870,000 to an amount not to exceed \$4,645,799 for the Digester Upgrade Phase 3 Design Project.
10. Authorize a five-year lease extension to March 31, 2024 with Eleventh and L Properties for 1,971 square feet of office space located at 1127 Eleventh Street, Suite 414 in Sacramento for the District's Office of Inter-Governmental Affairs, with the total base rent of \$300,388.80.

**CONSENT CALENDAR:** (Continued)

11. Authorize the Office of General Counsel to continue the employment of the law firm of Ellison, Schneider, Harris & Donlan, LLP, for specialized legal services related to water and energy law and litigation matters.
12. Approve the April 2019 Monthly Investment Transactions Report.

**DETERMINATION AND DISCUSSION:**

13. Authorize and approve the issuance of EBMUD Water System Revenue Bonds, Series 2019A, in an aggregate principal amount not to exceed \$225 million, and approve the form and authorize the execution of certain documents, including a Supplemental Indenture, in connection with the issuance, securing and sale of such bonds. (Resolution)
14. General Manager's Report.

**REPORTS AND DIRECTOR COMMENTS:**

15. Committee Reports:
  - Special Sustainability/Energy
  - Planning
  - Legislative/Human Resources
  - Finance/Administration
16. Other Items for Future Consideration.
17. Director Comments.

**ADJOURNMENT:**

***The next Regular Meeting of the Board of Directors will be held at 1:15 p.m. on Tuesday, June 11, 2019 in the Administration Center Boardroom, 375 11th Street, Oakland, California.***

**Disability Notice**

*If you require a disability-related modification or accommodation to participate in an EBMUD public meeting please call the Office of the Secretary (510) 287-0404. We will make reasonable arrangements to ensure accessibility. Some special equipment arrangements may require 48 hours advance notice.*

**Document Availability**

*Materials related to an item on this agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours, and can be viewed on our website at [www.ebmud.com](http://www.ebmud.com).*

## BOARD CALENDAR

Date	Meeting	Time/Location	Topics
<b>Tuesday, May 28</b>	<b>Finance/Administration Committee</b> Patterson {Chair}; Coleman; Katz  <b>Board of Directors</b>	1:30 p.m. Castro Valley Library Chabot/Canyon Rm. 3600 Norbridge Ave. Castro Valley, CA  2:00 p.m. 2:30 p.m. Castro Valley Library Chabot/Canyon Rm. 3600 Norbridge Ave. Castro Valley, CA	<ul style="list-style-type: none"> <li>• Monthly Investment Transactions Report</li> <li>• EBMUD Series 2019A Water System Revenue Bonds</li> <li>• Adopt New Climate Action Policy</li> <li>• Closed Session</li> <li>• Regular Meeting</li> </ul>
<b>Tuesday, June 11</b>	<b>Planning Committee</b> Linney {Chair}; McIntosh; Mellon  <b>Legislative/Human Resources Committee</b> Coleman {Chair}; McIntosh; Patterson  <b>Board of Directors</b>	9:15 a.m. Training Resource Center  10:15 a.m. Training Resource Center  11:00 a.m. 1:15 p.m.	<ul style="list-style-type: none"> <li>• Closed Session</li> <li>• Regular Meeting</li> </ul>
<b>Tuesday, June 25</b>	<b>Finance/Administration Committee</b> Patterson {Chair}; Coleman; Katz  <b>Board of Directors</b>	10:00 a.m. Training Resource Center  11:00 a.m. 1:15 p.m.	<ul style="list-style-type: none"> <li>• Closed Session</li> <li>• Regular Meeting</li> </ul>
<b>Thursday, July 4</b>	<b>Independence Day</b>		<i>District Offices Closed</i>
<b>Tuesday, July 9</b>	<b>Planning Committee</b> Linney {Chair}; McIntosh; Mellon  <b>Legislative/Human Resources Committee</b> Coleman {Chair}; McIntosh; Patterson  <b>Board of Directors</b>	9:15 a.m. Training Resource Center  10:15 a.m. Training Resource Center  11:00 a.m. 1:15 p.m.	<ul style="list-style-type: none"> <li>• Closed Session</li> <li>• Regular Meeting</li> </ul>

## MINUTES

**Tuesday, May 14, 2019**

**East Bay Municipal Utility District  
Board of Directors  
375 Eleventh Street  
Oakland, California**

### Regular Closed Session Meeting

Vice-President Doug Linney called to order the Regular Closed Session Meeting of the Board of Directors at 11:00 a.m. in the Administration Building Board Room.

#### ROLL CALL

Directors John A. Coleman, Frank Mellon, William B. Patterson, and Vice-President Doug Linney were present at roll call. Director Andy Katz arrived at 11:02 a.m. Director Lesa R. McIntosh and President Marguerite Young were absent (excused).

Staff present included General Manager Alexander R. Coate, General Counsel Craig S. Spencer, Assistant General Counsel Xanthe M. Berry (Items 1a, 1b, 2a, and 2b), Attorney Derek McDonald (Items 1b, 2a, 2b, and 3), Attorney Ann P. Gunderson (Item 1a), Law Clerk Yessenia Garcia-Vasquez (Items 1a, 1b, 2a, 2b, and 3) and Risk Manager Karen K. Curry (1a, 1b, 2a, and 2b).

#### PUBLIC COMMENT

There was no public comment.

#### ANNOUNCEMENT OF CLOSED SESSION AGENDA

Vice-President Linney announced the closed session agenda. The Board convened to Conference Room 8 for discussion.

### Regular Business Meeting

Vice-President Linney called to order the Regular Business Meeting of the Board of Directors at 1:15 pm. in the Administration Building Board Room.

#### ROLL CALL

Directors John A. Coleman, Andy Katz, Frank Mellon, William B. Patterson, and Vice-President Doug Linney were present at roll call. Director Lesa R. McIntosh and President Marguerite Young were absent (excused).

Staff present included General Manager Alexander R. Coate, General Counsel Craig S. Spencer and Secretary of the District Rischa S. Cole.

## **BOARD OF DIRECTORS**

Vice-President Linney led the Pledge of Allegiance.

## **ANNOUNCEMENTS FROM CLOSED SESSION**

The Board, in closed session this morning, by a unanimous vote of the Directors attending, authorized the General Counsel to initiate litigation in one matter. The action, defendants and other particulars will be disclosed, upon inquiry, once the action is formally commenced. There were no other announcements required from closed session.

## **PUBLIC COMMENT**

- Addressing the Board were the following: 1) Athan Magganas, Adelphos LLC commented on the interruption to water service at 317 Lester Avenue in Oakland; 2) Ivette Rivera, EBMUD Gardener Foreman commented on the District's vegetation management and information contained in the documentation she provided to the Board at their places; 3) Mark Foley, President, AFSCME Local 2019 commented on a Washington Post article regarding Delta Airlines posters on the cost of union dues. Mr. Foley asked the Board to consider directing staff to restrict use of Delta Airlines for District-related travel and to send a letter to Delta Airlines regarding the posters; and 4) Peter Magganas commented on the interruption to water service at 317-319 Lester Avenue in Oakland.

The Board asked questions regarding the comments received from the Magganas and Mr. Foley and requested written reports on both items. Mr. Athan Magganas was referred to staff for follow up.

## **CONSENT CALENDAR**

- Items 7 and 8 were removed from the Consent Calendar for comment.
  - Motion by Director Coleman, seconded by Director Mellon, to approve the recommended actions for Items 1-6 and 9 on the Consent Calendar, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).
1. **Motion No. 071-19** – Approved the Regular Meeting Minutes of April 23, 2019.
  2. The following correspondence was filed with the Board: **1)** Letter to Board of Directors, dated May 14, 2019, from Ivette Rivera, regarding original employment application at EBMUD; Construction and Maintenance Division's roles and responsibilities for Foremen, Assistant Superintendents, and Superintendents; and the status of vegetation management; **2)** Washington Post article (undated) regarding Delta Airlines' posters on the cost of union dues; **3)** Memorandum to Board of Directors from Secretary of the District Rischa S. Cole entitled "Logistics for Offsite Meetings in Castro Valley, CA - May 28, 2019," dated May 14, 2019; **4)** Presentation entitled "Amendment to EBMUD Retirement System Ordinance (No. 40) - Section 21 Second Reading," dated May 14, 2019; **5)** Presentation entitled "GM's Report on Water and Wastewater Schedule of Rates and Charges, Capacity Charges and Other Fees and Setting Public Hearing Date," dated May 14, 2019; and **6)** Speakers' Bureau and Outreach Record CY19, dated May 14, 2019.

3. **Motion No. 072-19** – Authorized an agreement beginning on or after May 14, 2019 with Brown and Caldwell in an amount not to exceed \$1,995,000 for engineering services in preparation of a master plan for the Main Wastewater Treatment Plant.
4. **Motion No. 073-19** – Authorized an agreement beginning on or after May 14, 2019 with Carollo Engineers, Inc., in an amount not to exceed \$279,800 for supplemental construction inspection services for the South Interceptor 3<sup>rd</sup> Street Rehabilitation Phase 2 Project under SD-392.
5. **Motion No. 074-19** – Authorized an agreement beginning on or after May 14, 2019 with Gayner Engineers in an amount not to exceed \$1,183,530 for engineering and design services for improvements to buildings' heating, ventilation, and air conditioning, fire protection, and roof systems at the Main Wastewater Treatment Plant.
- 6.1. **Motion No. 075-19** – Authorized the direct award of a contract to Frank A. Olsen Company in the amount, after the addition of taxes and site inspections, not to exceed \$338,931 for supplying one 42-inch diameter ball valve for the District's Main Wastewater Treatment Plant Influent Pump Station.
- 6.2. **Motion No. 076-19** – Authorized the direct award of an agreement beginning on or after May 14, 2019 with Unico Mechanical Corporation in an amount not to exceed \$166,037 for the refurbishment of one 42-inch diameter ball valve for the Main Wastewater Treatment Plant Influent Pump Station.
7. **Motion No. 077-19** – Authorized an amendment to the agreement awarded under Board Motion No. 161-17 on September 26, 2017 with Pacific States Environmental Contractors, Inc. to increase the amount by \$6,306,000 to a total amount not to exceed \$21,306,000 for trench soils removal services.
  - Director Coleman pulled Item 7 to ask if the District is working with entities performing wetlands restoration to reuse District trench soils. General Manager Coate responded that as the District expands its pipeline replacement efforts, staff will be exploring all options for trench soils reuse including working with wetlands restoration groups.
  - Motion by Director Coleman, seconded by Director Mellon, to approve the recommended actions for Item 7, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).
8. **Motion No. 078-19** – Approved the Water Supply Assessment requested by the City of Oakland for the Oakland Waterfront Ballpark Project pursuant to California Water Code, Sections 10910-10915.
  - Director Coleman pulled Item 8 to ask about recycled water use for the project. There was discussion and the Board asked staff to engage the City of Oakland on the project to require recycled water use where appropriate and to ensure future water supply assessment documents include language that will require project developers to implement recycled water use in their plans when appropriate.

- Motion by Director Coleman, seconded by Director Mellon, to approve the recommended action for Item 8, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).

9.1.- **Resolution No. 35138-19** – Authorizing The Sale Of The Punchbowl Reservoir Property  
9.2. In Oakland, California, To Mr. Minh Doan.

- Motion by Director Coleman, seconded by Director Mellon, to approve the recommended actions for Items 9.1 and 9.2, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).

## **DETERMINATION AND DISCUSSION**

### 10. **Legislative Report.**

Legislative/Human Resources Committee Chair John A. Coleman reported the Committee met this morning and supported the staff recommended positions in Legislative Report No. 03-19. Manager of Legislative Affairs Marlaigne K. Dumaine summarized the bills and recommended actions contained in the report. The Board raised no questions. Next, Ms. Dumaine provided an update on state and federal legislative activities.

- Motion by Director Coleman, seconded by Director Patterson, to approve the recommended actions for Item 10, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).
- **Motion No. 079-19** – Received Legislative Report No. 03-19 and approved positions on the following bills: SUPPORT AB 557 (Wood) Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program; SUPPORT AB 1414 (Friedman) Urban Retail Water Suppliers: Reporting; SUPPORT AB 1588 (Gloria) Drinking Water and Wastewater Operator Certification Programs; and SUPPORT SB 487 (Caballero) Department of Water Resources: Aerial Snow Survey.

### 11. **Conduct A Second and Final Reading, and Vote On An Ordinance Amending Section 21 of the EBMUD Employees' Retirement System Ordinance (Ordinance No. 40).**

Manager of Employee Services Lisa A. Sorani reported this is the second reading of the ordinance to amend Section 21 of the Employees' Retirement System Ordinance. The first reading of the ordinance was conducted at the Regular Board meeting on April 23, 2019. The proposed update will change the actuarially assumed rate of return from 7.25 percent to 7.00 percent. This reduction was recommended as part of the June 30, 2018 Actuarial Evaluation and adopted by the Retirement Board at its September 20, 2018 meeting. The proposed update ensures the ordinance language is consistent with the change adopted by the Retirement Board and is in compliance with IRS regulations. The amendments would take effect 30 days after passage.

- Motion by Director Mellon, seconded by Director Patterson, to approve the recommended action for Item 11, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).

**Ordinance No. 370-19** – An Ordinance, Effective As Of July 1, 2019, Amending Section 21, “Optional Modification Of Retirement Allowance,” To Ordinance No. 40, Which Is The Employees’ Retirement System Ordinance (*Second Reading and Vote – Ordinance No. 370-19*).

12.1.- **File a Report and Set A Public Hearing for the Water and Wastewater System Schedule**  
12.2. **of Rates and Charges, Capacity Charges and Other Fees.**

Director of Finance Sophia D. Skoda presented an overview of the District’s proposed Fiscal Years 2020 and 2021 (FY20/FY21) budget as well as the water and wastewater system rates, charges and fees. Ms. Skoda reported that workshops were held on January 22 and March 26 to review the proposed operating and capital budgets as well as rates, charges and fees. The District hired an independent rate consultant in 2015 and 2019 to perform cost of service (COS) studies for its water and wastewater systems to determine the appropriate rates needed to support the costs identified in the FY20 and FY21 budgets. The proposed FY20 and FY21 rates incorporate the results of the COS studies as well as the increased revenue required to address proposed FY20 and FY21 expenditures.

For the Water System, staff recommends increasing water charges (service, flow, elevation, and private fire service) 6.5 percent overall for FY20 and an additional 6.25 percent overall for FY21. These increases support the proposed FY20 and FY21 operating and capital expenses. The proposed charges are based on the assumption that water consumption will be 141 million gallons per day (MGD) in FY20 and 143 MGD in FY21. Additionally, staff recommends maintaining the staged system of Drought Surcharges developed in the District’s COS study as a contingency plan in the event of a water shortage. The Drought Surcharge percentage is imposed on the potable Water Flow Charge when the Board declares a drought Stage 2, 3, or 4.

For the Wastewater System, staff recommends modifying the wastewater system charges for FY20 to include the 2019 Wastewater COS study adjustments, which result in some wastewater rates and charges decreasing and others increasing. The proposed rates for FY20 wastewater system charges would increase an additional 4.0 percent for FY21. The FY20 and FY21 wastewater rate increases support the District’s proposed FY20 and FY21 operating and capital expenses.

Ms. Skoda reviewed the monthly impacts to single family residence bills from the proposed water and wastewater rate increases; and summarized all proposed changes to rates and charges subject to Proposition 218 and other fees and charges not subject to Proposition 218. A public hearing on the recommendations and adoption of the budget, rates and charges is scheduled for the June 11, 2019 Board meeting. For the rates subject to Proposition 218, a notice was mailed to the record owners of parcels upon which the proposed charges will be imposed and tenants directly responsible for the payment of the proposed charges informing them of the proposed increases, the public hearing and Proposition 218 protest provisions.

The proposed rates and charges for the water and wastewater systems are recommended to be effective on bills issued on or after July 1, 2019 for FY20, and on or after July 1, 2020 for FY21. All other proposed changes to the other fees and charges for the water and wastewater systems including the changes to the Public Records Act Fees and Real Property Use Application Fees will be effective July 1, 2019. The proposed changes to the Recreation Use

Fees are effective January 1, 2020 for the 2020 increases and January 1, 2021 for the 2021 increases to coincide with the recreation season.

Staff responded to Board questions on how cannabis businesses are categorized and permitted by the District, and how tariffs on steel, cement and other supplies could potentially impact the FY20/21 budgets.

- Director Mellon left the room at 2:01 p.m. and returned at 2:05 p.m.
- Motion by Director Mellon, seconded by Director Patterson, to approve the recommended actions for Items 12.1-12.2, carried (5-0) by the following voice vote: AYES (Coleman, Katz, Linney, Mellon, and Patterson); NOES (None); ABSTAIN (None); ABSENT (McIntosh and Young).

**Motion No. 080-19** – Filed the General Manager’s Report and Recommendation for revisions to the Water and Wastewater System Schedule of Rates and Charges, Capacity Charges and Other Fees; and set a Public Hearing for Tuesday, June 11, 2019, during the Board’s regular meeting to consider the report and recommendation, and to comply with Proposition 218 requirements.

13. **General Manager’s Report.**

General Manager Alexander R. Coate reported the April 2019 Monthly Report had been provided in the Board’s packet, briefly highlighted the logistics for the May 28 Board meeting to be held at the Castro Valley Library in Castro Valley and asked the Board to let staff know if they had questions on the latest Speakers’ Bureau and Outreach Record.

**REPORTS AND DIRECTOR COMMENTS**

14. **Committee Reports.**

- Filed with the Board were the Sustainability/Energy and Finance/Administration Committee Minutes of April 23, 2019.
- Planning Committee Chair Doug Linney reported the Committee met at 9:45 a.m. and received information on the Bayfair Pumping Plant and Estudillo Avenue Pipeline Replacement and San Ramon Valley Recycled Water Program Pump Station R3000 projects.
- Legislative/Human Resources Chair John A. Coleman reported the Committee met at 10:15 a.m. and received information on Legislative Report No. 03-19, Workforce Development Strategies – Center for Employment Opportunities Pilot Project, and the Wastewater Plant Operator Training Program.

15. **Other Items for Future Consideration.**

None.

**16. Director Comments.**

- Director Coleman reported attending/participating in the following events: UMRWA Board meeting on April 26 in Pardee; Federal Affairs Committee meeting at the ACWA Spring Conference on May 7 in Monterey; Lafayette Rotary Band Concert speaking engagement on May 11 in Lafayette; meeting with Jim Wheeler with HDR on May 13 in Sacramento; and Special DERWA Board meeting on May 13 in Dublin. He reported on plans to attend the following events: Contra Costa Leadership Group Board meeting on May 17 in Walnut Creek; Kennedy-King Memorial Scholarship Awards dinner on May 17 in Concord; Foothill Conservancy event on May 18 in Plymouth; DERWA Board meeting on May 20 in Dublin; Walnut Creek City Council presentation on May 21 in Walnut Creek; and EBMUD Ward 2 briefing on May 23 in Lafayette.
- Director Mellon reported attending/participating in the following events: San Ramon Mayors' Breakfast on April 26 in San Ramon; Labor to Labor networking lunch on April 26 in Concord; J-Sei Fundraiser on April 26 in Berkeley; CERES Conference April 30 through May 1 in San Francisco; ACWA Spring Conference May 7-9 in Monterey; and Special DERWA Board meeting on May 13 in Dublin.
- Director Patterson reported attending/participating in the following events: EBMUD Wards 3, 5 and 6 briefing on April 25 in Oakland; Oakland Parks and Recreation Foundation's Spring for Parks event on April 25 in Oakland; and ACWA Spring Conference May 7-10 in Monterey.
- Directors Katz, Linney, McIntosh and President Young had no report.

**ADJOURNMENT**

At the request of Director Coleman, Vice-President Linney announced that the Board of Directors will close today's meeting in memory of former Congresswoman Ellen Tauscher, who passed away on April 29.

Vice-President Linney adjourned the meeting at 2:39 p.m.

SUBMITTED BY:

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Rischa S. Cole, Secretary of the District

APPROVED: May 28, 2019

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Marguerite Young, President of the Board





AGENDA NO. 3.  
 MEETING DATE May 28, 2019

TITLE AMITO PUMPING PLANT SECURITY FENCE

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Award a contract to the lowest responsive/responsible bidder, Chain Link Fence and Supply, Inc., in an amount, after the addition of taxes, not to exceed \$101,600 for supplying and installing approximately 620 linear feet of fence around the Amito Pumping Plant site beginning on or after May 28, 2019 under Request for Quotation No. 1914.

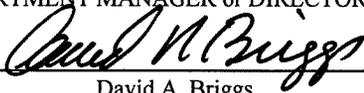
**SUMMARY**

Amito Pumping Plant and Summit South Reservoir are located on the same site in the Oakland Hills near Hiller Drive. In recent years, there have been a number of security incidents at this site. The contractor will install approximately 620 feet of District-standard security fence around the Amito Pumping Plant and Summit South Reservoir. The new fencing will protect District facilities against trespassers and vandalism. This item was presented at the May 8, 2018 Planning Committee meeting.

**DISCUSSION**

Amito Pumping Plant and Summit South Reservoir were constructed in the 1960s and are located at 102 Hiller Drive in the Hiller Highlands area of Oakland. Both facilities are partially below ground level. The site has been subject to dozens of documented incidents of trespassing, illegal dumping and vandalism. Although the Summit South Reservoir is adequately protected with an existing fence, the broader site is easily accessible and frequented by trespassers.

A perimeter fence around the entire shared site will be installed to secure the facilities and prevent trespassing. A District-standard security fence at the site will improve the safety and security of the District's finished water supply facilities. The District gathered input on the design and location of the fence in multiple meetings with the Hiller Highlands community. This project supports the District's Long-Term Infrastructure Investment Strategic Plan goal.

Funds Available: FY19		Budget Code: 783/8731/2012877	
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR		APPROVED
Operations and Maintenance	 David A. Briggs		 General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

## **VENDOR SELECTION**

Requests for quotations were sent to three resource organizations and 37 potential proposers, advertised in the Oakland Tribune newspaper, and posted to the District's website. Four quotes were received and the lowest qualified bid was accepted.

## **SUSTAINABILITY**

### **Economic**

Funding for this work is available in the FY19 budget in the Security System Improvements Project.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

### **Environmental**

A California Environmental Quality Act (CEQA) Notice of Exemption will be filed with Alameda County 30 days before the project begins.

## **ALTERNATIVES**

**Seek additional contractors.** This alternative is not recommended as the District engaged in a comprehensive solicitation process.

**Do not install the fence.** This alternative is not recommended because the site will remain vulnerable to trespassing and vandalism.

### Attachments

P-035 – Contract Equity Program Summary  
P-061 – Affirmative Action Summary



## CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> QUOTE NO.: 1914 Amito Pumping Plant Security Fence						<b>DATE:</b> May 9, 2019					
<b>CONTRACTOR:</b> Chain Link Fence and Supply, Inc. Livermore, CA 94550				Local / Small Business		<b>PERCENTAGE OF CONTRACT DOLLARS</b>					
<b>BID/PROPOSER'S PRICE:</b> \$101,600		<b>FIRM'S OWNERSHIP</b> Ethnicity: White      Gender: Men		<b>White Men</b> 25%		<b>White Women</b> 2%		<b>Ethnic Minorities</b> 25%		<b>Contracting Objectives</b> 100.0% 0.0% 0.0%	
<b>CONTRACT EQUITY PARTICIPATION</b>											
COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION						
			M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
<b>PRIME:</b> Chain Link Fence and Supply, Inc.  <b>SUBS:</b> None	\$101,600	White	X		100.0%						
<b>TOTAL</b>		\$101,600				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)</b>											
		White Men	White Women	Ethnic Minorities	Total Employees						
<b>No. of Employees:</b>		7	1	26	34						
<b>Percent of Total Employees:</b>		20.6%	2.9%	76.5%							
<b>MSA Labor Market %:</b>		32.3%	27.8%	39.9%							
<b>MSA Labor Market Location:</b>		9 Bay Area Counties									
<b>COMMENTS</b>											
Contract Equity Participation - 100% White Men participation.											
<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>				<b>Good Faith Outreach Efforts Requirement Satisfied</b>				<b>Award Approval Recommended</b>			
NA				NA							



## AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title: <b>Amito Pumping Plant Security Fence</b>		Ethnic Minority Percentages From U.S. Census Data							
			B	H	A/PI	AI/AN	TOTAL		
<b>Quote No.: 1914</b>	DATE: 5/9/2019	National	10.5	10.7	3.7	0.7	27.3		
		9 Bay Area Counties	5.5	16.2	14.2	0.4	39.9		
		Alameda/CC Counties	10.7	15.6	15.4	0.5	46.2		
R=Recmmd P=Prime S=Sub	Composition of Ownership	Number of Ethnic Minority Employees							
Company Name, Owner/Contact Person, Address, and Phone Number		B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %	
RP	<b>WM: L/SBE</b>	<b>Company Wide</b>	0	26	0	0	26	76.5%	39.9%
Chain Link Fence and Supply, Inc. Kenny Stanley 7650 Hawthorne Avenue, Suite 2 Livermore, CA 94550  925-606-8167		Manager/Prof	0	1	0	0	1	20.0%	
		Technical/Sales	0	2	0	0	2	50.0%	
		Clerical/Skilled	0	23	0	0	23	92.0%	
		Semi/Unskilled	0	0	0	0	0	0.0%	
		<b>Bay Area</b>	0	26	0	0	26	76.5%	
		AA Plan on File: NA	Date of last contract with District: 10/18/2018						
		Co. Wide MSA: 9 Bay Area Counties	# Employees-Co. Wide: 34		Bay Area: 34				
P	<b>WM: SBE</b>	<b>Company Wide</b>	INFORMATION NOT PROVIDED						
Crusader Fence Company, Inc. Jeff Petersen 3115 Gold Valley Drive Rancho Cordova, CA 95742  707-645-9191		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		<b>Bay Area</b>							
		Co. Wide MSA:							
P	<b>EMM: H: L/SBE</b>	<b>Company Wide</b>	1	27	1	1	30	81.1%	48.4%
Golden Bay Fence Plus Iron Works, Inc. Paul W. Chavez 4104 S. B Street Stockton, CA 95206  209-944-9754		Manager/Prof	0	0	0	1	1	25.0%	
		Technical/Sales	0	1	1	0	2	50.0%	
		Clerical/Skilled	0	1	0	0	1	50.0%	
		Semi/Unskilled	1	25	0	0	26	96.3%	
		<b>Bay Area</b>	0	10	0	0	10	100.0%	
		Co. Wide MSA: California	# Employees-Co. Wide: 37		Bay Area: 10				
P	<b>WM</b>	<b>Company Wide</b>	1	15	1	0	17	77.3%	44.0%
Vintage Contractors, Inc. Clarence H. Moreland III 2367 Ocean Avenue San Francisco, CA 94127  415-282-1602		Manager/Prof	0	0	1	0	1	25.0%	
		Technical/Sales	1	0	0	0	1	50.0%	
		Clerical/Skilled	0	0	0	0	0	0.0%	
		Semi/Unskilled	0	15	0	0	15	100.0%	
		<b>Bay Area</b>	1	12	1	0	14	82.4%	
		Co. Wide MSA: San Francisco	# Employees-Co. Wide: 22		Bay Area: 17				

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)



AGENDA NO.  
MEETING DATE

4.  
May 28, 2019

**TITLE** LARGE DIAMETER VALVES AND ASSOCIATED EQUIPMENT

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Award a contract to the lowest responsive/responsible bidder Ferguson Waterworks in an amount, after the addition of taxes, not to exceed \$151,530 for supplying two large-diameter valves and one actuator for the Maloney Pumping Plant and La Honda Rate Control Station, beginning on or after May 28, 2019 under Request for Quotation (RFQ) No. 1915.

**SUMMARY**

This contract is for the pre-purchase of equipment for the fabrication and delivery of two large diameter valves and associated equipment as part of Specification 2135, the Maloney Pumping Plant and Sobrante Water Treatment Plant Improvements Project. The scope of the supply agreement includes the following equipment:

- One 42” Flanged AWWA Butterfly Valve
- One 42” AWWA Ball Valve
- One Motor Actuator for 42” AWWA Ball Valve

**DISCUSSION**

Specification 2135 includes improvements to Maloney Pumping Plant and the La Honda Rate Control Station. The contract includes equipment for improvements to the pumping plant and rate control station, which supports the District’s Long-Term Infrastructure Investment Strategic Plan goal. The pre-purchase is required due to the long lead time for submittals, fabrication, inspection, testing and delivery of the equipment. The contract advances the delivery of critical path equipment by four or more months, allowing the Specification 2135 contractor to meet key outage windows for system connections.

Funds Available: FY19		Budget Code: 551/2012908/7333/5399
DEPARTMENT SUBMITTING  Finance	DEPARTMENT MANAGER or DIRECTOR   Sophia D. Skoda	APPROVED   General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

## **VENDOR SELECTION**

An RFQ was sent to 177 potential proposers, two resource organizations, advertised in the Oakland Tribune, and posted on the District's website. A total of three bids were received and Ferguson Waterworks was the lowest responsive/responsible bidder.

## **SUSTAINABILITY**

### **Economic**

This item is included in the FY19 budget for the Maloney Pressure Zone Facility.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

### **Environmental**

Ferguson Waterworks has a centralized recycling program at their distribution centers. They have upgraded lighting within their stores and distribution centers to attain green building certification; replaced faucet aerators within their restroom facilities to low flow; and encourage associates to utilize electronic media for meetings, rather than flying or driving.

## **ALTERNATIVES**

**Postpone purchase of valves and related equipment.** This alternative is not recommended because of the long lead times needed for the manufacturing and delivery of the equipment and the need for the equipment for critical path winter outage window work for Specification 2135.

**Rebid the RFQ.** This alternative is not recommended as the District engaged in a fair and competitive bid process.

### Attachments

P-035 – Contract Equity Program Summary

P-061 – Affirmative Action Summary



## CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

TITLE <b>QUOTE NO.: 1915</b> Large Diameter Valves and Associated Equipment						DATE: May 10, 2019							
CONTRACTOR: Ferguson Waterworks Hayward, CA 94545				Local Business				<b>PERCENTAGE OF CONTRACT DOLLARS</b>					
				Availability Group		Contracting Objectives			Participation				
<b>BID/PROPOSER'S PRICE:</b>		<b>FIRM'S OWNERSHIP</b>		White Men		25%			100.0%				
		Ethnicity	Gender	White Women		2%			0.0%				
\$151,530		White	Men	Ethnic Minorities		25%			0.0%				
<b>CONTRACT EQUITY PARTICIPATION</b>													
COMPANY NAME		ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION							
				M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign	
<b>PRIME:</b> Ferguson Waterworks		\$151,530	White	X		100.0%							
<b>SUBS:</b> None													
<b>TOTAL</b>		\$151,530				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)</b>													
		White Men		White Women		Ethnic Minorities		Total Employees					
No. of Employees:		14,104		4,562		6,545		25,211					
Percent of Total Employees:		55.9%		18.1%		26.0%							
MSA Labor Market %:		39.0%		33.7%		27.3%							
MSA Labor Market Location:		Total USA											
<b>COMMENTS</b>													
Contract Equity Participation - 100% White Men participation.													
Workforce Profile & Statement of Nondiscrimination Submitted				Good Faith Outreach Efforts Requirement Satisfied				Award Approval Recommended					
NA				NA									



## AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title: <b>Large Diameter Valves and Associated Equipment</b>		Ethnic Minority Percentages From U.S. Census Data							
			B	H	A/PI	AI/AN	TOTAL		
Quote No.: 1915		DATE: 5/10/2019	National	10.5	10.7	3.7	0.7	27.3	
			9 Bay Area Counties	5.5	16.2	14.2	0.4	39.9	
			Alameda/CC Counties	10.7	15.6	15.4	0.5	46.2	
R=Recmmd P=Prime S=Sub	Composition of Ownership	Number of Ethnic Minority Employees							
Company Name, Owner/Contact Person, Address, and Phone Number			B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %
RP	WM: LBE	Company Wide	2,901	2,416	309	131	5,757	22.9%	27.3%
Ferguson Waterworks Charlotte Murch 27750 Industrial Blvd. Hayward, CA (Local Office) 757-989-2870		Manager/Prof	1,810	355	203	63	2,431	21.9%	
		Technical/Sales	420	1,014	202	42	1,678	19.8%	
		Clerical/Skilled	503	684	227	18	1,432	33.9%	
		Semi/Unskilled	168	363	74	8	613	44.3%	
		Bay Area	58	157	62	6	283	63.2%	
		AA Plan on File:	NA		Date of last contract with District:		5/9/2019		
		Co. Wide MSA:	Total USA		# Employees-Co. Wide:		25,191	Bay Area:	448
P	WM: LBE	Company Wide	1	71	9	2	83	43.9%	44.0%
R & B Company Carolyn Barela 3486 Investment Blvd. Hayward, CA 94545 (Local Office) 408-436-1699		Manager/Prof	0	9	0	0	9	22.5%	
		Technical/Sales	1	12	3	0	16	29.1%	
		Clerical/Skilled	0	10	4	0	14	50.0%	
		Semi/Unskilled	0	40	2	2	44	66.7%	
		Bay Area	1	52	8	1	62	48.4%	
		Co. Wide MSA:	San Francisco		# Employees-Co. Wide:		189	Bay Area:	128
P	WM	Company Wide	INFORMATION NOT PROVIDED						
Val-Matic Valve & Manufacturing Mark Keenehan 905 Riverside Drive Elmhurst, IL 60126 630-993-4005		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							
		Co. Wide MSA:							

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)



AGENDA NO. 5.  
 MEETING DATE May 28, 2019

**TITLE MAIN WASTEWATER TREATMENT PLANT OXYGEN PLANT RECOATING**

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Award a contract to the lowest responsive/responsible bidder, F.D. Thomas, Inc., in the amount of \$531,445 for construction of the Main Wastewater Treatment Plant (MWWTP) Oxygen (O2) Plant Recoat Project under SD-411. In awarding this contract, the Board of Directors finds that this work cannot be satisfactorily performed under civil service.

**SUMMARY**

The MWWTP O2 Plant consists of two plants, O2 Plant No. 1 and O2 Plant No. 2, for redundancy. The O2 Plant also contains four 44-foot tall liquid oxygen (LOX) tanks for storage, two 77-foot tall cold box towers, air surge tanks, and appurtenances. The facility has experienced a moderate level of corrosion due to the age of the facility, including deterioration of existing paint on steel tanks, towers, piping, and other equipment. This project will provide new coatings on the majority of this critical infrastructure, including surface preparations and recoating of LOX tanks, cold boxes, air surge tanks, appurtenances, and corroded catwalk supports located on the cold box towers.

**DISCUSSION**

Recoating work is required to maintain the long-term reliability of the O2 Plant, which is critical to the wastewater treatment process. O2 Plant surfaces will be recoated and any damaged concrete found on the supports and bases will be repaired. Because the existing paint contains lead, this project includes removal and abatement of lead-containing paint. The contractor will provide all scaffolding, and will execute all the required lead hazard control activities, containment, and confined space entry tasks.

Work under the MWWTP O2 Plant Recoat Project must be done during the dry weather season and will be conducted in two phases over a two-year period. The new coatings will have an extended warranty period of five years for defects of material and workmanship. This project supports the District's Long-Term Infrastructure Investment Strategic Plan goal for meeting operational needs and reliability goals by effectively maintaining infrastructure.

Funds Available: FY19		Budget Code: WWC/927/7999/2013032/5561	
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR		APPROVED
Wastewater	 Eileen M. White		 General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

## **BID RESULTS**

Bid documents were issued to 22 resource organizations and five prospective bidders. One bid was received for \$531,445. The bid summary is attached. The engineer's estimate for this work is \$586,000.

The lowest responsive/responsible bidder, F.D. Thomas, Inc., is licensed to perform work in California, and is not on the State Department of Industrial Relations (DIR) debarment list. F.D. Thomas, Inc. and its listed subcontractor are properly registered with the State DIR. In the past five years, F.D. Thomas, Inc. has not filed a Government Code Claim and has not initiated any litigation against the District.

## **SUSTAINABILITY**

### **Economic**

This item is included in the FY19 budget for Routine Capital Equipment Replacement.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

Work under this contract is subject to the payment of current prevailing wages according to determinations for each craft as established by the Director of Industrial Relations of the State of California.

Local 444 was notified of this contract on January 22, 2019. The District and Local 444 met on March 7, 2019 and April 3, 2019 to discuss Local 444's concerns related to contracting out this work since painters are represented by Local 444. There are two painters in the staffing plan for the Wastewater Treatment Division and 11 painters in the staffing plan for the Facilities Maintenance and Construction Division. Of these 13 positions, there is one vacancy, and the recruitment is in process. The painters in both divisions have a backlog of work, and the completion of this project would require at least six painters. The District is not staffed for this peak painting workload. As the District and Local 444 were unable to resolve the issues, Local 444 has advised the District that it may address the Board regarding understaffing at the Board meeting. The District's reasons for contracting, as explained in this BD-1, are consistent with the District's criteria for contracting out work.

### **Environmental**

A California Environmental Quality Act Notice of Exemption was filed with the Alameda County Clerk on April 9, 2019.

## ALTERNATIVES

**Perform the work entirely with District forces.** This alternative is not recommended as the District does not have the capacity to perform this work within the recommended time frame. In addition, removal and management of lead-based paint is highly specialized work which the District does not routinely perform.

**Do not award this contract.** This alternative is not recommended because continuing deterioration could compromise the reliability of the MWWTP and result in significant costs for repairing further damage.

**Rebid this work.** Rebidding this work is not recommended because the bid received is reasonable and rebidding the work would result in a significant delay and increased compliance risks.

## Attachments

### Bid Summary

P-035 – Contract Equity Program Summary

P-061 – Affirmative Action Summary

**EAST BAY MUNICIPAL UTILITY DISTRICT**

**SPECIAL DISTRICT NO. 1**

**SPECIFICATION SD-411  
MAIN WASTEWATER TREATMENT PLANT  
O2 PLANT RECOAT**

**May 1, 2019**

**BID SUMMARY**

<b>BIDDER</b>		<b>TOTAL BID</b>
1.	F.D. Thomas, Inc.	\$531,445

Number of Proposals sent to Contractor	5
Number of Proposals sent to Resource Orgs	22
Number of Proposals sent to MBEs	1
Number of Proposals sent to WBEs	0
Number of Proposals sent to SBs	0
Number of bids received	1

Engineer's Estimate: \$586,000



## CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> SPEC NO.: SD-411 Main Wastewater Treatment Plant O2 Plant Recoat						<b>DATE:</b> May 10, 2019						
<b>CONTRACTOR:</b> F.D. Thomas, Inc. Central Point, OR 97502 Sole Bidder				<b>PERCENTAGE OF CONTRACT DOLLARS</b>								
<b>BID/PROPOSER'S PRICE:</b> \$531,445		<b>FIRM'S OWNERSHIP</b>		<b>Availability Group</b>		<b>Contracting Objectives</b>		<b>Participation</b>				
		Ethnicity		Gender		White Men		25%		0.0%		
		Alaskan Native		Men		White Women		9%		0.0%		
						Ethnic Minorities		25%		100.0%		
<b>CONTRACT EQUITY PARTICIPATION</b>												
<b>COMPANY NAME</b>		<b>ESTIMATED AMOUNT</b>	<b>ETHNICITY</b>	<b>GENDER</b>		<b>CONTRACTING PARTICIPATION</b>						
				M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
<b>PRIME:</b> F.D. Thomas, Inc.		\$422,015	Alaskan	X				79.4%				
<b>SUBS:</b> D2 Industrial Services		\$109,430	Alaskan	X				20.6%				
<b>TOTAL</b>		\$531,445				0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
<b>CONTRACTOR'S WORKFORCES PROFILE (From P-025 Form)</b>												
			<b>White Men</b>		<b>White Women</b>		<b>Ethnic Minorities</b>		<b>Total Employees</b>			
<b>No. of Employees:</b>			151		16		136		303			
<b>Percent of Total Employees:</b>			49.8%		5.3%		44.9%					
<b>MSA Labor Market %:</b>			39.0%		33.7%		27.3%					
<b>MSA Labor Market Location:</b>			Total USA									
<b>COMMENTS</b>												
Contract Equity Participation - 100% Ethnic Minority participation.												
<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>				<b>Good Faith Outreach Efforts Requirement Satisfied</b>				<b>Award Approval Recommended</b>				
NA				YES								





AGENDA NO.  
MEETING DATE

6.1.  
May 28, 2019

TITLE LAW ENFORCEMENT SERVICES – CALAVERAS COUNTY

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize an agreement beginning on or after July 1, 2019 with Calaveras County in an amount not to exceed \$258,000 annually for law enforcement services at Camanche Reservoir Recreation Area and on adjacent District watershed lands for three years with one option to renew for an additional three-year period for a total cost of \$1,629,000.

**SUMMARY**

The Calaveras County Sheriff’s Office will provide up to two deputy sheriffs to patrol District lands and facilities in Calaveras County. Services include incident response and routine patrol, which are needed to enforce all applicable codes, laws, and District rules and regulations in the recreation areas and watershed lands located in Calaveras County.

**DISCUSSION**

For more than 30 years, Calaveras County sheriff deputies have provided high-visibility patrol services in the Calaveras County portion of the Mokelumne watershed. Deputies familiar with the District’s properties, regulations, and issues of concern will perform this patrol service. A similar service is provided by Amador County for the Amador portion of the Mokelumne watershed. Regular patrol of District facilities, particularly at the Camanche Reservoir Recreation Area, is critical to maintaining visitor and employee safety, and protecting natural resources and facilities. The proposed agreement will also ensure adherence to the District’s Recreation Plan submitted to the Federal Energy Regulatory Commission pursuant to the license for Pardee and Camanche Powerhouses. This service supplements general law enforcement provided by Calaveras County.

Contracting with the Calaveras County Sheriff’s Office is preferable to contracting with a private security firm because those firms cannot provide the law enforcement services the District requires, including a centralized dispatch service with ready access to additional resources when needed, the power to arrest

Funds Available: FY		Budget Code:
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR	APPROVED
Water and Natural Resources	 Michael T. Tognolini	 General Manager

and transport, and the ability to issue citations for District ordinance violations, county ordinances, fish and wildlife regulations, and others.

The proposed agreement includes a dual indemnification clause as requested by Calaveras County. The same clause was approved and included in the 2013 agreement for special patrol services with Calaveras County. The clause protects both Calaveras County and the District equally from liability. Board Resolution No. 33278-01 authorizes this dual indemnification clause.

## **SUSTAINABILITY**

### **Economic**

Funding for this work is available in the proposed FY20/21 operating budget.

### **Social**

This contract provides enhanced visitor safety and recreation enjoyment through enforcement of applicable codes, laws and District rules and regulations.

### **Environmental**

Rule enforcement under this contract provides enhanced protection for natural resources in Calaveras County.

## **ALTERNATIVES**

**Do not provide contracted law enforcement services and rely on basic county law enforcement.** This alternative is not recommended as it would diminish patrol and enforcement at campgrounds and recreation areas, and impact public safety and District assets.

**Do not contract with Calaveras County and contract for law enforcement services with a private security firm.** This alternative is not recommended as private security firms do not provide the full range of law enforcement services and our multi-year relationship with the County has resulted in safe and secure watershed and recreation areas.



AGENDA NO.  
MEETING DATE

6.2.  
May 28, 2019

**TITLE CAMANCHE RESERVOIR RECREATION AREA CONCESSION MANAGEMENT  
CONTRACT AMENDMENT**

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Amend the contract with Urban Park Concessionaires (UPC) for the Camanche Reservoir Recreation Area to exercise an optional five-year extension and decrease the franchise fee payments from eight percent to six percent for a period of 24 months. In exchange, the concessionaire will fully fund the replacement of four lodging units at Camanche North Shore Recreation Area.

**SUMMARY**

The District entered into a concession management contract with UPC in October 1996. The proposed contract amendment would guarantee the optional five-year extension noted in the current contract and reduce from eight percent to six percent the franchise fees paid by UPC to the District for a period of two years. In exchange, UPC agrees to pay up to \$550,000 for replacement of the four aging visitor motel units with new, state-of-the-art units. One of the four new lodging units will be fully compliant with the Americans with Disabilities Act (ADA). The project was discussed at the April 9, 2019 Planning Committee meeting.

**DISCUSSION**

UPC has performed well in managing the Camanche Reservoir Recreation Management contract. The contract allows UPC to collect all revenue from recreation activities at Camanche North and South Shore Recreation Areas in exchange for payment of franchise and maintenance fees totaling 28 percent of gross revenue in a typical year. The current franchise fee is eight percent of gross revenue. UPC must also operate and maintain the facilities to District standards, and hold specified insurance and indemnification coverages. Most infrastructure upgrades and replacements are normally borne by the District. UPC's strong performance means that customer satisfaction is high, public safety has been a priority, infrastructure is well maintained, and financial performance indicators have been met.

The proposed amendment would be the fourth since the contract was first executed. The first amendment in 2003 extended the contract until 2016, revised the fees upward, and clarified provisions defining gross revenue. The second amendment further extended the contract, required UPC to install a new covered

Funds Available: FY		Budget Code:
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR	APPROVED
Water and Natural Resources	<i>Michael Tognolini</i> Michael T. Tognolini	<i>Alexander R. Crews</i> General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

berth boat dock at their expense, and updated insurance and indemnification provisions. The third amendment in 2015 was precipitated by the drought of 2014-2016 and created a tiered fee structure to lower the payments made by UPC to the District in low water years, and increase fees in favorable years. The proposed fourth amendment is similar to the second amendment in that it enlists UPC to make important and substantial infrastructure investments that would otherwise be borne by the District at a later date. The motel units to be replaced are nearly 50 years old and past the point of repair.

## **SUSTAINABILITY**

### **Economic**

Based on calculated revenues and reservoir elevations for 2018, the District will receive approximately \$104,000 less in franchise fees for each of the next two years. In exchange, the District will be able to forego a near-term expense estimated at more than \$500,000.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

The amendment provides for ADA-compliant access to lodging, increasing accessibility and upgrading the overall experience for all overnight guests.

### **Environmental**

The project is exempt from California Environmental Quality Act (CEQA) requirements because it will replace existing units.

## **ALTERNATIVE**

**Do not amend the contract.** This alternative is not recommended as this would encumber the District with a large expense and cause the motel unit facilities to be out of service for a considerably longer period of time.

### Attachments

P-035 – Contract Equity Program Summary

P-061 – Affirmative Action Summary



## CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> <i>General Services Agreement</i> Camanche Reservoir Recreation Area Concession Management Contract Amendment						<b>DATE:</b> May 23, 2019						
<b>CONTRACTOR:</b>				<b>PERCENTAGE OF CONTRACT DOLLARS</b>								
Urban Park Concessionaires (UPC) Red Bluff, CA 96080				<b>Availability Group</b>				<b>Contracting Objectives</b>		<b>Participation</b>		
<b>BID/PROPOSER'S PRICE:</b>		<b>FIRM'S OWNERSHIP</b>		<b>White Men</b>		<b>25%</b>		<b>100.0%</b>				
		<b>Ethnicity</b>	<b>Gender</b>	<b>White Women</b>		<b>6%</b>		<b>0.0%</b>				
NA		White	Men	<b>Ethnic Minorities</b>		<b>25%</b>		<b>0.0%</b>				
<b>CONTRACT EQUITY PARTICIPATION</b>												
<b>COMPANY NAME</b>		<b>ESTIMATED AMOUNT</b>	<b>ETHNICITY</b>	<b>GENDER</b>		<b>CONTRACTING PARTICIPATION</b>						
				<b>M</b>	<b>W</b>	<b>White-Men</b>	<b>White-Women</b>	<b>Ethnic Minorities</b>	<b>Unclassified</b>	<b>Publicly Held Corp.</b>	<b>Gov't/Non Profit</b>	<b>Foreign</b>
<b>PRIME:</b> Urban Park Concessionaires (UPC)		NA	White	X		100.0%						
<b>SUBS:</b> None												
<b>TOTAL</b>		NA				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)</b>												
			<b>White Men</b>		<b>White Women</b>		<b>Ethnic Minorities</b>		<b>Total Employees</b>			
<b>No. of Employees:</b>			16		13		12		41			
<b>Percent of Total Employees:</b>			39.0%		31.7%		29.3%					
<b>MSA Labor Market %:</b>			35.0%		30.9%		34.1%					
<b>MSA Labor Market Location:</b>			California									
<b>COMMENTS</b>												
<i>Contract Equity Participation - 100% White Men participation.</i>												
<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>				<b>Good Faith Outreach Efforts Requirement Satisfied</b>				<b>Award Approval Recommended</b>				
NA				NA								





AGENDA NO.  
MEETING DATE

7.  
May 28, 2019

TITLE CENTRALIZED SECURITY SYSTEM ACCESS CONTROL UPGRADE

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize an agreement beginning on or after May 28, 2019 with G4S Secure Integration, LLC (G4S) in an amount not to exceed \$493,389 for upgrading the District’s centralized security system’s software and hardware.

**SUMMARY**

G4S will upgrade the District’s centralized security system software from C-Cure 800 to C-Cure 9000 and will replace the related computer servers and workstations with new equipment. This work is necessary to ensure adequate security at District facilities.

**DISCUSSION**

The District’s centralized security system is used to monitor and control access to various critical District facilities through coded key cards. The C-Cure 800 system was installed in 2005 and is the backbone of the security system for these facilities. The vendor, Software House/Tyco Security Products (Software House), recently announced that support for C-Cure 800 will end after December 2019. This project will upgrade the existing system to C-Cure 9000. The upgrade will be completed without interruption to District security. The software upgrade is included within the integration services contract. Once upgraded, the new platform will provide the District with enhanced security. This project supports the District’s Long-Term Financial Stability Strategic Plan goal.

**SERVICE PROVIDER SELECTION**

A Request for Proposal (RFP) was sent to eight firms certified by Software House. All firms expressed interest in the project and signed a non-disclosure agreement prior to receiving a copy of the RFP. Four proposals were received and evaluated by the District. Proposals were evaluated based on project approach, relevant experience, cost, schedule, client references, and contract equity considerations. G4S received the highest overall score.

Funds Available: FY19		Budget Code: 783/7999/2011747
DEPARTMENT SUBMITTING  Water Operations	DEPARTMENT MANAGER or DIRECTOR  <i>David A. Briggs</i> David A. Briggs	APPROVED  <i>Alexander R. Coate</i> Alexander R. Coate

Contact the Office of the District Secretary with questions about completing or submitting this form.

## **SUSTAINABILITY**

### **Economic**

Funding for the project is available in the FY19 budget for the VA Security System Improvements Project.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

## **ALTERNATIVES**

**Complete the work with District forces.** This alternative is not recommended because staff does not have the specialized training and vendor certification necessary to perform this work.

**Do not perform the work.** This alternative is not recommended because the existing C-Cure 800 software will not be supported by the vendor after December 2019. The security system would be vulnerable to cybersecurity threats. Switching software platforms is also not viable due to the extensive hardware modifications needed.

### Attachments

P-035 – Contract Equity Program Summary

P-061 – Affirmative Action Summary



# CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> <b>Professional Services Agreement</b> Centralized Security System Access Control Upgrade	<b>DATE:</b> April 30, 2019
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CONTRACTOR:		PERCENTAGE OF CONTRACT DOLLARS			
G4S Secure Integration LLC Livermore, CA		Local Business	Availability Group	Contracting Objectives	Participation
BID/PROPOSER'S PRICE:	FIRM'S OWNERSHIP		White Men	25%	100.0%
	Ethnicity	Gender	White Women	6%	0.0%
	\$493,389	White	Men	Ethnic Minorities	25%

CONTRACT EQUITY PARTICIPATION												
COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION							
			M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign	
<b>PRIME:</b> G4S Secure Integration LLC	\$493,389	White	X		100.0%							
<b>SUBS:</b> None												
<b>TOTAL</b>	\$493,389				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)				
	White Men	White Women	Ethnic Minorities	Total Employees
<b>No. of Employees:</b>	408	65	224	697
<b>Percent of Total Employees:</b>	58.5%	9.3%	32.1%	
<b>MSA Labor Market %:</b>	39.0%	33.7%	27.3%	
<b>MSA Labor Market Location:</b>	Total USA			

**COMMENTS**

*Contract Equity Participation - 100% White Men participation.*

<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>	<b>Good Faith Outreach Efforts Requirement Satisfied</b>	<b>Award Approval Recommended</b>
NA	NA	



### AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title: <b>Centralized Security System Access Control Upgrade</b>		Ethnic Minority Percentages From U.S. Census Data								
			B	H	A/PI	AI/AN	TOTAL			
<b>Professional Services Agreement</b>		DATE: 4/30/2019	<b>National</b>		10.5	10.7	3.7	0.7	27.3	
			<b>9 Bay Area Counties</b>		5.5	16.2	14.2	0.4	39.9	
			<b>Alameda/CC Counties</b>		10.7	15.6	15.4	0.5	46.2	
R=Recmmd P=Prime S=Sub	Composition of Ownership	<b>Number of Ethnic Minority Employees</b>								
Company Name, Owner/Contact Person, Address, and Phone Number			B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %	
RP	<b>WM: LBE</b>	<b>Company Wide</b>	53	126	38	0	217	31.1%	27.3%	
G4S Secure Integration LLC Lisa Kaiser 1200 Landmark Center, Suite 1300 Omaha, NE 402-233-7673		Manager/Prof	16	44	18	1	79	23.4%		
		Technical/Sales	31	74	15	2	122	39.9%		
		Clerical/Skilled	6	8	5	0	19	35.8%		
		Semi/Unskilled	0	0	0	0	0	0.0%		
		<b>Bay Area</b>	13	11	0	0	24	17.9%	39.9%	
		AA Plan on File: <b>NA</b>	Date of last contract with District: <b>NA</b>							
		Co. Wide MSA: <b>Total USA</b>	# Employees-Co. Wide: <b>697</b>				Bay Area: <b>134</b>			
P	<b>PHC: LBE</b>	<b>Company Wide</b>	4,804	3,333	1,897	434	10,468	23.5%	27.3%	
Johnson Controls Froy Aparicio 25954 Eden Landing Road Hayward, CA 94545 510-600-5175		Manager/Prof	596	677	872	267	2,412	18.9%		
		Technical/Sales	166	75	64	67	372	11.9%		
		Clerical/Skilled	1,801	1,026	451	12	3,290	17.9%		
		Semi/Unskilled	2,241	1,555	510	88	4,394	42.7%		
		<b>Bay Area</b>	0	0	0	0	0	0.0%	39.9%	
		Co. Wide MSA: <b>Total USA</b>	# Employees-Co. Wide: <b>44,599</b>				Bay Area: <b>0</b>			
P	<b>PHC: LBE</b>	<b>Company Wide</b>	14	30	6	0	50	55.6%	39.9%	
Siemens Industry, Inc. Sam Chritoon 25821 Industrial Blvd., Suite 300 Hayward, CA 94545 510-305-7896		Manager/Prof	5	20	3	0	28	49.1%		
		Technical/Sales	4	6	1	0	11	68.8%		
		Clerical/Skilled	3	3	2	0	8	66.7%		
		Semi/Unskilled	2	1	0	0	3	60.0%		
		<b>Bay Area</b>	14	30	6	0	50	55.6%	39.9%	
		Co. Wide MSA: <b>9 Bay Area Counties</b>	# Employees-Co. Wide: <b>90</b>				Bay Area: <b>90</b>			
P	<b>WM</b>	<b>Company Wide</b>	INFORMATION NOT PROVIDED							
RFI Enterprises Rick Corr 360 Turtle Creek Court San Jose, CA 95125 408-882-4231		Manager/Prof								
		Technical/Sales								
		Clerical/Skilled								
		Semi/Unskilled								
		<b>Bay Area</b>								
		Co. Wide MSA:								

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)



AGENDA NO.  
MEETING DATE

8.  
May 28, 2019

TITLE TRENCH SOILS MASTER PLAN

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize an agreement beginning on or after May 28, 2019 with Terraphase Engineering, Inc. in an amount not to exceed \$149,700 to prepare a trench soils master plan.

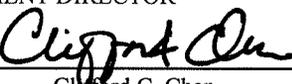
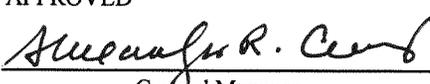
**SUMMARY**

The District's last trench soils master plan was completed in 2007. Since then, the District has significantly increased its trench soil generation with the expansion of pipeline replacement. This project will assess the District's current trench soils management practices and develop alternatives for improving operations related to soils generation, transporting soils and management of the disposal sites.

**DISCUSSION**

Trench soils are generated from pipeline repair and replacement activities. The initial trench soils master plan was developed in 1995 and an update was completed in 2007. In 2007, prior to the Pipeline Rebuild Program, the District replaced approximately six miles of pipe. With the inception of the Pipeline Rebuild Program, the District established an annual goal for pipe replacement. For FY 2019, the annual goal is 15 miles of pipe and the District will increase the annual replacement rate to 20 miles by FY 2021. Trench soil generation will increase as the pipeline replacement program expands, and management of trench soils will require thorough evaluation. This project will create a ten-year plan that promotes sustainability and reduces the life cycle cost of trench soil generation, storage, and disposal.

The project's scope of work includes an assessment of the District's current soils management practices, and recommendations in the following areas: 1) reducing soils production, 2) evaluating new stockpile sites, 3) managing existing stockpile sites, 4) marketing soils for reuse, 5) improving hydro-excavation slurry storage and disposal practices, and 6) improving construction specifications to encourage reuse. Through this project, a trench soil database will be developed for better management decisions. Each alternative recommended in the master plan will be evaluated based on its financial, environmental and social considerations. This project supports the District's Water Quality and Environmental Protection and Long-Term Infrastructure Investment Strategic Plan goals.

Funds Available: FY19, CIP #000652, Page 47		Budget Code: WSC\790\7999\5231
DEPARTMENT SUBMITTING <u>Operations and Maintenance</u>	DEPARTMENT DIRECTOR  Clifford C. Chan	APPROVED  General Manager

## **CONSULTANT SELECTION**

Requests for proposals were sent to 58 firms, including 11 minority-owned firms, and posted on the District's website. Three firms submitted proposals. Terraphase Engineering Inc. was selected based on the consultant's environmental and soil management expertise. In addition to their qualifications, Terraphase's proposal demonstrated a thorough understanding of the master plan purpose and scope.

## **SUSTAINABILITY**

### **Economic**

Funding for this item is included in the FY19 budget for the Trench Spoils Disposal Sites.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

Locals 2019 and 21 were notified of this agreement on January 14, 2019. Local 2019 issues were addressed at meetings on February 6, 2019 and February 15, 2019 and resolved. Local 21 did not raise any specific issues related to this agreement.

### **Environmental**

The project will create a long-term plan to address trench soils generated as part of the District's pipeline infrastructure activities. The master plan will reduce greenhouse gas emissions, address pollution prevention, and evaluate opportunities to recycle and reuse trench soils.

## **ALTERNATIVES**

**Perform the work with District staff.** This alternative is not recommended because District staff does not have the necessary expertise. The work requires expertise in soils generation reduction, soils management improvements, and soils reuse marketing.

**Do not perform the work.** This alternative is not recommended because the work is required to ensure regulatory compliance, establish priorities for trench soils management, and develop a plan to manage trench soils as the District increases its pipeline replacement.

### Attachments

P-035 – Contract Equity Program Summary  
P-061 – Affirmative Action Summary



# CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> <i>Professional Services Agreement</i> Trench Soils Master Plan	<b>DATE:</b> April 16, 2019
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CONTRACTOR:	PERCENTAGE OF CONTRACT DOLLARS				
Terraphase Engineering, Inc. Oakland, CA 94612	Local / Small Business	Availability Group	Contracting Objectives	Participation	
<b>BID/PROPOSER'S PRICE:</b>	<b>FIRM'S OWNERSHIP</b>		White Men	25%	100.0%
	Ethnicity	Gender	White Women	6%	0.0%
\$149,700	White	Men	Ethnic Minorities	25%	0.0%

CONTRACT EQUITY PARTICIPATION											
COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION						
			M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
<b>PRIME:</b> Terraphase Engineering, Inc.	\$145,300	White	X		97.1%						
<b>SUBS:</b> Mountain Cascade, Inc.	\$4,400	White	X		2.9%						
<b>TOTAL</b>	\$149,700				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)				
	White Men	White Women	Ethnic Minorities	Total Employees
<b>No. of Employees:</b>	40	23	13	76
<b>Percent of Total Employees:</b>	52.6%	30.3%	17.1%	
<b>MSA Labor Market %:</b>	32.3%	27.8%	39.9%	
<b>MSA Labor Market Location:</b>	9 Bay Area Counties			

**COMMENTS**

*Contract Equity Participation - 100% White Men participation.*

<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>	<b>Good Faith Outreach Efforts Requirement Satisfied</b>	<b>Award Approval Recommended</b>
NA	YES	



## AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title:		Ethnic Minority Percentages From U.S. Census Data							
		B	H	A/PI	AI/AN	TOTAL			
<b>Trench Soils Master Plan</b>		National	10.5	10.7	3.7	0.7	27.3		
		9 Bay Area Counties	5.5	16.2	14.2	0.4	39.9		
		Alameda/CC Counties	10.7	15.6	15.4	0.5	46.2		
<b>Professional Services Agreement</b>		DATE:							
		4/16/2019							
R=Recmmd P=Prime S=Sub	Composition of Ownership	<b>Number of Ethnic Minority Employees</b>							
Company Name, Owner/Contact Person, Address, and Phone Number		B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %	
<b>RP</b>	<b>WM: L/SBE</b>	<b>Company Wide</b>	3	4	5	0	12	15.8%	48.4%
Terraphase Engineering, Inc. Hank Galinfo 1404 Franklin Street, Suite 600 Oakland, CA 94612  510-645-1850 ext.64		Manager/Prof	2	2	2	0	6	9.4%	
		Technical/Sales	0	0	0	0	0	0.0%	
		Clerical/Skilled	0	2	2	0	4	44.4%	
		Semi/Unskilled	1	0	1	0	2	0.0%	
		<b>Bay Area</b>	3	2	5	0	10	0.0%	
		AA Plan on File:	NA		Date of last contract with District:		10/18/2018		
		Co. Wide MSA:	California		# Employees-Co. Wide:		76	Bay Area: 40	
<b>S</b>	<b>WM: LBE</b>	<b>Company Wide</b>	INFORMATION NOT PROVIDED						
Mountain Cascade, Inc. Mike F. 555 Exchange Court Livermore, CA 94550  925-373-8370		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		<b>Bay Area</b>							
		Co. Wide MSA:							
<b>P</b>	<b>WW: L/SBE</b>	<b>Company Wide</b>	1	1	1	0	3	6.8%	27.3%
Northgate Environmental Management, Inc. Randa Bitar 428 13th Street, 4th floor Oakland, CA 94612  510-839-0688 ext.210		Manager/Prof	0	0	0	0	0	0.0%	
		Technical/Sales	0	0	0	0	0	0.0%	
		Clerical/Skilled	1	1	1	0	3	75.0%	
		Semi/Unskilled	0	0	0	0	0	0.0%	
		<b>Bay Area</b>	0	0	0	0	0	0.0%	
		Co. Wide MSA:	Total USA		# Employees-Co. Wide:		44	Bay Area: 24	
<b>P</b>	<b>EMM: A/PI - L/SBE</b>	<b>Company Wide</b>	9	9	21	0	39	53.4%	48.4%
Alisto Engineering Group Nancy Valero 2737 N. Main Street, Suite 200 Walnut Creek, CA 94597  925-279-5000		Manager/Prof	3	2	11	0	16	48.5%	
		Technical/Sales	6	5	7	0	18	60.0%	
		Clerical/Skilled	0	0	3	0	3	50.0%	
		Semi/Unskilled	0	2	0	0	0	0.0%	
		<b>Bay Area</b>	9	9	21	0	39	54.9%	
		Co. Wide MSA:	California		# Employees-Co. Wide:		73	Bay Area: 71	

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)



AGENDA NO.  
MEETING DATE

9.  
May 28, 2019

**TITLE** AMENDMENT TO THE AGREEMENT FOR DIGESTER UPGRADE PROJECT  
PHASE 3 DESIGN

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize an amendment to the agreement with Brown and Caldwell beginning on or after May 28, 2019 to increase the agreement amount by \$1,870,000 to an amount not to exceed \$4,645,799 for the Digester Upgrade Phase 3 Design Project. In authorizing this agreement amendment, the Board of Directors finds this work cannot be performed under civil service.

**SUMMARY**

On October 24, 2017 under Board Motion No. 177-17 the Board authorized the original agreement with Brown and Caldwell for the design of the Main Wastewater Treatment Plant (MWWTP) Digester Upgrade Project Phase 3 Design. This project involves the design of improvements to MWWTP solid processing facilities, including seismic retrofits and upgrades to the three oldest digesters, replacement of two failing digester covers, improvements to three odor control systems and high-strength waste grit removal to protect downstream equipment. This amendment is needed to conduct a grit removal pilot and secure engineering services during construction (ESDC). This project was discussed during the March 26, 2019 Budget No. 2 Workshop.

**DISCUSSION**

This amendment includes design, construction, and operational support for a temporary grit removal pilot facility at the blend tanks. The pilot will evaluate three grit removal and handling technologies. Each method will be tested in order to select the most effective technology, which will then be installed during the construction phase. Design of grit removal technology is part of the Digester Upgrade Phase 3 Design Project. To support this design, pilot testing is needed to provide valuable data that will inform the selection process. The pilot will be operated by a combined District and consultant team. Brown and Caldwell will also provide ESDC for the Digester Upgrade Phase 3 Construction Project under SD-356, including startup services and performance testing. Brown and Caldwell's broad range of specialized expertise is required to successfully implement this project in a timely manner. This amendment supports

Funds Available: FY19		Budget Code: WWC/928/7999/2012853 and 2001386/5231
DEPARTMENT SUBMITTING  Wastewater	DEPARTMENT MANAGER or DIRECTOR  <i>Eileen M. White</i> Eileen M. White	APPROVED  <i>Susan R. Cumb</i> General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

the District's Long-Term Infrastructure Investment Strategic Plan goal for meeting operational needs and reliability goals by effectively maintaining infrastructure.

## **CONSULTANT SELECTION**

Requests for proposals for the original agreement were sent to 47 firms, including five minority-owned firms with expertise in wastewater treatment and structural design, and posted on the District's website. Two firms submitted proposals and Brown and Caldwell was selected based on their experience designing seismic retrofits, anaerobic digester covers, biogas management systems, grit removal, and high strength waste receiving stations.

Brown and Caldwell is the Engineer of Record for this project and it is District practice to retain the Engineer of Record during construction to ensure design continuity and minimize District liability.

## **SUSTAINABILITY**

### **Economic**

Funding for this work is included in the FY19 budget for the Digester Upgrade and the Resource Recovery Projects.

Implementation of this project will support continuation of the Resource Recovery Program, which generates revenue through the co-digestion of high-strength wastes and the production of renewable energy. The project will also help guide decisions about how to best remove grit, which will reduce the high operation and maintenance requirements in operating the solids processing facilities.

### **Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

Implementation of this project will improve operational reliability and protect staff from the failure of one or more of these digesters in the event of a major earthquake. Work under this agreement for construction of the temporary pilot equipment is subject to the payment of current prevailing wages according to determinations for each craft as established by the Director of Industrial Relations of the State of California.

Locals 444, 2019, and 21 were notified of this amendment on September 19, 2018 for the grit removal pilot and on April 23, 2019 for the ESDC work. Locals 444 and 2019 issues regarding the pilot were addressed at meetings on October 4, 2018 and November 14, 2018, and resolved. Local 21 did not raise any specific issues related to this amendment.

### **Environmental**

This project will reduce flaring and nuisance odors while increasing renewable energy production. The project supports the District's Resource Recovery Program by ensuring the continued processing and beneficial reuse of thousands of truckloads of liquid and solid food waste material to generate energy.

### **ALTERNATIVES**

**Perform the work entirely with District forces.** This alternative is not recommended for the pilot test as staff cannot complete the work on the required schedule due to the need for multiple contracts with equipment providers and contractors.

**Select a different consultant to perform the work.** This alternative is not recommended because Brown and Caldwell is performing the full-scale grit removal design work under the existing agreement and has a sound and cost-effective approach to completing the pilot testing. In addition, Brown and Caldwell is the Engineer of Record and has the required technical expertise and project design experience.

### Attachments

P-035 – Contract Equity Program Summary

P-061 – Affirmative Action Summary



# CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> <b>Professional Services Agreement - Amendment</b> Agreement for Digester Upgrade Project Phase 3 Design	<b>DATE:</b> <p style="text-align: center; font-size: 1.2em;">May 22, 2019</p>
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CONTRACTOR:	PERCENTAGE OF CONTRACT DOLLARS				
Brown and Caldwell Walnut Creek, CA 94596	Local Business	Availability Group	Contracting Objectives	Participation	
<b>BID/PROPOSER'S PRICE:</b>	<b>FIRM'S OWNERSHIP</b>		White Men	25%	<b>48.7%</b>
	Ethnicity	Gender	White Women	6%	<b>7.2%</b>
\$1,870,000 *	White	Men	Ethnic Minorities	25%	<b>44.1%</b>

CONTRACT EQUITY PARTICIPATION											
COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION						
			M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
<b>PRIME:</b>											
Brown and Caldwell	\$418,169	White	X		22.4%						
<b>SUBS:</b>											
Beyaz & Patel	\$364,104	A/PI	X					19.5%			
DTN Engineers, Inc.	\$430,824	A/PI	X					23.0%			
SRT Consultants	\$59,000	White		X		3.2%					
Saylor Consulting Group	\$75,570	White		X		4.0%					
Ninyo & Moore	\$29,000	Hispanic	X					1.6%			
Black Dog Analytical	\$45,714	White	X		2.4%						
Monterey Mechanical	\$247,619	White	X		13.2%						
Vantage Point	\$200,000	White	X		10.7%						
<b>TOTAL</b>	\$1,870,000				48.7%	7.2%	44.1%	0.0%	0.0%	0.0%	0.0%

CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)				
	White Men	White Women	Ethnic Minorities	Total Employees
<b>No. of Employees:</b>	826	449	290	1,565
<b>Percent of Total Employees:</b>	52.8%	28.7%	18.5%	
<b>MSA Labor Market %:</b>	39.0%	33.7%	27.3%	
<b>MSA Labor Market Location:</b>	Total USA			

**COMMENTS**

**Contract Equity Participation** - 48.7% White Men participation, 7.2% White Women participation, and 44.1% Ethnic Minority participation.

\*Total contract amount: \$4,645,799.00 = \$2,775,799 (Multiple previous amendments) + \$1,870,000 (Amendment)

<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b> <p style="text-align: center;">NA</p>	<b>Good Faith Outreach Efforts Requirement Satisfied</b> <p style="text-align: center;">YES</p>	<b>Award Approval Recommended</b> 
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## AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title: <b>Agreement for Digester Upgrade Project Phase 3 Design</b>		Ethnic Minority Percentages From U.S. Census Data														
			B	H	A/PI	AI/AN	TOTAL									
<b>Professional Services Agreement - Amendment</b>		DATE: 5/22/2019	9 Bay Area Counties		5.5	16.2	14.2	0.4	39.9							
			Alameda/CC Counties		10.7	15.6	15.4	0.5	46.2							
R=Recmmd P=Prime S=Sub	Composition of Ownership	<b>Number of Ethnic Minority Employees</b>														
Company Name, Owner/Contact Person, Address, and Phone Number			B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %							
RP	<b>WM: LBE</b>	<b>Company Wide</b>	50	87	128	5	270	17.3%	27.3%							
Brown and Caldwell Robert Chapman 201 North Civic Drive, Suite 300 Walnut Creek, CA 94596  303-239-5461		Manager/Prof	33	67	97	3	200	15.6%								
		Technical/Sales	7	10	12	2	31	23.1%								
		Clerical/Skilled	10	10	19	0	39	26.5%								
		Semi/Unskilled	0	0	0	0	0	0.0%								
		<b>Bay Area</b>	3	12	25	1	41	31.1%	39.9%							
		AA Plan on File:	NA		Date of last contract with District:		9/5/2017									
		Co. Wide MSA:	Total USA		# Employees-Co. Wide:		1,565	Bay Area:	132							
S	<b>EMM: A/PI - L/SBE</b>	<b>Company Wide</b>	0	0	8	0	8	57.1%	48.4%							
Beyaz & Patel, Inc. Subhash Patel 1280 Civic Drive, Suite 204 Walnut Creek, CA 94596  858-451-0374		Manager/Prof	0	0	7	0	7	77.8%								
		Technical/Sales	0	0	1	0	1	50.0%								
		Clerical/Skilled	0	0	0	0	0	0.0%								
		Semi/Unskilled	0	0	0	0	0	0.0%								
		<b>Bay Area</b>	0	0	7	0	7	77.8%	39.9%							
		Co. Wide MSA:	California		# Employees-Co. Wide:		14	Bay Area:	9							
S	<b>EMM: A/PI - LBE</b>	<b>Company Wide</b>	0	0	5	0	5	83.3%	53.9%							
DTN Engineers Inc. Diep Nguyen 1305 Franklin Street, Suite 206 Oakland, CA 94612  510-267-0441		Manager/Prof	0	0	4	0	4	80.0%								
		Technical/Sales	0	0	1	0	1	100.0%								
		Clerical/Skilled	0	0	0	0	0	0.0%								
		Semi/Unskilled	0	0	0	0	0	0.0%								
		<b>Bay Area</b>	0	0	5	0	5	83.3%	39.9%							
		Co. Wide MSA:	Alameda		# Employees-Co. Wide:		6	Bay Area:	6							
S	<b>WW: SBE</b>	<b>Company Wide</b>	INFORMATION NOT PROVIDED													
SRT Consultants Tanya Yurovsky 90 New Montgomery Street, Suite 905 San Francisco, CA 94105  415-776-5800		Manager/Prof														
		Technical/Sales														
		Clerical/Skilled														
		Semi/Unskilled														
		<b>Bay Area</b>														
		Co. Wide MSA:														
S	<b>WW: SBE</b>	<b>Company Wide</b>	2	0	9	0	11	33.3%	48.3%							
Saylor Consulting Group Natalie Saylor 71 Stevenson Street, Suite 400 San Francisco, CA 94105  415-399-9990		Manager/Prof	2	0	7	0	9	30.0%								
		Technical/Sales	0	0	0	0	0	0.0%								
		Clerical/Skilled	0	0	2	0	2	66.7%								
		Semi/Unskilled	0	0	0	0	0	0.0%								
		<b>Bay Area</b>	2	0	9	0	11	0.0%	39.9%							
		Co. Wide MSA:	San Francisco		# Employees-Co. Wide:		33	Bay Area:	33							
S	<b>EMM: H/LA - LBE</b>	<b>Company Wide</b>	6	1	2	0	9	36.0%	37.3%							
Ninyo & Moore Peter Connolly 1956 Webster Street, Ste. 400 Oakland, CA 94612  510-343-3001		Manager/Prof	5	1	2	0	8	33.3%								
		Technical/Sales	0	0	0	0	0	0.0%								
		Clerical/Skilled	1	0	0	0	1	100.0%								
		Semi/Unskilled	0	0	0	0	0	0.0%								
		<b>Bay Area</b>	0	0	0	0	0	0.0%	39.9%							
		Co. Wide MSA:	Sacramento		# Employees-Co. Wide:		25	Bay Area:	0							

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)





AGENDA NO. 10.  
 MEETING DATE May 28, 2019

TITLE RENEWAL OF OFFICE SPACE LEASE IN SACRAMENTO

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize a five-year lease extension to March 31, 2024 with Eleventh and L Properties for 1,971 square feet of office space located at 1127 Eleventh Street, Suite 414 in Sacramento for the District's Office of Inter-Governmental Affairs, with the total base rent of \$300,388.80.

**SUMMARY**

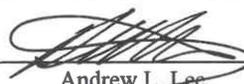
Since 1981, the District has leased this office for the Office of Inter-Governmental Affairs (OIGA) in Sacramento. OIGA works closely with all District staff on legislative matters and it is essential for the District to maintain a presence in Sacramento.

The existing lease expired on March 31, 2019 and the District has negotiated a five-year lease extension that will expire on March 31, 2024. The proposed five-year lease term includes a monthly base rent of \$4,730.40 for year one of the extension; \$4,928 for years two and three; and \$5,223 for years four and five. The total base rent for the five-year lease is \$300,388.80 and includes a tenant improvement allowance.

**DISCUSSION**

The OIGA has occupied office space at this Sacramento location (1127 Eleventh Street) since 1981. The site is near the State Capitol building and within walking distance of most state administrative and legislative offices. It is also close to the offices of major water associations, Capitol-based environmental organizations, and other water agencies' Sacramento offices.

The proposed lease rate for this office is \$2.40 - \$2.65/square foot/month over the five-year term. The new lease rate compares favorably with rental rates for downtown Sacramento office space.

Funds Available: FY19		Budget Code: 115-8712-5316
DEPARTMENT SUBMITTING  Customer and Community Svcs.	DEPARTMENT MANAGER or DIRECTOR   Andrew L. Lee	APPROVED   General Manager

## **SUSTAINABILITY**

### **Economic**

Sufficient funds for the lease payments are available in the FY19 operating budget.

## **ALTERNATIVES**

**Relocate staff to another location in Sacramento.** This alternative is not recommended as the current location is convenient to the Capitol and provides staff the opportunity to walk to the majority of their meetings. Relocating would require moving expenses and additional potential expenses for improvements to make the location useable by District staff.

**Relocate staff to the Administration Building in Oakland.** This alternative is not recommended because of the travel time and effort required on the part of staff to attend the meetings in the Sacramento area. The District would also lose its presence in Sacramento.



AGENDA NO.  
MEETING DATE

11.  
May 28, 2019

**TITLE** AUTHORIZE CONTINUED EMPLOYMENT OF ELLISON, SCHNEIDER, HARRIS & DONLAN, LLP, FOR SPECIALIZED LEGAL SERVICES

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize the Office of General Counsel to continue the employment of the law firm of Ellison, Schneider, Harris & Donlan, LLP, for specialized legal services related to water and energy law and litigation matters in an additional amount not to exceed \$160,000.

**DISCUSSION**

The law firm of Ellison, Schneider, Harris & Donlan, LLP, specializes in water and energy law, with expertise in water rights, groundwater law and adjudications. The firm currently provides the District with specialized legal assistance on institutional and water rights issues, and in related state and federal regulatory proceedings and litigation matters. The firm also specializes in electric power issues and provides assistance with legal issues involving the options and cost-effectiveness of the District's energy services, and represents the District's interests in various energy initiatives and proceedings before the California Public Utilities Commission. Further detail on the nature of services provided by Ellison, Schneider, Harris & Donlan, LLP, is outlined in a separate confidential attorney-client privileged memorandum to the Board.

**SUSTAINABILITY**

**Economic**

Funding for this item is included in the FY19 budget for obtaining specialized legal assistance.

**Social**

The completed P-035 and P-061 forms for the Contract Equity Program are attached.

**Attachments**

- P-035 – Contract Equity Program Summary
- P-061 – Affirmative Action Summary

Funds Available: FY19		Budget Code: WSO 130 8511 5231	
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR		APPROVED
Office of General Counsel	 Craig S. Spencer, General Counsel		 General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.





## CONTRACT EQUITY PROGRAM SUMMARY (P-035)

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

<b>TITLE</b> <b>Professional Services Agreement - Amendment</b> Authorize Continued Employment of Ellison, Schneider, Harris & Donlan, LLP for Specialized Legal Services	<b>DATE:</b> May 16, 2019
---	------------------------------

CONTRACTOR:	Direct Award/Small Business	PERCENTAGE OF CONTRACT DOLLARS			
Ellison, Schneider, Harris & Donlan, LLP Sacramento, CA 95816	Direct Award/Small Business	Availability Group	Contracting Objectives	Participation	
<b>BID/PROPOSER'S PRICE:</b>	<b>FIRM'S OWNERSHIP</b>		White Men	25%	100.0%
	Ethnicity	Gender	White Women	6%	0.0%
	\$160,000	White	Men	Ethnic Minorities	25%

CONTRACT EQUITY PARTICIPATION											
COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION						
			M	W	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
<b>PRIME:</b> Ellison, Schneider, Harris & Donlan, LLP <b>SUBS:</b> None	\$160,000	White	X		100.0%						
<b>TOTAL</b>	\$160,000				100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

CONTRACTOR'S WORKFORCE PROFILE (From P-025 Form)				
	White Men	White Women	Ethnic Minorities	Total Employees
<b>No. of Employees:</b>	6	9	2	17
<b>Percent of Total Employees:</b>	35.3%	52.9%	11.8%	
<b>MSA Labor Market %:</b>	32.7%	30.0%	37.3%	
<b>MSA Labor Market Location:</b>	Sacramento County			

**COMMENTS**

*Contract Equity Participation - 100% White Men participation.*

<b>Workforce Profile &amp; Statement of Nondiscrimination Submitted</b>	<b>Good Faith Outreach Efforts Requirement Satisfied</b>	<b>Award Approval Recommended</b>
NA	NA	





AGENDA NO.  
MEETING DATE

12.  
May 28, 2019

TITLE MONTHLY INVESTMENT TRANSACTIONS REPORT

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Approve the April 2019 Monthly Investment Transactions Report.

**SUMMARY**

In accordance with Board Resolution No. 30127 and Policy 4.07 – Investment Policy, staff presents a monthly transactions report for the Finance/Administration Committee to review and for the Board to consider each month. The April 2019 report is being submitted for Board consideration. This item was reviewed with the Finance/Administration Committee on May 28, 2019.

**DISCUSSION**

Pursuant to Policy 4.07 – Investment Policy, staff produces a monthly report of investment transactions generated by Treasury staff (buys, sales, deposits, withdrawals) as well as transactions that occur as a feature of the securities held (interest, calls, maturities). Information on portfolio performance, balances, and other factors are presented in the quarterly investment report.

In April 2019, the portfolio increased from \$704.1 million to \$720.0 million. Net transactions increased the total by \$14.5 million and interest received added \$1.4 million. Deposits into short-term liquidity funds totaled \$52.8 million and \$9.7 million was withdrawn. The District purchased no securities, \$6.7 million in securities matured, and \$19.4 million in securities were called. No securities were sold. Net transactions at the District’s commercial bank resulted in a decrease of \$2.6 million.

This item supports the District’s Long-Term Financial Stability Strategic Plan goal to ensure integrity, accountability and transparency in financial management.

**Attachment**

I:\Sec\2019 Board Related Items\052819 Board Agenda Items\FIN - BD1 Monthly Investment Transactions Report 052819

Funds Available:		Budget Code:	
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR	APPROVED	
Finance	 Sophia D. Skoda	 General Manager	

Contact the Office of the District Secretary with questions about completing or submitting this form.



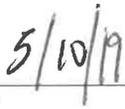
**Monthly Investment Transactions Report**  
**April 2019**

This report is presented to the Board pursuant to Government Code Section 53607 and in accordance with the District's Investment Policy 4.07.

The attached report details transactions in the District's portfolio as follows:

- **Monthly Investment Transactions Summary** **Page 1**
- **Monthly Investment Activity** **Page 2**
  - Buys Page 3
  - Deposits Page 4
  - Matured Page 5
  - Calls Page 6
  - Sales Page 7
  - Withdrawals Page 8
- **Monthly Interest Activity** **Page 9**
  - Interest Received (Transferred to Wells Fargo) Page 10-11
  - Interest Received (Reinvested) Page 12

  
Approved by: Sophia D. Skoda, Finance Director

  
Date

SDS:DSK:AW



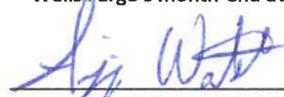


**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Investment Transactions Summary**  
**April 2019**

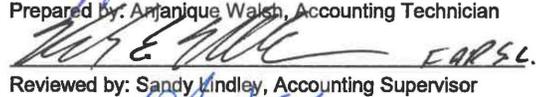
Portfolio	Beginning Balance*	Monthly Net Transaction Activity	Monthly Interest Activity	Ending Balance
001 - Water System Consolidated	540,439,225.78	12,320,000.00	76,107.37	552,835,333.15
007 - Wastewater Consolidated	113,285,778.70	6,600,000.00	79,084.23	119,964,862.93
049 - Ferc Partnership	2,000,000.00	-	-	2,000,000.00
009 - BACWA	2,862,600.00	-	-	2,862,600.00
015 - DERWA	-	-	-	-
002 - FRWA	1,500,000.00	-	-	1,500,000.00
014 - IICP	150,500.00	-	-	150,500.00
010 - UMRWA	64,000.00	-	-	64,000.00
003 - Employees Retirement	10,825,372.18	(1,851,000.00)	108,213.61	9,082,585.79
065 - Water S2008A DSRF	3,352,857.63	-	5,693.86	3,358,551.49
068 - Water 2010A DSRF	347,916.02	-	590.83	348,506.85
099 - Wells Fargo**	29,301,521.65	(2,553,510.70)	1,116,796.66	27,864,807.61
<b>Total</b>	<b>704,129,771.96</b>	<b>14,515,489.30</b>	<b>1,386,486.56</b>	<b>720,031,747.82</b>

\* Portfolio balance presented at face value.

\*\*Wells Fargo's month-end available balance per bank statement. Gross amount; not allocated by fund and not included in balances above.

  
 Prepared by: Arjanique Walsh, Accounting Technician

5/7/19  
 Date

  
 Reviewed by: Sandy Lindley, Accounting Supervisor

5-7-19  
 Date

  
 Approved by: D. Scott Klein, Controller

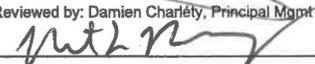
5-7-19  
 Date



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Investment Activity**  
**April 2019**

Portfolio	Buys	Deposits	Matured	Calls	Sales	Withdrawals	Non-Investment Transactions*	Net Transaction Activity
001 - Water System Consolidated	-	35,000,000.00	(6,700,000.00)	(15,980,000.00)	-	-	-	12,320,000.00
007 - Wastewater Consolidated	-	10,000,000.00	-	(3,400,000.00)	-	-	-	6,600,000.00
049 - Ferc Partnership	-	-	-	-	-	-	-	-
009 - BACWA	-	-	-	-	-	-	-	-
015 - DERWA	-	-	-	-	-	-	-	-
002 - FRWA	-	-	-	-	-	-	-	-
014 - IICP	-	-	-	-	-	-	-	-
010 - UMRWA	-	-	-	-	-	-	-	-
003 - Employees Retirement	-	7,809,000.00	-	-	-	(9,660,000.00)	-	(1,851,000.00)
065 - Water S2008A DSRF	-	-	-	-	-	-	-	-
068 - Water 2010A DSRF	-	-	-	-	-	-	-	-
<b>Investment Activity Total</b>	-	<b>52,809,000.00</b>	<b>(6,700,000.00)</b>	<b>(19,380,000.00)</b>	-	<b>(9,660,000.00)</b>	-	<b>17,069,000.00</b>
<b>099 - Wells Fargo</b>	-	<b>(52,809,000.00)</b>	<b>6,700,000.00</b>	<b>19,380,000.00</b>	-	<b>9,660,000.00</b>	<b>14,515,489.30</b>	<b>(2,553,510.70)</b>
<b>Total</b>	-	-	-	-	-	-	<b>14,515,489.30</b>	<b>14,515,489.30</b>

\*Non-investment transactions are net receipts and expenditures in Wells Fargo resulting from activities other than investment and interest transactions detailed in this report.

  
 Reviewed by: Damien Charley, Principal Mgmt Analyst  
  
 Approved by: Robert L. Hannay, Treasury Manager

5/08/19  
 Date  
 5/9/19  
 Date



EAST BAY MUNICIPAL UTILITY DISTRICT  
Monthly Investment Activity  
April 2019

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
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**Buys**

\*No Transactions this Period

0.00 0.00 0.00 0.00



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Investment Activity**  
**April 2019**

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Deposits</b>										
001 - Water System Consolidated	CAMP CA Asset Mgmt Program	CAMP MM	CAMP6035	04/17/2019	04/17/2019	N/A	15,000,000.00	15,000,000.00	0.00	15,000,000.00
001 - Water System Consolidated	CAMP CA Asset Mgmt Program	CAMP MM	CAMP6035	04/29/2019	04/29/2019	N/A	20,000,000.00	20,000,000.00	0.00	20,000,000.00
					<b>Subtotal</b>		<b>35,000,000.00</b>			
003 - Employees Retirement	LAIF Local Government Investment Pool	LAIF LGIP	LGIP1005	04/05/2019	04/05/2019	N/A	3,908,000.00	3,908,000.00	0.00	3,908,000.00
003 - Employees Retirement	LAIF Local Government Investment Pool	LAIF LGIP	LGIP1005	04/29/2019	04/29/2019	N/A	3,901,000.00	3,901,000.00	0.00	3,901,000.00
					<b>Subtotal</b>		<b>7,809,000.00</b>			
007 - Wastewater Consolidated	CAMP CA Asset Mgmt Program	CAMP MM	CAMP6035	04/05/2019	04/05/2019	N/A	10,000,000.00	10,000,000.00	0.00	10,000,000.00
					<b>Subtotal</b>		<b>10,000,000.00</b>			
							<b>52,809,000.00</b>	<b>52,809,000.00</b>	<b>0.00</b>	<b>52,809,000.00</b>



EAST BAY MUNICIPAL UTILITY DISTRICT  
 Monthly Investment Activity  
 April 2019

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Matured</b>										
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 4/4/2019-17	3134G8TL3	04/04/2019	04/04/2019	04/04/2019	1,000,000.00	1,000,000.00	0.00	1,000,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.03 4/5/2019-16	3133EGJW6	04/05/2019	04/05/2019	04/05/2019	3,500,000.00	3,500,000.00	0.00	3,500,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.39 4/17/2019-17	3133EHFP3	04/17/2019	04/17/2019	04/17/2019	2,200,000.00	2,200,000.00	0.00	2,200,000.00

6,700,000.00    6,700,000.00    0.00    6,700,000.00



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Investment Activity**  
**April 2019**

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Calls</b>										
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 9/30/2019-17	3134GAMF8	04/01/2019	04/01/2019	09/30/2019	1,930,000.00	1,930,000.00	0.00	1,930,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/26/2019-17	3134G9J24	04/26/2019	04/26/2019	07/26/2019	2,500,000.00	2,500,000.00	0.00	2,500,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA Step 7/26/2019-16	3136G3ZA6	04/26/2019	04/26/2019	07/26/2019	4,000,000.00	4,000,000.00	0.00	4,000,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2019-17	3134GAUR3	04/28/2019	04/28/2019	10/28/2019	2,500,000.00	2,500,000.00	0.00	2,500,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA Step 10/28/2019-16	3136G3E43	04/28/2019	04/28/2019	10/28/2019	3,000,000.00	3,000,000.00	0.00	3,000,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB 2.74 4/29/2021-19	3130AFTR8	04/29/2019	04/29/2019	04/29/2021	2,050,000.00	2,050,000.00	0.00	2,050,000.00
					<b>Subtotal</b>		<b>15,980,000.00</b>			
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/18/2019-17	3134GAR55	04/18/2019	04/18/2019	10/18/2019	400,000.00	400,000.00	0.00	400,000.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 2.95 10/22/2020-19	3130AF4Q7	04/22/2019	04/22/2019	10/22/2020	700,000.00	700,000.00	0.00	700,000.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/26/2019-17	3134G9J24	04/26/2019	04/26/2019	07/26/2019	1,500,000.00	1,500,000.00	0.00	1,500,000.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 2.7 10/30/2020-19	3130AFND5	04/30/2019	04/30/2019	10/30/2020	800,000.00	800,000.00	0.00	800,000.00
					<b>Subtotal</b>		<b>3,400,000.00</b>			
							<b>19,380,000.00</b>	<b>19,380,000.00</b>	<b>0.00</b>	<b>19,380,000.00</b>



EAST BAY MUNICIPAL UTILITY DISTRICT  
Monthly Investment Activity  
April 2019

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
Sales										

\*No Transaction this Period

0.00 0.00 0.00 0.00



EAST BAY MUNICIPAL UTILITY DISTRICT  
Monthly Investment Activity  
April 2019

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Withdrawals</b>										
003 - Employees Retirement	LAIF Local Government Investment Pool	LAIF LGIP	LGIP1005	04/29/2019	04/29/2019	N/A	9,660,000.00	9,660,000.00	0.00	9,660,000.00

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9,660,000.00 9,660,000.00 0.00 9,660,000.00



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Interest Activity**  
**April 2019**

Portfolio	Total Interest Received	Interest Transferred to Wells Fargo*	Net Interest Activity (Reinvested)**
001 - Water System Consolidated	856,726.21	(780,618.84)	76,107.37
007 - Wastewater Consolidated	373,484.61	(294,400.38)	79,084.23
049 - Ferc Partnership	12,546.29	(12,546.29)	-
009 - BACWA	14,195.19	(14,195.19)	-
015 - DERWA	-	-	-
002 - FRWA	13,680.93	(13,680.93)	-
014 - IICP	942.81	(942.81)	-
010 - UMRWA	412.22	(412.22)	-
003 - Employees Retirement	108,213.61	-	108,213.61
065 - Water S2008A DSRF	5,693.86	-	5,693.86
068 - Water 2010A DSRF	590.83	-	590.83
<b>Interest Transactions Total</b>	<b>1,386,486.56</b>	<b>(1,116,796.66)</b>	<b>269,689.90</b>
<b>099 - Wells Fargo</b>	<b>-</b>	<b>1,116,796.66</b>	<b>1,116,796.66</b>
<b>Total</b>	<b>1,386,486.56</b>	<b>-</b>	<b>1,386,486.56</b>

\*Coupon and other interest received; reinvestment unavailable.

\*\*Coupon and other interest payments reinvested in specific portfolio.

*Anjanique Walsh*  
 Prepared by: Anjanique Walsh, Accounting Technician

5/7/19  
 Date  
5-7-19

*Sandy Lindley*  
 Reviewed by: Sandy Lindley, Accounting Supervisor

Date  
5-7-19

Approved by: D. Scott Klein, Controller

Date



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Interest Activity**  
**April 2019**

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Interest Received (Transferred to Wells Fargo)</b>										
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB Step 3/30/2021-16	3130A9HD6	04/01/2019	04/01/2019	03/30/2021	0.00	0.00	40,000.00	40,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 9/30/2019-17	3134GAMF8	04/01/2019	04/01/2019	09/30/2019	0.00	0.00	19,300.00	19,300.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 9/30/2021-16	3134GAGL2	04/01/2019	04/01/2019	09/30/2021	0.00	0.00	24,680.00	24,680.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 4/4/2019-17	3134G8TL3	04/04/2019	04/04/2019	04/04/2019	0.00	0.00	10,000.00	10,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.03 4/5/2019-16	3133EGJW6	04/05/2019	04/05/2019	04/05/2019	0.00	0.00	18,025.00	18,025.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.4 4/13/2020-17	3133EF2L0	04/13/2019	04/13/2019	04/13/2020	0.00	0.00	15,750.00	15,750.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.34 10/17/2019-14	313380XX0	04/17/2019	04/17/2019	10/17/2019	0.00	0.00	1,675.00	1,675.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.39 4/17/2019-17	3133EHFP3	04/17/2019	04/17/2019	04/17/2019	0.00	0.00	15,290.00	15,290.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB 3 4/17/2023-19	3130ADZ88	04/17/2019	04/17/2019	04/17/2023	0.00	0.00	75,000.00	75,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FFCB 1.18 10/18/2019-16	3133EGLD5	04/18/2019	04/18/2019	10/18/2019	0.00	0.00	5,900.00	5,900.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA 1.21 10/18/2019-16	3136G3C45	04/18/2019	04/18/2019	10/18/2019	0.00	0.00	13,612.50	13,612.50
001 - Water System Consolidated	Medium Term Notes	Toyota Motor Credit Corp. 1.55 10/18/2019	89236TDH5	04/18/2019	04/18/2019	10/18/2019	0.00	0.00	33,108.00	33,108.00
001 - Water System Consolidated	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	140,372.38	140,372.38
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB 1.37 10/24/2019-14	313380Z75	04/24/2019	04/24/2019	10/24/2019	0.00	0.00	956.99	956.99
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/25/2022-19	3134GSYN9	04/25/2019	04/25/2019	10/25/2022	0.00	0.00	69,231.25	69,231.25
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/26/2019-17	3134G9J24	04/26/2019	04/26/2019	07/26/2019	0.00	0.00	15,625.00	15,625.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA Step 7/26/2019-16	3136G3ZA6	04/26/2019	04/26/2019	07/26/2019	0.00	0.00	25,000.00	25,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC 1.5 4/27/2021-18	3134G9EE3	04/27/2019	04/27/2019	04/27/2021	0.00	0.00	7,500.00	7,500.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/27/2021-17	3134G9L47	04/27/2019	04/27/2019	07/27/2021	0.00	0.00	21,250.00	21,250.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/27/2021-17	3134G9K63	04/27/2019	04/27/2019	07/27/2021	0.00	0.00	11,925.00	11,925.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB Step 4/28/2021-16	3130A7PQ2	04/28/2019	04/28/2019	04/28/2021	0.00	0.00	6,875.00	6,875.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2019-17	3134GAUR3	04/28/2019	04/28/2019	10/28/2019	0.00	0.00	25,000.00	25,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2019-17	3134GASN5	04/28/2019	04/28/2019	10/28/2019	0.00	0.00	31,500.00	31,500.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2021-17	3134GASR6	04/28/2019	04/28/2019	10/28/2021	0.00	0.00	41,350.00	41,350.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2021-17	3134GASK1	04/28/2019	04/28/2019	10/28/2021	0.00	0.00	18,000.00	18,000.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/28/2021-17	3134GASC9	04/28/2019	04/28/2019	10/28/2021	0.00	0.00	25,900.00	25,900.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA 1.35 10/28/2019-16	3135G0J95	04/28/2019	04/28/2019	10/28/2019	0.00	0.00	10,125.00	10,125.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FNMA Step 10/28/2019-16	3136G3E43	04/28/2019	04/28/2019	10/28/2019	0.00	0.00	16,875.00	16,875.00
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB 2.625 10/29/2019	3130AFC70	04/29/2019	04/29/2019	10/29/2019	0.00	0.00	26,906.25	26,906.25
001 - Water System Consolidated	Federal Agency Issues Coupon	FHLB 2.74 4/29/2021-19	3130AFTR8	04/29/2019	04/29/2019	04/29/2021	0.00	0.00	13,886.47	13,886.47
									<b>Subtotal</b>	<b>780,618.84</b>
002 - FRWA	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	13,680.93	13,680.93
									<b>Subtotal</b>	<b>13,680.93</b>
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FNMA 1.15 9/30/2019-17	3136G4CZ4	04/01/2019	04/01/2019	09/30/2019	0.00	0.00	2,875.00	2,875.00
007 - Wastewater Consolidated	Municipal Bonds	California St 6.2 10/1/2019-09	13063A7G3	04/01/2019	04/01/2019	10/01/2019	0.00	0.00	8,525.00	8,525.00
007 - Wastewater Consolidated	Municipal Bonds	Fontana Redevelopment Agency Successor Agency 1.62	34461CAW4	04/01/2019	04/01/2019	10/01/2019	0.00	0.00	2,437.50	2,437.50
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FFCB 1.49 4/2/2020	3133ECKU7	04/02/2019	04/02/2019	04/02/2020	0.00	0.00	745.00	745.00
007 - Wastewater Consolidated	Medium Term Notes	Toyota Motor Credit Corp. 2.95 4/13/2021	89236TEU5	04/13/2019	04/13/2019	04/13/2021	0.00	0.00	3,171.25	3,171.25
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 2.625 10/15/2019	3130AF5V5	04/15/2019	04/15/2019	10/15/2019	0.00	0.00	5,184.38	5,184.38
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLMC Step 10/18/2019-17	3134GAR55	04/18/2019	04/18/2019	10/18/2019	0.00	0.00	2,250.00	2,250.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB Step 10/19/2020-18	3130ACJ21	04/19/2019	04/19/2019	10/19/2020	0.00	0.00	4,062.50	4,062.50
007 - Wastewater Consolidated	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	225,992.47	225,992.47
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 2.95 10/22/2020-19	3130AF4Q7	04/22/2019	04/22/2019	10/22/2020	0.00	0.00	10,325.00	10,325.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 1.6 10/23/2019-18	3130ACHR8	04/23/2019	04/23/2019	10/23/2019	0.00	0.00	2,000.00	2,000.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FNMA 2.28 4/23/2021-14	3136G0EG2	04/23/2019	04/23/2019	04/23/2021	0.00	0.00	9,690.00	9,690.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 1.37 10/24/2019-14	313380Z75	04/24/2019	04/24/2019	10/24/2019	0.00	0.00	2,367.28	2,367.28
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLMC Step 7/26/2019-17	3134G9J24	04/26/2019	04/26/2019	07/26/2019	0.00	0.00	9,375.00	9,375.00
007 - Wastewater Consolidated	Federal Agency Issues Coupon	FHLB 2.7 10/30/2020-19	3130AFND5	04/30/2019	04/30/2019	10/30/2020	0.00	0.00	5,400.00	5,400.00
									<b>Subtotal</b>	<b>294,400.38</b>



**EAST BAY MUNICIPAL UTILITY DISTRICT**  
**Monthly Interest Activity**  
**April 2019**

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total
<b>Interest Received (Transferred to Wells Fargo)</b>										
009 - BACWA	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	14,195.19	14,195.19
								<b>Subtotal</b>		<b>14,195.19</b>
010 - UMRWA	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	412.22	412.22
								<b>Subtotal</b>		<b>412.22</b>
014 - IICP	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	942.81	942.81
								<b>Subtotal</b>		<b>942.81</b>
049 - Ferc Partnership	LAIF Local Government Investment	LAIF LGIP	LGIP1001	04/19/2019	04/19/2019	N/A	0.00	0.00	12,546.29	12,546.29
								<b>Subtotal</b>		<b>12,546.29</b>

**0.00    0.00    1,116,796.66    1,116,796.66**



EAST BAY MUNICIPAL UTILITY DISTRICT  
 Monthly Interest Activity  
 April 2019

Portfolio Name	Asset Class	Description	CUSIP/Ticker	Trade Date	Settlement Date	Maturity Date	Face Amount/Shares	Principal	Interest/Dividends	Total	
<b>Interest Received (Reinvested)</b>											
001 - Water System Consolidated	CAMP CA Asset Mgmt Program	CAMP MM	CAMP6035	04/30/2019	04/30/2019	N/A	0.00	0.00	76,065.79	76,065.79	
001 - Water System Consolidated	Money Market Mutual Funds	Federated MM	MM3767	04/30/2019	04/30/2019	N/A	0.00	0.00	41.58	41.58	
							<b>Subtotal</b>			<b>76,107.37</b>	
003 - Employees Retirement	LAIF Local Government Investment Pool	LAIF LGIP	LGIP1005	04/15/2019	04/15/2019	N/A	0.00	0.00	108,213.61	108,213.61	
							<b>Subtotal</b>			<b>108,213.61</b>	
007 - Wastewater Consolidated	CAMP CA Asset Mgmt Program	CAMP MM	CAMP6035	04/30/2019	04/30/2019	N/A	0.00	0.00	79,073.12	79,073.12	
007 - Wastewater Consolidated	Money Market Mutual Funds	Federated MM	MM3767	04/30/2019	04/30/2019	N/A	0.00	0.00	11.11	11.11	
							<b>Subtotal</b>			<b>79,084.23</b>	
065 - Water S2008A DSRF	Money Market Mutual Funds	Dreyfus MM	MM6999	04/02/2019	04/02/2019	N/A	0.00	0.00	5,693.86	5,693.86	
068 - Water 2010A DSRF	Money Market Mutual Funds	Dreyfus MM	MM2642	04/02/2019	04/02/2019	N/A	0.00	0.00	590.83	590.83	
							<b>Subtotal</b>			<b>6,284.69</b>	
							<b>0.00</b>	<b>0.00</b>	<b>269,689.90</b>	<b>269,689.90</b>	



AGENDA NO.  
MEETING DATE

13.  
May 28, 2019

TITLE EBMUD SERIES 2019A WATER SYSTEM REVENUE BONDS

MOTION \_\_\_\_\_  RESOLUTION \_\_\_\_\_  ORDINANCE \_\_\_\_\_

**RECOMMENDED ACTION**

Authorize and approve the issuance of EBMUD Water System Revenue Bonds, Series 2019A, in an aggregate principal amount not to exceed \$225 million, and approve the form and authorize the execution of certain documents, including a Supplemental Indenture, in connection with the issuance, securing and sale of such bonds.

**SUMMARY**

The Series 2019A Water System Revenue Bonds are being issued to provide funding for the District’s capital improvement program. Bond proceeds will also be used to pay the costs of issuance of the Bonds. The District is planning to issue these Bonds as “Green Bonds” based on the Green Bond guidance adopted by the Board in April 2015. Green Bonds are bonds issued to finance climate change resilient projects or other environmentally beneficial projects. For this bond issue, the District intends to finance projects that meet the standards provided in the adopted Green Bond guidance.

The bond resolution authorizes the issuance of the bonds in one or more series (and with such further or other series designation as applicable). It approves the Preliminary Official Statement and Official Statement that will be used to market the bonds to investors. The resolution further authorizes other documents supporting the bond issuance, including a Supplemental Indenture, a continuing disclosure agreement, and a bond purchase contract, and authorizes their execution. It also delegates authority to the General Manager, the Director of Finance or the Treasury Manager or the designee of any of such officers to engage The Bank of New York Mellon Trust Company, N.A., the District’s bond trustee, as trustee for the Series 2019A Water System Revenue Bonds. The bond resolution further authorizes the General Manager, the Director of Finance, the Treasury Manager and the other proper officers of the District to take the necessary actions and execute other agreements, documents and certificates in order to provide for the sale and delivery of the bonds. The bonds are currently scheduled to be sold via a negotiated sale in June 2019 using underwriters from the District’s underwriter pool. The timing of the bond sale may be adjusted for market conditions and other factors.

Funds Available: FY		Budget Code:
DEPARTMENT SUBMITTING  Finance	DEPARTMENT MANAGER or DIRECTOR   Sophia D. Skoda	APPROVED   General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

This item was reviewed with the Finance/Administration Committee on May 28, 2019.

A copy of the bond resolution and key bond documents are attached.

## **DISCUSSION**

The Series 2019A Water System Revenue Bonds are being issued to provide funding for the District's Water System capital improvement program. The bond issue is consistent with the financing plan in the District's Proposed Budget for Fiscal Years 2020 and 2021.

Summaries of the key bond documents are provided below:

- Authorizing Resolution relating to the Series 2019A Water System Revenue Bonds authorizes the issuance of the Series 2019A Bonds in one or more series or subseries (with such further or other series designation as applicable) in an amount not to exceed \$225 million, with a final maturity not later than June 1, 2049 and at a true interest cost to the District of not in excess of 5.0 percent per annum.
- Twenty-Ninth Supplemental Indenture relating to the Series 2019A Water System Revenue Bonds supplements the Water System Bond Indenture and provides the terms of the Series 2019A Water System Revenue Bonds, including the principal and interest payment dates and the interest rates on the new Series 2019A Water System Revenue Bonds. Under the Water System Bond Indenture, the District is obligated to set rates to provide net revenues sufficient to cover 1.1 times the annual debt service on all of the outstanding Water System Revenue Bonds, which will include the Series 2019A Water System Revenue Bonds.
- Purchase Contract is the agreement between the District and the underwriters of the Series 2019A Water System Revenue Bonds in connection with a negotiated sale of the bonds which provides the terms and conditions under which the underwriters agree to purchase the District's bonds for reoffering to the public and specifies the circumstances under which the underwriters' obligation may be terminated prior to delivery of the Bonds. The Authorizing Resolution provides that the discount to be paid to the underwriters in connection with their purchase of the bonds shall not exceed 0.3 percent of the aggregate principal amount of the bonds.
- Continuing Disclosure Agreement obligates the District to provide certain annual reports regarding the District and the Water System and notices of certain events in connection with the Series 2019A Water System Revenue Bonds. Under the securities laws, the underwriters are required to obtain this commitment from the District to provide ongoing disclosure in connection with the District's bonds. Under the Continuing Disclosure Agreement, the Bank of New York, as dissemination agent, is entitled to receive compensation for its services and receives certain indemnification from the District in connection with its services similar to the indemnification afforded the Bank of New York in its role as trustee for the bonds under the Bond Indenture.

## EBMUD Series 2019A Water System Revenue Bonds

May 28, 2019

Page 3

- Preliminary Official Statement (including Appendix A) is the disclosure document prepared by the District that provides information about the District and the Water System (primarily in Appendix A) and the terms of the bond sale to potential investors. A final Official Statement will be prepared after the sale of the bonds for distribution to actual purchasers of the Series 2019A Water System Revenue Bonds. Under federal securities laws, these disclosure documents are required to contain all information that would be material to investors in making their decision whether to purchase the District's bonds, and must not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make such information therein not misleading, in light of the circumstances under which it was presented.

## SUSTAINABILITY

### Economic

At current market rates the District's debt service costs are expected to be below estimates in the proposed budget.

### Environmental

By issuing this series of bonds as Green Bonds, the District helps further develop the market for Green Bonds for issuers and investors.

## ALTERNATIVE

**Do not issue the proposed bonds.** This alternative is not recommended because without the bond issue the District would need to fund capital improvement projects from cash on hand, thereby decreasing the District's liquidity, which in turn would weaken the District's credit profile and put upward pressure on future borrowing costs.

## Attachments



RESOLUTION NO. \_\_\_\_\_

AUTHORIZE AND APPROVE THE ISSUANCE OF NOT TO EXCEED \$225,000,000 MILLION AGGREGATE PRINCIPAL AMOUNT OF EAST BAY MUNICIPAL UTILITY DISTRICT WATER SYSTEM REVENUE BONDS, SERIES 2019A; APPROVE THE FORM, AND AUTHORIZE THE EXECUTION, OF CERTAIN DOCUMENTS IN CONNECTION WITH THE ISSUANCE, SECURING AND SALE OF SUCH BONDS; AND APPROVE CERTAIN ACTIONS RELATING THERETO

Introduced by Director \_\_\_\_\_ ; Seconded by Director \_\_\_\_\_

WHEREAS, the East Bay Municipal Utility District (the "District") is authorized by Section 12850, *et. seq.* of the Municipal Utility District Act, constituting Division 6 of the Public Utilities Code of the State of California (the "Act"), to issue revenue bonds; and

WHEREAS, pursuant to authority granted under the Act, the District has entered into a Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990 (the "Bond Indenture"), 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; and

WHEREAS, the Bond Indenture provides that the District may issue additional water system revenue bonds (referred to herein as "Bonds") from time to time as authorized by a supplemental indenture; and

WHEREAS, (i) pursuant to Resolution No. 33606-07 adopted by the Board of Directors of the District (the "Board") on June 12, 2007, the Board declared its intention to authorize the issuance of up to \$1.1 billion of water system revenue bonds; and, as of the date hereof, \$988,770,000 of such water system revenue bonds have been issued under the authority of Resolution No. 33606-07; and (ii) pursuant to Resolution No. 34031-15 adopted by the Board on April 28, 2015, the Board declared its intention to authorize the issuance of up to \$653,000,000 of water system revenue bonds; and, as of the date hereof, no water system revenue bonds have been issued under the authority of Resolution No. 34031-15; and

WHEREAS, pursuant to the Act and the Bond Indenture, the Board has determined to authorize the issuance of Bonds to be designated "East Bay Municipal Utility District Water System Revenue Bonds, Series 2019A," with such further or other designation as may be determined appropriate at the time of issuance of such Bonds, if any, to further identify such Bonds (herein called the "Series 2019A Bonds") in an aggregate principal amount not to exceed \$225,000,000 to be issued pursuant to a Twenty-Ninth Supplemental Indenture (as hereinafter defined), by and between the District and the Trustee; and

WHEREAS, the Series 2019A Bonds are being issued in order to provide moneys (i) to finance and/or reimburse the District for certain costs of improvements to the water storage, transmission and distribution system of the District, and (ii) to pay costs of issuance in connection with the Series 2019A Bonds; and

WHEREAS, the District has determined that the Series 2019A Bonds may be designated and sold as “green bonds;” and

WHEREAS, pursuant to a purchase contract, by and between the District and the Underwriters (as hereinafter defined), the Underwriters will purchase the Series 2019A Bonds and the District will deliver the Series 2019A Bonds to the Underwriters, upon certain conditions as provided therein; and

WHEREAS, in order to provide a continuing disclosure undertaking pursuant to the requirements promulgated under Rule 15c2-12 of the Securities and Exchange Commission in connection with the Series 2019A Bonds, the District intends to enter into a continuing disclosure agreement, by and between the District and the Trustee, as dissemination agent thereunder; and

WHEREAS, the Underwriters will distribute a preliminary and final official statement (including any supplements or amendments thereto) relating to the Series 2019A Bonds to prospective and actual purchasers of the Series 2019A Bonds; and

WHEREAS, California Government Code Section 5852.1 requires that the Board obtain from an underwriter, financial advisor or private lender and disclose, prior to authorization of the issuance of bonds with a term of greater than 13 months, good faith estimates of the following information in a meeting open to the public: (a) the true interest cost of the bonds, (b) the sum of all fees and charges paid to third parties with respect to the bonds, (c) the amount of proceeds of the bonds expected to be received net of the fees and charges paid to third parties and any reserves or capitalized interest paid or funded with proceeds of the bonds, and (d) the sum total of all debt service payments on the bonds calculated to the final maturity of the bonds plus the fees and charges paid to third parties not paid with the proceeds of the bonds; and

WHEREAS, in compliance with Government Code Section 5852.1, the Board has obtained from Montague DeRose and Associates, LLC, the District’s municipal advisor in connection with the Series 2019A Bonds, the required good faith estimates and such estimates are disclosed and set forth on Exhibit A attached hereto; and

WHEREAS, it is desirable that the Board provide for the issuance, securing and sale of the Series 2019A Bonds at this time; and

WHEREAS, there has been presented to this Board meeting proposed forms of certain financing documents relating to the Series 2019A Bonds and the issuance, sale and delivery thereof;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of East Bay Municipal Utility District, as follows:

Section 1. Recitals True and Correct. The Board hereby finds and determines that the foregoing recitals are true and correct.

Section 2. Authorization of Series 2019A Bonds. The issuance of the Series 2019A Bonds in one or more series or subseries (with such additional or other identifying designations, including the applicable alphabetical letter or numbering sequence designation for a series or subseries) as may be determined by the General Manager, the Director of Finance or the

Treasury Manager, on the terms and conditions set forth in, and subject to the limitations specified in, the Twenty-Ninth Supplemental Indenture is hereby authorized and approved. The Series 2019A Bonds will be dated, will bear interest at the rates, will mature on the dates, will be issued in the form, will be subject to redemption (if applicable), and will be as otherwise provided in the Twenty-Ninth Supplemental Indenture as the same is completed as provided in this Resolution. The proposed form of the Series 2019A Bonds, as set forth in the Twenty-Ninth Supplemental Indenture, is hereby approved and the President of the Board of Directors of the District is hereby authorized and directed to execute (by manual or facsimile signature) for and on behalf of the District the Series 2019A Bonds in substantially such form and the Secretary of the District is authorized and directed to attest (by manual or facsimile signature) thereto, and the Trustee is hereby authorized and directed to authenticate and deliver the Series 2019A Bonds to the Underwriters in accordance with the Purchase Contract (as hereinafter defined) and the Twenty-Ninth Supplemental Indenture; provided, however, that (i) the aggregate principal amount of Series 2019A Bonds shall not exceed \$225,000,000, (ii) the final maturity of any of the Series 2019A Bonds shall not be later than June 1, 2049, and (iii) the true interest cost to the District of the Series 2019A Bonds shall not exceed 5.00% per annum.

Section 3. Approval of Twenty-Ninth Supplemental Indenture. The General Manager, the Director of Finance or the Treasury Manager or the designee of any of such officers is hereby authorized and directed to execute for and on behalf of the District, and the Secretary of the District shall attest thereto, a supplemental indenture to the Bond Indenture in connection with the issuance of the Series 2019A Bonds (the herein-referenced Twenty-Ninth Supplemental Indenture), in substantially the form as submitted to this meeting, with such changes therein (and additions thereto to reflect the terms of sale of the Series 2019A Bonds) as the General Manager, the Director of Finance or the Treasury Manager shall approve after consultation with the District's General Counsel and Norton Rose Fulbright US LLP and Curls Bartling P.C., the District's Co-Bond Counsel (such approval to be evidenced by the execution and delivery thereof). The supplemental indenture, as executed and delivered, is herein referred to as the "Twenty-Ninth Supplemental Indenture" and such Twenty-Ninth Supplemental Indenture is hereby approved.

Section 4. Selection of Underwriters; Approval of Purchase Contract. The Board hereby approves the engagement of J.P. Morgan Securities LLC, as senior managing underwriter, and of Merrill Lynch, Pierce, Fenner & Smith Incorporated (or BofA Securities, Inc. as may be applicable at the time of sale of the Series 2019A Bonds) and Siebert Cisneros Shank & Co., L.L.C., as co-managing underwriters (and/or such other co-senior managing underwriters and/or co-managing underwriters as the Director of Finance shall determine) (collectively, the "Underwriters") in connection with the negotiated sale of the Series 2019A Bonds. The General Manager, the Director of Finance, the Treasury Manager or the designee of any of such officers is hereby authorized and directed to execute for and on behalf of the District a bond purchase contract, in substantially the form of the purchase contract submitted to this meeting, with such changes, insertions and omissions (and additions thereto to reflect the terms of the sale of the Series 2019A Bonds) as the General Manager, the Director of Finance or the Treasury Manager shall approve after consultation with the District's General Counsel and Co-Bond Counsel (such approval to be evidenced by the execution and delivery thereof); provided, however, that the Underwriters' discount with respect to the Series 2019A Bonds may not exceed 0.30% of the aggregate principal amount of the Series 2019A Bonds purchased thereunder. The purchase

contract, as executed and delivered, is hereinafter referred to as the "Purchase Contract" and such Purchase Contract is hereby approved.

Section 5. Approval of Continuing Disclosure Agreement. The General Manager, the Director of Finance or the Treasury Manager or the designee of any of such officers is hereby authorized and directed to execute for and on behalf of the District a continuing disclosure agreement, in substantially the form of the continuing disclosure agreement submitted to this meeting, with such changes therein as the General Manager, the Director of Finance or the Treasury Manager shall approve after consultation with the District's General Counsel and Co-Bond Counsel, such approval to be evidenced by the execution and delivery thereof. The continuing disclosure agreement, as executed and delivered, is hereinafter referred to as the "Continuing Disclosure Agreement" and such Continuing Disclosure Agreement is hereby approved.

Section 6. Approval of Preliminary and Final Official Statement. The Board hereby approves the form of preliminary official statement of the District relating to the Series 2019A Bonds, in substantially the form as submitted to this meeting, with such additions thereto and changes therein (including such changes and additions to reflect the terms of the Series 2019A Bonds) as are approved by the General Manager, the Director of Finance or the Treasury Manager after consultation with the District's General Counsel and Co-Bond Counsel. The Director of Finance, the Treasury Manager or any duly authorized designee of the Director of Finance designated by the Director of Finance in writing to act on behalf of such officer for such purpose, is hereby authorized to authorize the Underwriters to distribute or cause to be distributed (via printed format and/or through electronic means) in connection with the sale of the Series 2019A Bonds such preliminary official statement to prospective purchasers of the Series 2019A Bonds. The General Manager, the Director of Finance or the Treasury Manager or any designee of the Director of Finance designated by the Director of Finance in writing to act on behalf of such officer for such purpose is hereby authorized to certify that the preliminary official statement is as of its date "deemed final" for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

The General Manager, the Director of Finance, the Treasury Manager or any designee of the General Manager designated by the General Manager in writing to act on behalf of such officer for such purpose is hereby authorized to cause to be prepared and to execute for and on behalf of the District a final official statement in substantially the form of the preliminary official statement with such changes therein and additions or supplements thereto to reflect the terms of the sale of the Series 2019A Bonds and to comply with applicable federal securities laws as the General Manager, the Director of Finance or the Treasury Manager shall approve after consultation with the District's General Counsel and Co-Bond Counsel, such approval to be evidenced by the execution and delivery thereof. The Director of Finance, the Treasury Manager or any duly authorized designee of the Director of Finance designated by the Director of Finance in writing to act on behalf of such officer for such purpose, is hereby authorized to authorize the Underwriters to distribute (via printed format and/or through electronic means) the final official statement (and any supplement thereto) in connection with the sale and delivery of the Series 2019A Bonds.

Section 7. Additional Actions. The General Manager, the Director of Finance, the Treasury Manager and all such other proper officers of the District be and they hereby are

authorized, individually and collectively, to take all actions and execute any and all documents necessary: to engage The Bank of New York Mellon Trust Company, N.A. as trustee and paying agent under the Twenty-Ninth Supplemental Indenture; to effect the sale and delivery of the Series 2019A Bonds pursuant to the Purchase Contract and the Bond Indenture as supplemented; and to do any and all things and to execute and deliver such other agreements, documents and certificates, including (without limitation) executing and delivering one or more tax certificates relating to the Series 2019A Bonds, any investment agreements relating to the investment of the Series 2019A Bond proceeds, and taking any and all actions to provide for the giving of written directions and notices, and the securing of any necessary third party approvals in connection with the issuance of the Series 2019A Bonds, as may be necessary, convenient, or advisable in order to consummate the sale, execution and delivery of the Series 2019A Bonds and otherwise to carry out, give effect to and comply with the terms and intent of this Resolution, the Series 2019A Bonds, the Bond Indenture, the Twenty-Ninth Supplemental Indenture, the Purchase Contract, the Continuing Disclosure Agreement, the preliminary official statement and the final official statement and the transactions herein authorized. All such actions heretofore taken by such officers or their designees are hereby ratified, confirmed and approved.

[Remainder of page intentionally left blank.]

ADOPTED this 28<sup>th</sup> day of May, 2019 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

\_\_\_\_\_  
President

\_\_\_\_\_  
Secretary

APPROVED AS TO FORM AND PROCEDURE:

\_\_\_\_\_  
General Counsel

{00037941;1}

## EXHIBIT A

### GOOD FAITH ESTIMATES

The good faith estimates set forth herein are provided with respect to the East Bay Municipal Utility District Water System Revenue Bonds, Series 2019A (the "Series 2019A Bonds") in compliance with Section 5852.1 of the California Government Code. Such good faith estimates have been provided to the East Bay Municipal Utility District (the "District") by Montague DeRose and Associates, LLC, as municipal advisor to the District (the "Municipal Advisor").

*Principal Amount.* The Municipal Advisor has informed the District that, based on the District's financing plan and current market conditions, its good faith estimate of the aggregate principal amount of the Series 2019A Bonds to be sold is \$163,490,000 (the "Estimated Principal Amount").

*True Interest Cost of the Series 2019A Bonds.* The Municipal Advisor has informed the District that, assuming that the Estimated Principal Amount of the Series 2019A Bonds is sold, and based on market interest rates prevailing at the time of preparation of such estimate, its good faith estimate of the true interest cost of the Series 2019A Bonds, which means the rate necessary to discount the amounts payable on the respective principal and interest payment dates to the purchase price received for the Series 2019A Bonds, is 3.33%.

*Finance Charge of the Series 2019A Bonds.* The Municipal Advisor has informed the District that, assuming that the Estimated Principal Amount of the Series 2019A Bonds is sold, and based on market interest rates prevailing at the time of preparation of such estimate, its good faith estimate of the finance charge for the Series 2019A Bonds, which means the sum of all fees and charges paid to third parties (or costs associated with the Series 2019A Bonds), is \$757,000.00.

*Amount of Proceeds to be Received.* The Municipal Advisor has informed the District that, assuming that the Estimated Principal Amount of the Series 2019A Bonds is sold, and based on market interest rates prevailing at the time of preparation of such estimate, its good faith estimate of the amount of proceeds expected to be received by the District for sale of the Series 2019A Bonds, less the finance charge of the Series 2019A Bonds, as estimated above, and any reserves or capitalized interest paid or funded with proceeds of the Series 2019A Bonds, is \$200,000,000.00.

*Total Payment Amount.* The Municipal Advisor has informed the District that, assuming that the Estimated Principal Amount of the Series 2019A Bonds is sold, and based on market interest rates prevailing at the time of preparation of such estimate, its good faith estimate of the total payment amount, which means the sum total of all payments the District will make to pay debt service on the Series 2019A Bonds, plus the finance charge for the Series 2019A Bonds, as described above, not paid with the proceeds of the Series 2019A Bonds, calculated to the final maturity of the Series 2019A Bonds, is \$319,490,000.00.

The foregoing estimates constitute good faith estimates only. The actual principal amount of the Series 2019A Bonds issued and sold, the true interest cost thereof, the finance charges thereof, the amount of proceeds received therefrom and total payment amount with respect thereto may differ from such good faith estimates due to (a) the actual date of the sale of the Series 2019A Bonds being different than the date assumed for purposes of such estimates, (b) the actual principal amount of Series 2019A Bonds sold being different from the Estimated Principal Amount, (c) the actual amortization of the Series 2019A Bonds being different than the amortization assumed for purposes of such estimates, (d) the actual market interest rates at the time of sale of the Series 2019A Bonds being different than

those estimated for purposes of such estimates, (e) other market conditions, or (f) alterations in the District's financing plan, or a combination of such factors. The actual date of sale of the Series 2019A Bonds and the actual principal amount of Series 2019A Bonds sold will be determined by the District based on the need for project funds and other factors. The actual interest rates borne by the Series 2019A Bonds will depend on market interest rates at the time of sale thereof. The actual amortization of the Series 2019A Bonds will also depend, in part, on market interest rates at the time of sale thereof. Market interest rates are affected by economic and other factors beyond the control of the District. The Board has approved the issuance of the Series 2019A Bonds with a maximum true interest cost of 5.00%.

## CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (this “Disclosure Agreement”), dated \_\_\_\_\_, 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, it 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 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.

[Remainder of Page Intentionally Left Blank]

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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TWENTY-NINTH SUPPLEMENTAL INDENTURE

between

EAST BAY MUNICIPAL UTILITY DISTRICT

and

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.  
as Successor Trustee

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Dated as of June 1, 2019

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(Supplemental to the Water System Subordinated Revenue Bond  
Indenture dated as of April 1, 1990)

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# TABLE OF CONTENTS

Page

## ARTICLE XL IV SERIES 2019A BONDS

SECTION 44.01	Definitions.....	2
SECTION 44.02	Authorization .....	3
SECTION 44.03	Book Entry System .....	4
SECTION 44.04	Redemption of Series 2019A Bonds.....	6
SECTION 44.05	Selection of Series 2019A Bonds for Redemption .....	6
SECTION 44.06	Notice of Redemption of Series 2019A Bonds.....	7
SECTION 44.07	Partial Redemption of Series 2019A Bonds .....	7
SECTION 44.08	Effect of Redemption of Series 2019A Bonds.....	7
SECTION 44.09	Series 2019A Sinking Accounts .....	7
SECTION 44.10	Form of Series 2019A Bonds.....	8
SECTION 44.11	Issuance of Series 2019A Bonds.....	8
SECTION 44.12	Application of Proceeds of Series 2019A Bonds.....	8
SECTION 44.13	Establishment and Application of Series 2019A Water System Fund .....	9
SECTION 44.14	Continuing Disclosure .....	9
SECTION 44.15	Terms of Series 2019A Bonds Subject to the Indenture.....	10
SECTION 44.16	Effective Date of Twenty-Ninth Supplemental Indenture .....	10
SECTION 44.17	Execution in Counterparts.....	10
EXHIBIT A – FORM OF SERIES 2019A BOND.....		A-1

Twenty-Ninth Supplemental Indenture  
(Supplemental to the Water System  
Subordinated Revenue Bond Indenture dated  
as of April 1, 1990)  
Authorizing the Issuance of  
\$[\_\_\_\_\_] Aggregate Principal Amount of  
East Bay Municipal Utility District  
Water System Revenue Bonds,  
Series 2019A (Green Bonds)

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This Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019 (the “Twenty-Ninth Supplemental Indenture”), between the East Bay Municipal Utility District (the “District”) and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”);

W I T N E S S E T H :

WHEREAS, this Twenty-Ninth Supplemental Indenture is supplemental to the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, as amended and supplemented (the “Indenture”), between the District and the Trustee, providing for the issuance of bonds initially designated as “Water System Subordinated Revenue Bonds” and subsequent to the execution and delivery of the Eighteenth Supplemental Indenture designated as “Water System Revenue Bonds” (the “Bonds”);

WHEREAS, the Indenture provides that the District may issue additional Bonds from time to time as authorized by a Supplemental Indenture;

WHEREAS, the District (i) has previously authorized the issuance of up to \$1.1 billion of water system revenue bonds, pursuant to Resolution No. 33606-07 adopted by the Board on June 12, 2007, and, as of the date hereof, \$988,770,000 of such water system revenue bonds have been issued under the authority of Resolution No. 33606-07; and (ii) has previously authorized the issuance of up to \$653,000,000 of water system revenue bonds, pursuant to Resolution No. 34031-15 adopted by the Board on April 28, 2015, and as of the date hereof, no water system revenue bonds have been issued under the authority of Resolution No. 34031-15;

WHEREAS, the District has determined to issue its Water System Revenue Bonds, Series 2019A (Green Bonds) (the “Series 2019A Bonds”) in the aggregate principal amount of \$[\_\_\_\_\_], pursuant to this Twenty-Ninth Supplemental Indenture for the purpose of providing moneys to finance and/or reimburse the District for certain costs of various capital improvements to the Water System of the District and to pay the Costs of Issuance in connection with the delivery of the Series 2019A Bonds;

WHEREAS, the Indenture creates a valid and binding pledge and assignment of and security interest in the Subordinated Water Revenues and all amounts held by the Trustee under the Indenture (except for amounts held in the Rebate Fund) for the payment of the Bonds as and to the extent provided therein in accordance with the terms thereof without the need for any

physical delivery, recordation, filing or further act, in accordance with Section 5451 of the Government Code of the State of California;

NOW, THEREFORE, the parties hereto agree, as follows:

#### ARTICLE XLIV

#### SERIES 2019A BONDS

SECTION 44.01 Definitions. The terms defined in this Section shall, for all purposes of this Twenty-Ninth Supplemental Indenture and of any certificate, opinion or other document herein mentioned, have the meanings herein specified, to be equally applicable to both the singular and plural forms of any of the terms herein defined. Terms defined in the Indenture not otherwise defined herein shall have the meanings specified therein.

“Beneficial Owner” means any Person which (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Series 2019A Bond (including any Person holding a Series 2019A Bond through nominees, depositories or other intermediaries), or (b) is treated as the owner of any Series 2019A Bond for federal income tax purposes.

“Book-Entry System” means the system maintained by the Securities Depository and described in Section 44.03 hereof.

“Closing Date” means the date of delivery of the Series 2019A Bonds to the Representative of the Underwriters, against payment therefor, such date being [June 27], 2019.

“Continuing Disclosure Agreement” means any continuing disclosure agreement entered into by the District and the Trustee, as dissemination agent, in connection with the Series 2019A Bonds in order to comply with the continuing disclosure requirements promulgated under Securities Exchange Commission Rule 15c2-12.

“DTC” means The Depository Trust Company, New York, New York, and its successors and assigns.

“Representation Letter” means the Letter of Representations from the District to DTC relating to the Book-Entry System for the Series 2019A Bonds.

“Representative” means J.P. Morgan Securities LLC, as representative of the Underwriters of the Series 2019A Bonds.

“Securities Depository” means DTC or, if applicable, any successor securities depository appointed pursuant to Section 44.03 hereof.

“Securities Depository Participant” means any broker-dealer, bank or other financial institution for which a Securities Depository holds Series 2019A Bonds as Securities Depository from time to time.

“Series 2019A Bonds” means the East Bay Municipal Utility District Water System Revenue Bonds, Series 2019A (Green Bonds).

“Series 2019A Water System Fund” means the fund by that name established pursuant to Section 44.13 hereof.

SECTION 44.02      Authorization.

(A)    Designation of Bonds. A thirty-fifth Series of Bonds to be issued under the Indenture is hereby created. Such Series of Bonds shall be known as the “East Bay Municipal Utility District Water System Revenue Bonds, Series 2019A (Green Bonds)” (herein referred to as the “Series 2019A Bonds”). The Series 2019A Bonds shall be issued in the aggregate principal amount of \$[\_\_\_\_\_].

The Series 2019A Bonds shall be issued in accordance with the Act and pursuant to Resolution No. [\_\_\_\_\_] adopted by the Board on [May \_\_\_\_], 2019, and this Twenty-Ninth Supplemental Indenture. The Series 2019A Bonds shall be issued for the purpose of (i) financing certain costs (including by reimbursement of such costs to the District) of various capital improvements to the Water System of the District, and (ii) paying Costs of Issuance in connection with the delivery of the Series 2019A Bonds.

The Series 2019A Bonds shall be Current Interest Indebtedness.

(B)    Registered Form. The Series 2019A Bonds shall be issued in fully registered form and shall be initially registered in the name of “Cede & Co.,” as nominee of DTC in accordance with Section 44.03 hereof. The Series 2019A Bonds shall be evidenced by one bond maturing on each maturity date of the Series 2019A Bonds as set forth in Section 44.02(C) hereof. Each Series 2019A Bond may be assigned by the Trustee a distinctive number or letter and number, and a record of the same shall be maintained by the Trustee. Registered ownership of the Series 2019A Bonds, or any portion thereof, may not thereafter be transferred except as set forth in Section 44.03 hereof.

(C)    Maturities; Interest Rates; Denominations. The Series 2019A Bonds shall be dated the date of delivery thereof, shall be issued in denominations of \$5,000 principal amount or any integral multiple thereof, and shall bear interest from the date thereof at the following rates per annum, and shall mature on June 1 in the following years in the following amounts:

<u>Maturity Date (June 1)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
20[___]	\$[_____]	[___]%

Interest on the Series 2019A Bonds shall be payable semiannually on June 1 and December 1 of each year, commencing on December 1, 2019, by check mailed by first-class mail on each interest payment date to the Owners thereof as of the close of business on the fifteenth (15th) day of the calendar month immediately preceding such interest payment date (each, a “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 ten (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. Interest on the Series 2019A Bonds shall be computed on the basis of a 360-day year of twelve 30-day months. The principal of and premium, if any, on the Series 2019A Bonds are payable when due upon presentation thereof at the corporate trust office of the Trustee in San Francisco, California, or at such other place as designated by the Trustee, in lawful money of the United States of America.

So long as the Series 2019A Bonds are maintained in book-entry form, payments of principal, premium, if any, and interest shall be made by the Trustee to the Securities Depository by wire transfer in accordance with mutually satisfactory arrangements between the Trustee and the Securities Depository.

The Trustee shall provide CUSIP number identification, with appropriate dollar amounts for each CUSIP number, on all redemption payments and interest payments, whether by check or by wire transfer.

SECTION 44.03 Book Entry System. The Series 2019A Bonds shall be initially issued registered in the name of “Cede & Co.,” as nominee for DTC and registered Owner thereof, and held in the custody of the Securities Depository. A single certificate will be issued and delivered to the Securities Depository for the maturity of the Series 2019A Bonds, and the Beneficial Owners will not receive physical delivery of bond certificates for the Series 2019A Bonds except as provided herein. For so long as the Securities Depository shall continue to serve as securities depository for the Series 2019A Bonds as provided herein, all transfers of beneficial ownership interests will be made by book-entry only, and no investor or other party purchasing, selling or otherwise transferring beneficial ownership of Series 2019A Bonds will receive, hold or deliver any Series 2019A Bond certificate.

At the written direction of the District, with notice to the Trustee, but without the consent of the Owners of the Series 2019A Bonds or the Trustee, the District, may appoint a successor Securities Depository and enter into an agreement with the successor Securities Depository, to establish procedures with respect to a Book-Entry System for the Series 2019A Bonds not inconsistent with the provisions of the Indenture. Any successor Securities Depository shall be a “clearing agency” registered under Section 17A of the Securities Exchange Act of 1934, as amended.

The District and the Trustee may rely conclusively upon (i) a certificate of the Securities Depository as to the identity of the Securities Depository Participants in the Book-Entry System with respect to the Series 2019A Bonds and (ii) a certificate of any such Securities Depository

Participant as to the identity of, and the respective principal amount of the Series 2019A Bonds beneficially owned by, the Beneficial Owners.

Whenever, during the term of the Series 2019A Bonds, the beneficial ownership thereof is determined by a book-entry at the Securities Depository, the requirements in the Indenture of holding, delivering or transferring the Series 2019A Bonds shall be deemed modified to require the appropriate person to meet the requirements of the Securities Depository as to registering or transferring the book-entry to produce the same effect. Any provision hereof permitting or requiring delivery of the Series 2019A Bonds shall, while the Series 2019A Bonds are in the Book-Entry System, be satisfied by the notation on the books of the Securities Depository in accordance with applicable state law.

Except as otherwise specifically provided in the Indenture and the Series 2019A Bonds with respect to the rights of Securities Depository Participants and Beneficial Owners, when a Book-Entry System is in effect, the District and the Trustee may treat the Securities Depository (or its nominee) as the sole and exclusive Owner of the Series 2019A Bonds registered in its name for the purposes of payment of the principal of and interest on the Series 2019A Bonds or portion thereof to be redeemed or purchased, and of giving any notice permitted or required to be given to the Owners of Series 2019A Bonds under the Indenture, and neither the District nor the Trustee shall be affected by any notice to the contrary. Neither the District nor the Trustee will have any responsibility or obligation to the Securities Depository, any Securities Depository Participant, any Beneficial Owner or any other Person which is not shown on the registration books required to be maintained by the Trustee, with respect to: (i) the accuracy of any records maintained by the Securities Depository or any Securities Depository Participant; (ii) the payment by the Securities Depository or by any Securities Depository Participant of any amount due to any Beneficial Owner in respect of the principal amount or redemption or purchase price (if applicable) of, or interest on, any Series 2019A Bonds; (iii) the delivery of any notice by the Securities Depository or any Securities Depository Participant; (iv) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of the Series 2019A Bonds; or (v) any other action taken by the Securities Depository or any Securities Depository Participant. The Trustee shall pay all principal of and interest on the Series 2019A Bonds registered in the name of Cede & Co. only to or “upon the order of” the Securities Depository, and all such payments shall be valid and effective to fully satisfy and discharge the District’s obligations with respect to the principal of and interest on such Series 2019A Bonds to the extent of the sum or sums so paid.

The Book-Entry System may be discontinued by the Trustee and the District, at the direction and expense of the District, and the District and the Trustee will cause the delivery of Series 2019A Bond certificates to such Beneficial Owners of the Series 2019A Bonds and registered in the names of such Beneficial Owners as shall be specified to the Trustee by the Securities Depository in writing, under the following circumstances:

(1) The Securities Depository determines to discontinue providing its service with respect to the Series 2019A Bonds and no successor Securities Depository is appointed as described above. Such a determination may be made at any time by giving thirty (30) days’ notice to the District and the Trustee and discharging its responsibilities with respect thereto under applicable law; or

(2) The District determines not to continue the Book-Entry System through a Securities Depository, upon not less than forty-five (45) days' prior written notice to the Trustee.

When the Book-Entry System is not in effect, all references herein to the Securities Depository shall be of no further force or effect.

So long as any Series 2019A Bond is registered in the name of Cede & Co., as nominee of DTC, all payments with respect to principal of and interest on such Series 2019A Bond and all notices with respect to such Series 2019A Bond shall be made and given, respectively, in the manner provided in the Representation Letter.

In the event of a redemption or any other transaction necessitating a reduction in aggregate principal amount of Series 2019A Bonds Outstanding, DTC in its discretion: (a) may request the District and the Trustee to issue and authenticate a new Series 2019A Bond certificate; or (b) shall make an appropriate notation on the Series 2019A Bond certificate indicating the date and amounts of such reduction in principal, except in the case of final maturity, in which case the certificate must be presented to the Trustee prior to payment.

In connection with any proposed transfer outside the Book-Entry System, the District or DTC shall provide or cause to be provided to the Trustee all information necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost basis reporting obligations under Internal Revenue Code Section 6045. The Trustee may rely on the information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

#### SECTION 44.04 Redemption of Series 2019A Bonds.

(A) 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 June 1, 20[\_\_], 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.

(B) Mandatory Sinking Account Redemption. The Series 2019A Bonds maturing on June 1, 20\_\_ are also subject to redemption prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments required by and as specified in Section 44.09, commencing on June 1, 20[\_\_], at the principal amount thereof plus accrued interest thereon to the date fixed for redemption, without premium.

SECTION 44.05 Selection of Series 2019A Bonds for Redemption. Whenever provision is made in this Twenty-Ninth Supplemental 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 shall select the Series 2019A Bonds of such maturity to be redeemed, from all Series 2019A Bonds not previously called for redemption, in authorized

denominations, by lot, in any manner which the Trustee in its sole discretion shall deem appropriate and fair. The Trustee shall promptly notify the District in writing of the Series 2019A Bonds so selected for redemption.

SECTION 44.06 Notice of Redemption of Series 2019A Bonds. The District shall notify the Trustee at least twenty-five (25) days prior to the redemption date for any Series 2019A Bonds pursuant to Section 44.04(A) (or such shorter time as may be agreed to by the Trustee). Notice of redemption shall be given by the Trustee, not less than twenty (20) nor more than sixty (60) days prior to the redemption date, (i) 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, (ii) to the Securities Depository by electronic means of communication or by first-class mail, and (iii) to the Electronic Municipal Market Access System (referred to as “EMMA”), a facility of the Municipal Securities Rulemaking Board, at [www.emma.msrb.org](http://www.emma.msrb.org), 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. Notice of redemption shall be given in the form and otherwise in accordance with the terms of the Indenture and this Twenty-Ninth Supplemental Indenture.

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.

SECTION 44.07 Partial Redemption of Series 2019A Bonds. Upon surrender of any Series 2019A Bond redeemed in part only, the District shall execute and the Trustee shall authenticate and deliver to the Owner thereof, at the expense of the District, a new Series 2019A Bond of authorized denominations, and of the same maturity and interest rate, equal in aggregate principal amount to the unredeemed portion of the Series 2019A Bond surrendered.

SECTION 44.08 Effect of Redemption of Series 2019A Bonds. If notice of redemption has been duly given pursuant to Section 44.06, 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, on the redemption date designated in such notice, the Series 2019A Bonds (or portions thereof) so called for redemption shall become due and payable at the Redemption Price specified in such notice together with interest accrued thereon to the date fixed for redemption, interest on the Series 2019A Bonds so called for redemption shall cease to accrue, the Series 2019A Bonds (or portions thereof) shall cease to be entitled to any benefit or security under the Indenture, and the Owners of the Series 2019A Bonds shall have no rights in respect thereof except to receive payment of the Redemption Price and accrued interest.

All Series 2019A Bonds redeemed pursuant to the provisions of this Article shall be cancelled upon surrender thereof and destroyed.

SECTION 44.09 Series 2019A Sinking Accounts. An Account is hereby established within the Principal Fund created by Section 5.02 of the Indenture to be designated the “Series

2019A Sinking Account.” On each Business Day prior to the following payment dates, the District shall transfer from the Principal Fund to the Series 2019A Sinking Account an amount equal to the Mandatory Sinking Account Payment due on such date as set forth below:

**Series 2019A Term Bonds Due June 1, 20[\_\_\_]**

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

†

† Final Maturity.

Upon an optional redemption of a portion of any Series 2019A Term Bonds pursuant to Section 44.04(A), 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 Series 2019A Term Bond after such redemption as specified by the District in such schedule to reflect such redeemed portion.

Moneys in the Series 2019A Sinking Account shall be applied as provided in Section 5.02(A) and Section 5.04(B) of the Indenture.

**SECTION 44.10**     Form of Series 2019A Bonds. The Series 2019A Bonds and the certificate of authentication and registration to be executed thereon shall be in substantially the form set forth as Exhibit A hereto. The Series 2019A Bond letters and numbers, maturity dates, principal amounts and interest rates shall be inserted therein in conformity with Section 44.02.

**SECTION 44.11**     Issuance of Series 2019A Bonds. Upon the execution and delivery of this Twenty-Ninth Supplemental Indenture, the District shall execute and the Trustee shall authenticate and deliver the Series 2019A Bonds in the aggregate principal amount of \$[\_\_\_\_\_] on the Closing Date therefor upon an Order of the District.

**SECTION 44.12**     Application of Proceeds of Series 2019A Bonds. The net proceeds of the sale of the Series 2019A Bonds in the amount of \$[\_\_\_\_\_] (representing the \$\_\_\_\_\_ aggregate principal amount of the Series 2019A Bonds plus \$[\_\_\_\_\_] original issue premium, less \$[\_\_\_\_\_] of Underwriters’ discount), shall be received by the Trustee on behalf of the District in trust. Amounts received by the Trustee shall be transferred to the District and the District shall deposit \$[\_\_\_\_\_] of net proceeds from the sale of the Series 2019A Bonds in the Series 2019A Water System Fund (of which \$[\_\_\_\_\_] shall be deposited in the Series 2019A (Green Bonds) Construction Account therein and \$[\_\_\_\_\_]

shall be deposited in the Costs of Issuance Account therein) to be applied in accordance with Section 44.13. The Trustee may establish temporary funds or accounts to facilitate such transfers.

**SECTION 44.13**     Establishment and Application of Series 2019A Water System Fund. The District shall establish, maintain and hold in trust a separate fund designated as the “Series 2019A Water System Fund,” with two accounts therein designated as the “Series 2019A (Green Bonds) Construction Account” and the “Costs of Issuance Account.” The moneys on deposit in the Series 2019A (Green Bonds) Construction Account shall be used and withdrawn by the District to pay the costs of construction, reconstruction, replacement, acquisition or improvement of any facility or facilities necessary or convenient for the storage, transmission or distribution of water; or incidental to, or in connection with, the operation of the Water System which the District has determined to be a project appropriate for “green bond” funding, or to pay or reimburse the District for interest on the Series 2019A Bonds during the respective construction periods for the improvements to the Water System funded by the Series 2019A Bonds. The moneys on deposit in the Costs of Issuance Account shall be used and withdrawn by the District to pay Costs of Issuance of the Series 2019A Bonds. Excess amounts, if any, remaining in the Costs of Issuance Account after payment in full of all Costs of Issuance of the Series 2019A Bonds shall be transferred to the Series 2019A (Green Bonds) Construction Account to be applied to the purposes thereof. Moneys on deposit in the Series 2019A Water System Fund may be invested in (i) Investment Securities, (ii) investment agreements with a domestic or foreign bank or corporation (other than a life or property casualty insurance company) the long-term debt of which, or, in the case of a guaranteed corporation the long-term debt of the guarantor of which, or, in the case of a monoline financial guaranty insurance company, the claims paying ability of which, is rated on the date of execution of such investment agreement not lower than “Aa2” by Moody’s (if Moody’s is then rating any of the District’s Outstanding Bonds) and “AA” by Standard & Poor’s (if Standard & Poor’s is then rating any of the District’s Outstanding Bonds), or (iii) the Local Agency Investment Fund (as that term is defined in Section 16429.1 of the California Government Code, as such section may be amended or recodified from time to time), and with a term so as to provide moneys when needed for payments to be made therefrom. Interest, profit or other income derived from the investment of moneys held in the Series 2019A Water System Fund shall be credited to such Fund. Interest, profit or other income derived from the investment of moneys held in the Series 2019A Water System Fund may also be transferred to the Trustee for deposit in the Rebate Fund in an amount determined by the District to be required.

**SECTION 44.14**     Continuing Disclosure. The District and the Trustee hereby covenant and agree that they will comply with and carry out all of their respective obligations under the Continuing Disclosure Agreement. Notwithstanding any other provision of this Indenture, failure of the District or the Trustee to comply with the Continuing Disclosure Agreement shall not be considered an Event of Default; however, any Series 2019A Bondholder or Beneficial Owner or the Trustee may (and, at the request of any Participating Underwriter (as defined in the Continuing Disclosure Agreement) or the Owners of at least 25% of the aggregate principal amount of Outstanding Series 2019A Bonds and upon provision of indemnification satisfactory to the Trustee, shall) take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the District or the Trustee, as the case may be, to comply with its obligations under this Section 44.14.

SECTION 44.15 Terms of Series 2019A Bonds Subject to the Indenture. Except as in this Twenty-Ninth Supplemental Indenture expressly provided, every term and condition contained in the Indenture shall apply to this Twenty-Ninth Supplemental Indenture and to the Series 2019A Bonds with the same force and effect as if the same were herein set forth at length, with such omissions, variations and modifications thereof as may be appropriate to make the same conform to this Twenty-Ninth Supplemental Indenture.

This Twenty-Ninth Supplemental Indenture and all the terms and provisions herein contained shall form part of the Indenture as fully and with the same effect as if all such terms and provisions had been set forth in the Indenture. The Indenture is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof, as supplemented and amended hereby.

SECTION 44.16 Effective Date of Twenty-Ninth Supplemental Indenture. This Twenty-Ninth Supplemental Indenture shall take effect upon its execution and delivery.

SECTION 44.17 Execution in Counterparts. This Twenty-Ninth Supplemental Indenture may be executed in several counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties hereto have executed the Twenty-Ninth Supplemental Indenture by their officers thereunto duly authorized as of the day and year first written above.

EAST BAY MUNICIPAL UTILITY  
DISTRICT

By: \_\_\_\_\_  
Sophia D. Skoda  
Director of Finance

ATTEST:

By: \_\_\_\_\_  
Rischa S. Cole  
Secretary of the District

THE BANK OF NEW YORK MELLON  
TRUST COMPANY, N.A., as Trustee

By: \_\_\_\_\_  
Daniel Marroquin  
Vice President

EXHIBIT A

(FORM OF SERIES 2019A BOND)

No. \_\_\_\_\_

\$ \_\_\_\_\_

EAST BAY MUNICIPAL UTILITY DISTRICT  
(ALAMEDA AND CONTRA COSTA COUNTIES, CALIFORNIA)  
WATER SYSTEM REVENUE BOND,  
SERIES 2019A (GREEN BONDS)

Unless this certificate is presented by an authorized representative of The Depository Trust Company, a New York corporation (“DTC”), to the District or its agent for registration of transfer, exchange, or payment, and any certificate issued is registered in the name of Cede & Co. or in such other name as is requested by an authorized representative of DTC (and any payment is made to Cede & Co. or to such other entity as is requested by an authorized representative of DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL inasmuch as the registered owner hereof, Cede & Co., has an interest herein.

<u>Maturity Date</u>	<u>Dated Date</u>	<u>Interest Rate</u>	<u>CUSIP</u>
June 1, 20[___]	[____], 2019	[___]%	271014____

REGISTERED OWNER: CEDE & CO.

PRINCIPAL AMOUNT:

EAST BAY MUNICIPAL UTILITY DISTRICT, a municipal utility district duly organized and existing under and pursuant to the laws of the State of California (the “District”), for value received, hereby promises to pay (but only out of the Subordinated Water Revenues and funds hereinafter referred to) to the registered owner named above or registered assigns, on the maturity date specified above (subject to any right of prior redemption or payment as provided in the hereinafter mentioned Indenture), the principal amount specified above together with interest thereon from its Dated Date until the principal hereof shall have been paid, at the interest rate per annum specified above, payable on December 1, 2019, and semiannually thereafter on June 1 and December 1 in each year. Interest hereon is payable in lawful money of the United States of America by (except as otherwise provided in the hereinafter mentioned Indenture) check mailed by first-class mail on each interest payment date to the registered owner as of the close of business on the 15th day of the calendar month immediately preceding such interest payment date (each, a “record date”), except that in the case of an Owner of \$1,000,000 or more in aggregate principal amount of the hereinafter described 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. The principal hereof and premium, if any, hereon are payable when due upon presentation hereof at the corporate trust office of The Bank of New York Mellon Trust Company, N.A., as successor trustee (together with any successor as trustee under said Indenture, the “Trustee”), in San Francisco, California, or at such other place as designated by the Trustee, in lawful money of the United States of America.

This Bond is one of a duly authorized issue (of the series and designation indicated on the face hereof) of Water System Revenue Bonds of the District issued pursuant to a Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, as amended and supplemented, between the Trustee and the District, providing for the issuance of said bonds (the “Bonds”). Said authorized issue of Bonds is not limited in aggregate principal amount, except as otherwise provided in said Water System Subordinated Revenue Bond Indenture, and consists or may consist of one or more series of varying denominations, dates, maturities, interest rates and other provisions, as in said Water System Subordinated Revenue Bond Indenture provided, all issued and to be issued pursuant to the provisions of the Act (as defined in the Water System Subordinated Revenue Bond Indenture). This Bond is issued pursuant to the Water System Subordinated Revenue Bond Indenture, as amended and supplemented, including as amended and supplemented by a Twenty-Ninth Supplemental Indenture, dated as of [June] 1, 2019, between the Trustee and the District, authorizing the issuance of the series of bonds of which this Bond is one, such series being herein referred to as the “Series 2019A Bonds” (the Water System Subordinated Revenue Bond Indenture, as amended and supplemented, including as amended and supplemented by the Twenty-Ninth Supplemental Indenture, being herein collectively referred to as the “Indenture”). Reference is hereby made to the Indenture and to the Act for a description of the terms on which the Bonds are issued and to be issued, the provisions with regard to the nature and extent of the Subordinated Water Revenues (as that term is defined in the Indenture), and the rights of the registered owners of the Bonds; and all the terms of the Indenture and the Act are hereby incorporated herein and constitute a contract between the District and the registered owner from time to time of this Bond, and to all the provisions thereof the registered owner of this Bond, by its acceptance hereof, consents and agrees. Additional Bonds may be issued, and indebtedness may be incurred, on a parity with the Bonds of this authorized issue, but only subject to the conditions and limitations contained in the Indenture.

The Bonds and the interest thereon (to the extent set forth in the Indenture), together with the Parity Debt (as defined in the Indenture) issued by the District, and the interest thereon, are payable from, and are secured by a charge and lien on, the “Subordinated Water Revenues” (as more particularly defined in the Indenture). All of the Bonds and Parity Debt are equally secured by a pledge of, and charge and lien upon, all of the Subordinated Water Revenues, and the Subordinated Water Revenues constitute a trust fund for the security and payment of the interest on and principal of the Bonds; but nevertheless out of Subordinated Water Revenues certain amounts may be applied for other purposes as provided in the Indenture.

The Bonds are limited obligations of the District and are payable, both as to principal and interest, and as to any premiums upon the redemption thereof, out of the Subordinated Water Revenues and certain funds held under the Indenture. The general fund of the District is not

liable, and the credit or taxing power of the District is not pledged, for the payment of the Bonds or the interest thereon. The Bonds are not secured by a legal or equitable pledge of, or charge, lien or encumbrance upon, any of the property of the District or any of its income or receipts, except the Subordinated Water Revenues and the funds held under the Indenture. No registered owner of this Bond shall ever have the right to compel any exercise of the taxing power of the District to pay this Bond or the interest hereon.

The Series 2019A Bonds are being issued by means of a Book-Entry System with no physical distribution of bond certificates to be made except as provided in the Indenture. One bond certificate with respect to each date on which the Series 2019A Bonds are stated to mature, registered in the name of the Cede & Co, is being issued and required to be deposited with the Securities Depository and immobilized in its custody. The Book-Entry System will evidence positions held in the Series 2019A Bonds by the Securities Depository Participants, beneficial ownership of the Series 2019A Bonds in authorized denominations being evidenced in the records of such Securities Depository Participants. Transfers of ownership shall be effected on the records of the Securities Depository and its Securities Depository Participants pursuant to rules and procedures established by the Securities Depository and its Securities Depository Participants. The District and the Trustee will recognize Cede & Co., while the registered owner of this Series 2019A Bond, as the owner of this Series 2019A Bond for all purposes, including (i) payments of principal of, and redemption premium, if any, and interest on this Series 2019A Bond and (ii) notices. Transfer of principal, interest and any redemption premium payments to Securities Depository Participants, and transfer of principal, interest and any redemption premium payments to Beneficial Owners of the Series 2019A Bonds by Securities Depository Participants will be the responsibility of such Securities Depository Participants and other nominees of such Beneficial Owners. The District will not be responsible or liable for such transfers of payments or for maintaining, supervising or reviewing the records maintained by the Securities Depository, Cede & Co., its Securities Depository Participants or persons acting through such Securities Depository Participants. While Cede & Co. is the registered owner of this Series 2019A Bond, notwithstanding any other provision hereof, payments of principal of, redemption premium, if any, and interest on this Series 2019A Bond shall be made in accordance with existing arrangements between the Trustee or its successors under the Indenture and the Securities Depository.

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 June 1, 20\_\_, 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.

The Series 2019A Bonds maturing on June 1, 20\_\_ are also subject to redemption prior to maturity, in part, by lot, from Mandatory Sinking Account Payments required by and as specified in the Indenture, commencing on June 1, 20[\_\_], at the principal amount thereof plus accrued interest thereon to the date fixed for redemption, without premium.

This Bond is transferable or exchangeable for other authorized denominations by the registered owner hereof, in person or by its attorney duly authorized in writing, at the corporate

trust office of the Trustee in San Francisco, California, but only in the manner, subject to the limitations and upon payment of the charges provided in the Indenture, and upon surrender and cancellation of this Bond. Upon such transfer or exchange a new fully registered Bond or Bonds without coupons, of authorized denomination or denominations, of the same series, tenor, maturity and interest rate for the same aggregate principal amount will be issued to the registered owner in exchange hereof.

The District, the Trustee and any paying agent may deem and treat the registered owner hereof as the absolute owner hereof for all purposes, and the District, the Trustee and any paying agent shall not be affected by any notice to the contrary.

The rights and obligations of the District and of the registered owners of the Bonds may be modified or amended at any time in the manner, to the extent, and upon the terms provided in the Indenture, which provide, in certain circumstances, for modifications and amendments without the consent of or notice to the registered owners of the Bonds.

It is hereby certified and recited that any and all acts, conditions and things required to exist, to happen and to be performed, precedent to and in the incurring of the indebtedness evidenced by this Bond, and in the issuing of this Bond, do exist, have happened and have been performed in due time, form and manner, as required by the Constitution and statutes of the State of California, and that this Bond, together with all other indebtedness of the District pertaining to the Subordinated Water Revenues, is within every debt and other limit prescribed by the Constitution and the statutes of the State of California, and is not in excess of the amount of Bonds permitted to be issued under the Indenture or the Act.

This Bond shall not be entitled to any benefit under the Indenture, or become valid or obligatory for any purpose, until the certificate of authentication hereon endorsed shall have been signed by the Trustee.

Capitalized terms used but not defined herein shall have the meanings assigned to them in the Indenture.

IN WITNESS WHEREOF, EAST BAY MUNICIPAL UTILITY DISTRICT has caused this Bond to be executed in its name and on its behalf by the President of the Board of Directors and attested by its Secretary, and this Bond to be dated as of the [\_\_\_\_] day of [June], 2019.

EAST BAY MUNICIPAL UTILITY DISTRICT

By: \_\_\_\_\_  
President of the Board of Directors

Attested:

By: \_\_\_\_\_  
Secretary

[FORM OF CERTIFICATE OF AUTHENTICATION  
AND REGISTRATION]

This is one of the Bonds described in the within mentioned Indenture and registered on the date set forth below.

Dated: \_\_\_\_\_, 20\_\_

THE BANK OF NEW YORK MELLON  
TRUST COMPANY, N.A., as Trustee

By: \_\_\_\_\_  
Authorized Officer

[FORM OF ASSIGNMENT]

For value received \_\_\_\_\_ hereby sell, assign and transfer unto \_\_\_\_\_ the within Bond and hereby irrevocably constitute and appoint \_\_\_\_\_ attorney, to transfer the same on the books of the District at the office of the Trustee, with full power of substitution in the premises.

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NOTE: The signature to this Assignment must correspond with the name on the face of the within registered bond in every particular, without alteration or enlargement or any change whatsoever.

Dated: \_\_\_\_\_

Signature Guaranteed by:

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NOTE: Signature must be guaranteed by an eligible guarantor institution.

\$[PAR]  
EAST BAY MUNICIPAL UTILITY DISTRICT  
WATER SYSTEM REVENUE BONDS,  
SERIES 2019A (GREEN BONDS)

PURCHASE CONTRACT

June [\_\_\_], 2019

Board of Directors  
East Bay Municipal Utility District  
375 11th Street  
Oakland, California 94607

Ladies and Gentlemen:

The undersigned J.P. Morgan Securities LLC, as representative (the “Representative”) of itself, BofA Securities, Inc., and Siebert Cisneros Shank & Co., L.L.C. (each, an “Underwriter” and collectively, the “Underwriters”), hereby offers to enter into this Purchase Contract (the “Purchase Contract”) with you, the East Bay Municipal Utility District (the “District”), which, upon the District’s acceptance of this offer, will be binding upon the District and the Underwriters. This offer is made subject to acceptance by you prior to 5:00 p.m., California time, on the date hereof. If this offer is not so accepted, this offer will be subject to withdrawal by the Underwriters upon notice delivered to you at any time prior to acceptance. Upon acceptance, this Purchase Contract shall be in full force and effect in accordance with its terms and shall be binding upon the District and the Underwriters. All capitalized terms used herein not otherwise defined herein shall have the respective meanings ascribed thereto in the Official Statement (as hereinafter defined). The Representative has been duly authorized to execute this Purchase Contract and to take any action hereunder by and on behalf of the Underwriters.

The District acknowledges and agrees that (i) the purchase and sale of the Series 2019A Bonds (as hereinafter defined) pursuant to this Purchase Contract is an arm’s-length commercial transaction between the District and the Underwriters, (ii) in connection therewith and with the discussions, undertakings and procedures leading up to the consummation of such transaction, the Underwriters are and have been acting solely as principals and are not acting as financial advisors or municipal advisors to or fiduciaries of the District, (iii) the Underwriters have not assumed an advisory or fiduciary responsibility in favor of the District with respect to the offering contemplated hereby or the discussions, undertakings and procedures leading thereto (irrespective of whether an Underwriter has provided other services or is currently providing other services to the District on other matters), (iv) the Underwriters have financial and other interests that differ from those of the District, and (v) the District has consulted its own legal, financial and other advisors to the extent it has deemed appropriate.

1. Purchase, Sale and Delivery of the Series 2019A Bonds.

(a) Subject to the terms and conditions and in reliance upon the representations, warranties and agreements set forth herein, the Underwriters, jointly and severally, hereby agree to purchase and the District agrees to sell and deliver to the Underwriters all (but not less than all) of the East Bay Municipal Utility District Water System Revenue Bonds, Series 2019A (Green Bonds), in the aggregate principal amount of \$[Par] (the “Series 2019A Bonds”).

(b) The Series 2019A Bonds shall be 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 (collectively, the “Act”), and the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, by and between the District and The Bank of New York Mellon Trust Company, N.A., as successor 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 shall be dated, shall mature, and shall be redeemable as provided in the Indenture and shall otherwise be as described in the Official Statement described below. The Series 2019A Bonds shall be substantially in the form described in, and shall be issued and secured under the provisions of, the Indenture. The Series 2019A Bonds shall be special obligations of the District payable from, and secured by a pledge of, the Subordinated Water Revenues of the District. The Series 2019A Bonds shall be dated the Closing Date (as hereinafter defined), shall bear interest payable June 1 and December 1 of each year, commencing on December 1, 2019, and shall mature on June 1 in each of the years, subject to earlier redemption, as set forth in Schedule I.

The Series 2019A Bonds are being issued for the purposes 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) paying costs of issuance of the Series 2019A Bonds.

(c) The aggregate purchase price for the Series 2019A Bonds shall be \$[Purchase Price] (consisting of the principal amount of the Series 2019A Bonds in the amount of \$[Par], [plus/less] [net] original issuance [premium/discount] of \$[Premium/Discount], less \$[UW Discount] of Underwriters’ discount).

(d) In the event that the Underwriters fail (other than for a reason permitted under this Purchase Contract) to purchase, accept delivery of and pay for the Series 2019A Bonds on the Closing Date as herein provided, the Underwriters shall pay to the District \$1,650,000, which shall constitute full liquidated damages for such failure and for any and all defaults hereunder on the part of the Underwriters, and shall constitute full release and discharge of all claims and rights hereunder of the District against the Underwriters with respect to such failure.

(e) At 8:00 a.m., California time, on June [\_\_\_], 2019, or at such other time or on such other date as the District and the Representative mutually agree upon (the “Closing Date”), the District will, subject to the terms and conditions hereof, cause to be delivered to the Underwriters, the Series 2019A Bonds, in fully registered book-entry eligible form, through the facilities of The Depository Trust Company (“DTC”) in New York, New York, duly executed,

and at the offices of Curls Bartling P.C., Lake Merritt Plaza, 1999 Harrison Street, Suite 610, Oakland, California 94612, or at such other place as shall have been mutually agreed upon by the District and the Representative, the other documents mentioned herein. The Underwriters will accept such delivery and pay the purchase price of the Series 2019A Bonds as set forth in subparagraph (c) above in immediately available funds (such delivery and payment being herein referred to as the “Closing”) to the order of the Trustee in an amount equal to the purchase price.

2. Use and Preparation of Official Statement.

The District hereby ratifies, confirms and approves of the distribution and use by the Underwriters prior to the date hereof of the preliminary official statement dated [\_\_\_\_], 2019, relating to the Series 2019A Bonds (the “Preliminary Official Statement”) and the making available of the Preliminary Official Statement to investors prior to the date hereof on the internet. The District has deemed final the Preliminary Official Statement as of the date thereof for purposes of Rule 15c2-12 promulgated under the Securities Exchange Act of 1934 (“Rule 15c2-12”), except for information permitted to be omitted therefrom in accordance with paragraph (b)(1) of Rule 15c2-12. The District hereby agrees to deliver or cause to be delivered to the Underwriters, within seven (7) business days of the date hereof and, in any case, one business day prior to the Closing Date in order to permit the Underwriters to comply with Rule 15c2-12 and the applicable rules of the Municipal Securities Rulemaking Board (the “MSRB”), with respect to the distribution of the Official Statement (as hereinafter defined), copies of the final Official Statement relating to the Series 2019A Bonds, dated the date hereof, in the form of the Preliminary Official Statement, with such changes thereto, as may be approved by the District and the Representative (including the appendices thereto and any subsequent amendments or supplements as have been approved by the District and the Underwriters, the “Official Statement”), in such quantity as the Underwriters shall reasonably request. The District hereby approves of the distribution and use by the Underwriters of the Official Statement in connection with the offer and sale of the Series 2019A Bonds. The Representative hereby agrees to deliver a copy of the Official Statement to the MSRB through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at <http://emma.msrb.org> on or before the Closing Date.

3. Establishment of Issue Price.

(a) The Underwriters agree to make a bona fide public offering of the Series 2019A Bonds at the prices set forth in Schedule I, which prices may be changed from time to time by the Underwriters after such initial public offering.

(b) The Representative, on behalf of the Underwriters, agrees to assist the District in establishing the issue price of the Series 2019A Bonds and shall execute and deliver to the District at Closing an “issue price” or similar certificate, together with the supporting pricing wires or equivalent communications, substantially in the form attached hereto as Exhibit A, with such modifications as may be appropriate or necessary, in the reasonable judgment of the Representative, the District and Co-Bond Counsel (as hereinafter defined), to accurately reflect, as applicable, the sales price or prices or the initial offering price or prices to the public of the Series 2019A Bonds. If such certificate is insufficient to assist the District in establishing the issue price of the Series 2019A Bonds, one or more of the Underwriters shall, at the request of

the District, execute and deliver to the District at Closing a certificate substantially in the form of Attachment C to Exhibit A to the extent necessary to assist the District in establishing the issue price of the Series 2019A Bonds. [All actions to be taken by the District under this section to establish the issue price of the Series 2019A Bonds may be taken on behalf of the District by the District's municipal advisor identified herein and any notice or report to be provided to the District may be provided to the District's municipal advisor.]

(c) With respect to Series 2019A Bonds of those maturities as to which at least 10% of the Series 2019A Bonds of the maturity has been sold to the public (defined in subsection (g) below) at a single price (the "10% test"), based on reporting by the Representative to the District on the date hereof and prior to the execution of this Purchase Contract, which maturities are indicated in Schedule I attached hereto, the District will treat the first price at which 10% of each such maturity of the Series 2019A Bonds was sold to the public as the issue price of that maturity. With respect to Series 2019A Bonds of those maturities as to which the 10% test has not been satisfied, based on reporting by the Representative to the District on the date hereof and prior to the execution of this Purchase Contract, which maturities are indicated in Schedule I attached hereto, the Representative and the District agree that the rules in subsection (d) below shall apply. For purposes of this Section, for Series 2019A Bonds maturing on the same date but having different interest rates, each separate CUSIP number for such Series 2019A Bonds is subject to the 10% test or subsection (d) below, as the case may be, as if such separate CUSIP number were a separate maturity.

(d) [The Representative confirms that the Underwriters have offered the Series 2019A Bonds to the public on or before the date of this Purchase Contract at the respective offering price or prices (the "initial offering price"), or at the corresponding respective yield or yields, set forth in Schedule I attached hereto. Schedule I also sets forth, as of the date of this Purchase Contract, the maturities, if any, of the Series 2019A Bonds for which the 10% test has not been satisfied at the time this Purchase Contract is executed and for which the District and the Representative, on behalf of the Underwriters, agree that the restrictions set forth in the next sentence shall apply, which will allow the District to treat the initial offering price to the public of each such maturity as of the sale date as the issue price of that maturity (the "hold-the-offering-price rule"). So long as the hold-the-offering-price rule remains applicable to any maturity of the Series 2019A Bonds, the Underwriters will neither offer nor sell unsold Series 2019A Bonds of that maturity to any person at a price that is higher than the initial offering price to the public during the period starting on the sale date and ending on the earlier of the following:

- (1) the close of the fifth (5th) business day after the sale date; or
- (2) the date on which the Underwriters have sold at least 10% of that maturity of the Series 2019A Bonds to the public at a price that is no higher than the initial offering price to the public.

The Representative will advise the District promptly after the close of the fifth (5th) business day after the sale date whether it has sold 10% of that maturity of the Series 2019A Bonds to the public at a price that is no higher than the initial offering price to the public.]

(e) The Representative confirms that:

(1) any agreement among underwriters, any selling group agreement and each third-party distribution agreement (to which the Representative is a party) relating to the initial sale of the Series 2019A Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter, each dealer who is a member of the selling group and each broker-dealer that is a party to such third-party distribution agreement, as applicable:

(A) (i) to report the prices at which it sells to the public the unsold Series 2019A Bonds of each maturity allocated to it, whether or not the Closing Date has occurred, until either all Series 2019A Bonds of that maturity allocated to it have been sold or it is notified by the Representative that the 10% test has been satisfied as to the Series 2019A Bonds of that maturity, and (ii) to comply with the hold-the-offering-price rule, if applicable, if and for so long as directed by the Representative and as set forth in the related pricing wires, and

(B) to promptly notify the Representative of any sales of Series 2019A Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter participating in the initial sale of the Series 2019A Bonds to the public (each such term being used as defined below),

(C) to acknowledge that, unless otherwise advised by the Underwriter, dealer or broker-dealer, the Representative shall assume that each order submitted by the Underwriter, dealer or broker-dealer is a sale to the public.

(2) any agreement among underwriters or selling group agreement relating to the initial sale of the Series 2019A Bonds to the public, together with the related pricing wires, contains or will contain language obligating each Underwriter or dealer that is a party to a third-party distribution agreement to be employed in connection with the initial sale of the Series 2019A Bonds to the public to require each broker-dealer that is a party to such third-party distribution agreement to (A) report the prices at which it sells to the public the unsold Series 2019A Bonds of each maturity allocated to it, whether or not the Closing Date has occurred, until either all Series 2019A Bonds of that maturity allocated to it have been sold or it is notified by the Representative or such Underwriter or dealer that the 10% test has been satisfied as to the Series 2019A Bonds of that maturity, and (B) comply with the hold-the-offering-price rule, if applicable to a particular maturity of the Series 2019A Bonds, if and for so long as directed by the Representative or the Underwriter or the dealer and as set forth in the related pricing wires.

(f) The District acknowledges that, in making the representations set forth in this section, the Representative will rely on (i) the agreement of each Underwriter to comply with the requirements for establishing issue price of the Series 2019A Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Series 2019A Bonds, as set forth in an agreement among underwriters and the related pricing wires, (ii) in the event a selling group has been created in connection with the initial sale of the Series 2019A Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with the requirements for establishing issue price of the Series 2019A Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to

the Series 2019A Bonds, as set forth in a selling group agreement and the related pricing wires, and (iii) in the event that an Underwriter or dealer who is a member of the selling group is a party to a third-party distribution agreement that was employed in connection with the initial sale of the Series 2019A Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with the requirements for establishing issue price of the Series 2019A Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Series 2019A Bonds, as set forth in the third-party distribution agreement and the related pricing wires. The District further acknowledges that each Underwriter shall be solely liable for its failure to comply with its agreement regarding the requirements for establishing issue price of the Series 2019A Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Series 2019A Bonds, and that no Underwriter shall be liable for the failure of any other Underwriter, or of any dealer who is a member of a selling group, or of any broker-dealer that is a party to a third-party distribution agreement, to comply with its corresponding agreement to comply with the requirements for establishing issue price of the Series 2019A Bonds, including, but not limited to, its agreement to comply with the hold-the-offering-price rule, if applicable to the Series 2019A Bonds.

(g) The Underwriters acknowledge that sales of any Series 2019A Bonds to any person that is a related party to an underwriter participating in the initial sale of the Series 2019A Bonds to the public (each such term being used as defined below) shall not constitute sales to the public for purposes of this section. Further, for purposes of this section:

(1) “public” means any person other than an underwriter or a related party,

(2) “underwriter” means (A) any person that agrees pursuant to a written contract with the District (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Series 2019A Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Series 2019A Bonds to the public (including a member of a selling group or a party to a third-party distribution agreement participating in the initial sale of the Series 2019A Bonds to the public),

(3) a purchaser of any of the Series 2019A Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (A) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (B) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (C) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(4) “sale date” means the date of execution of this Purchase Contract by all parties.

4. Representations, Warranties and Agreements of the District.

The District hereby represents, warrants and agrees with the Underwriters as follows:

(a) The District is, and will be on the Closing Date, a municipal utility district of the State of California duly organized and validly existing and operating pursuant to the laws of the State of California with full legal right, power and authority to issue the Series 2019A Bonds pursuant to the Act and the Indenture, to execute and deliver the Official Statement and to enter into this Purchase Contract and the Continuing Disclosure Agreement, dated June [\_\_\_], 2019, between the District and the Trustee (the “Disclosure Agreement” and together with the Indenture and this Purchase Contract, the “District Documents”);

(b) By all necessary official action of the District prior to or concurrently with the acceptance hereof, the District has duly authorized the issuance and sale of the Series 2019A Bonds and has duly approved the distribution of the Preliminary Official Statement and the execution, delivery and distribution of the Official Statement, and has duly authorized and approved the execution and delivery of, and the performance by the District of the obligations on its part contained in the District Documents and the consummation by it of all other transactions contemplated by the Official Statement and the District Documents and the District is on the date hereof and will be on the Closing Date in compliance in all material respects with the provisions of the District Documents; the District Documents are or as of the Closing Date will be in full force and effect in substantially the form heretofore submitted to the Underwriters with only such changes as shall have been agreed to in writing by the Underwriters; and the District Documents constitute valid and legally binding agreements of the District enforceable against the District in accordance with their terms; provided, however, that the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors’ rights and to the limitations on legal remedies against public agencies in the State of California;

(c) Except as otherwise disclosed in writing by the District to the Representative on or prior to the date hereof, the District is not in Material Breach or Default (as hereinafter defined) under any applicable constitutional provision, law or administrative regulation to which it is subject or any applicable judgment, decree, court order or consent decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the District is a party or to which the District or any of its property or assets is otherwise subject, and no event has occurred and is continuing which with the passage of time or the giving of notice, or both, would constitute such a Material Breach or Default under any of the foregoing; and the issuance of the Series 2019A Bonds, the execution and delivery of the District Documents and compliance with the provisions on the District’s part contained herein and therein, will not constitute a Material Breach or Default under any law, administrative regulation, judgment, decree, court order, consent decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the District is a party or to which the District or any of its property or assets is otherwise subject, nor will any such execution, delivery or compliance result in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any of the properties or assets of the District under the terms of any such law, administrative regulation, judgment, decree, court order, consent decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument, except as provided in the

Indenture (for purposes of this Purchase Contract, the term “Material Breach or Default” means any breach or default which could have a material adverse effect on the business operations or financial condition of the District or its Water System);

(d) Except as disclosed in the Preliminary Official Statement and the Official Statement or otherwise disclosed in writing by the District to the Representative on or prior to the date hereof, there is no action, suit, proceeding, inquiry or investigation (with service of process having been accomplished), at law or in equity, before or by any court, governmental agency, public board or body, pending or, to the best knowledge of the District after reasonable investigation, threatened against or affecting the District: (i) in any material respect affecting or contesting the existence of the District or the titles of its officers to their respective offices; or (ii) affecting or seeking to prohibit, restrain or enjoin the issuance, sale or delivery of the Series 2019A Bonds; or (iii) contesting or affecting, as to the District, the validity or enforceability of the Series 2019A Bonds or the District Documents; or (iv) contesting the powers of the District or its authority to enter into, adopt or perform its obligations under any of the foregoing, or contesting or affecting the power or authority of the District to impose rates and charges, or the collection thereof, or the pledge of revenues under the Indenture; or (v) which may result in any material adverse change in the ability of the District to pay the Series 2019A Bonds; or (vi) contesting the status of the interest on the Series 2019A Bonds as excludable from federal gross income as described in the Preliminary Official Statement or in the Official Statement; or (vii) contesting in any way the completeness or accuracy of the Preliminary Official Statement or the Official Statement; or (viii) wherein an unfavorable ruling or finding would result in any material adverse change in the business operations or financial condition of the District or the Water System;

(e) All authorizations, approvals, licenses, permits, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction over the matter which are required for the due authorization by, or which would constitute a condition precedent to or the absence of which would materially adversely affect the approval or adoption, as applicable, of the District Documents, the issuance of the Series 2019A Bonds or the due performance by, the District of its obligations in connection with the District Documents have been duly obtained and remain in full force and effect, except for such approvals, consents and orders as may be required under the Blue Sky or securities laws of any state in connection with the offering and sale of the Series 2019A Bonds;

(f) Under the laws of the State of California, the authority of the District to determine, fix, prescribe and collect rates, fees and charges in connection with the services and facilities furnished by the Water System is not presently subject to the regulatory jurisdiction of the California Public Utilities Commission, or other local, regional or state regulatory authority, and, except as otherwise disclosed in writing by the District to the Representative on or prior to the date hereof, the District is not aware of any legislation proposed or pending to limit or restrict such rates, fees and charges;

(g) The Series 2019A Bonds, when issued, authenticated and delivered in accordance with the Indenture and sold to the Underwriters as provided herein, will be valid and legally enforceable obligations of the District in accordance with their terms and the terms of the Indenture and the Indenture will provide, for the benefit of the holders from time to time of the

Series 2019A Bonds and any parity bonds issued under the Indenture, a legally valid and binding pledge of Subordinated Water Revenues (as defined in the Indenture) and the funds and accounts pledged under the Indenture, subject only to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth therein;

(h) The Series 2019A Bonds and the Indenture conform in all material respects to the descriptions thereof contained in the Preliminary Official Statement and the Official Statement and the proceeds of the sale of the Series 2019A Bonds will be applied generally as described in the Preliminary Official Statement and the Official Statement;

(i) The financial statements of the District contained in the Preliminary Official Statements and the Official Statement do and will fairly present the financial position and results of operations of the District as of the dates and for the periods therein set forth in accordance with generally accepted accounting principles applied consistently, and, except as otherwise disclosed in the Preliminary Official Statement and the Official Statement, since the date thereof there has been no material adverse change in the financial position or results of operations of the District or the Water System;

(j) The District will furnish such information, execute such instruments and take such other action in cooperation with the Underwriters as the Underwriters may reasonably request in order (i) to qualify the Series 2019A Bonds for offer and sale under the Blue Sky or other securities laws and regulations of such states and other jurisdictions of the United States as the Underwriters may designate and (ii) to determine the eligibility of the Series 2019A Bonds for investment under the laws of such states and other jurisdictions, and will use its best efforts to continue such qualification in effect so long as required for distribution of the Series 2019A Bonds; provided, however, that in no event shall the District be required to take any action which would subject it to the general service of process in any jurisdiction in which it is not now so subject, and will use its best efforts to advise the Representative promptly of receipt by the District of any written notification with respect to the suspension of the qualification of the Series 2019A Bonds for sale in any jurisdiction or the initiation or threat of any proceeding for that purpose;

(k) The Preliminary Official Statement (except for information relating to offering prices, interest rate, selling compensation, aggregate principal amount, principal amount per maturity, delivery dates, ratings, other terms of the securities depending on such matters, and the identity of the underwriters and such other information as may be omitted therefrom pursuant to Rule 15c2-12) did not as of the date thereof and, as supplemented or amended through the date hereof, does not as of the date hereof contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading in any material respect (except for information relating to DTC and its book-entry only system, as to which no opinion or view is expressed);

(l) As of the date thereof and at all times subsequent thereto to and including the date which is 25 days following the End of the Underwriting Period (as hereinafter defined) for the Series 2019A Bonds, the Official Statement did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make

the statements therein, in the light of the circumstances under which they were made, not misleading;

(m) If between the date hereof and the date which is 25 days after the End of the Underwriting Period for the Series 2019A Bonds, an event occurs which might or would cause the information contained in the Official Statement, as then supplemented or amended, to contain an untrue statement of a material fact or to omit to state a material fact required to be stated therein or necessary to make such information therein, in the light of the circumstances under which it was presented, not misleading, the District will notify the Underwriters, and, if in the opinion of the District, the Underwriters or their respective counsel, such event requires the preparation and publication of a supplement or amendment to the Official Statement, the District will forthwith prepare and furnish to the Underwriters (at the expense of the District) a reasonable number of copies of an amendment of or supplement to the Official Statement (in form and substance satisfactory to the Underwriters and their counsel) which will amend or supplement the Official Statement so that it will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at the time the Official Statement is delivered to prospective purchasers, not misleading. For the purposes of this subsection, between the date hereof and the date which is 25 days after the End of the Underwriting Period for the Series 2019A Bonds, the District will furnish such information with respect to itself as the Underwriters may from time to time reasonably request;

(n) If the information contained in the Official Statement is amended or supplemented pursuant to paragraph (m) hereof, at the time of each supplement or amendment thereto and (unless subsequently again supplemented or amended pursuant to such subparagraph) at all times subsequent thereto up to and including the date which is 25 days after the End of the Underwriting Period for the Series 2019A Bonds, the portions of the Official Statement so supplemented or amended (including any financial and statistical data contained therein) will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or make such information therein, in the light of the circumstances under which it was presented, not misleading;

(o) As used herein and for the purposes of this Purchase Contract, the term “End of the Underwriting Period” for the Series 2019A Bonds shall mean the earlier of (i) the Closing Date unless the District shall have been notified in writing to the contrary by the Representative on or prior to the Closing Date, or (ii) the date on which the End of the Underwriting Period for the Series 2019A Bonds has occurred under Rule 15c2-12; provided, however, that the District may treat as the End of the Underwriting Period for the Series 2019A Bonds the date specified as such in a notice from the Representative stating the date which is the End of the Underwriting Period;

(p) After the Closing, the District will not participate in the issuance of any amendment of or supplement to the Official Statement to which, after being furnished with a copy, the Underwriters shall reasonably object in writing;

(q) Between the date of this Purchase Contract and the Closing Date, except as referred to in or as contemplated by the Official Statement, the District will not, without the prior

written consent of the Representative (which consent shall not be unreasonably withheld), publicly offer or issue any bonds, notes or other obligations for borrowed money, or incur any material liabilities, direct or contingent, payable from the revenues of the Water System, nor will there be any adverse change of a material nature in the financial position, results of operations or condition, financial or otherwise, of the District, in either case other than in the ordinary course of its business or as discussed in the Official Statement;

(r) The District is duly authorized to apply and will apply, or cause the application of, the proceeds of the Series 2019A Bonds in accordance with the Indenture, including for payment of District expenses incurred in connection with the authorization, execution, delivery and sale of the Series 2019A Bonds to the extent contemplated by Section 6;

(s) Any certificate signed by any authorized official of the District, and delivered to the Underwriters in connection with the execution and delivery of the Series 2019A Bonds, shall be deemed a representation and warranty by the District to the Underwriters as to the statements made therein; and

(t) Except as disclosed in the Preliminary Official Statement and the Official Statement, the District has not failed within the last five years to comply in all material respects with any previous undertakings with regard to Rule 15c2-12 to provide annual reports of financial and operating data or notices of enumerated events.

#### 5. Conditions to the Obligations of the Underwriters.

The Underwriters hereby enter into this Purchase Contract in reliance upon the representations and warranties of the District contained herein and the representations and warranties to be contained in the documents and instruments to be delivered at the Closing and upon the performance by the District of its obligations both on and as of the date hereof and as of the Closing Date. Accordingly, the Underwriters' obligations under this Purchase Contract to purchase, to accept delivery of and to pay for the Series 2019A Bonds shall be subject, at the option of the Underwriters, to the accuracy in all material respects of the representations and warranties of the District contained herein as of the date hereof and as of the Closing Date, to the accuracy in all material respects of the statements of the officers and other officials of the District made in any certificate or other document furnished pursuant to the provisions hereof, to the performance by the District of its obligations to be performed hereunder and under such documents and instruments at or prior to the Closing Date, and also shall be subject to the following additional conditions:

(a) The Underwriters shall receive, within seven (7) business days of the date hereof and, in any case, in sufficient time to accompany customer confirms requesting payment, copies of the Official Statement (including all information previously permitted to have been omitted by Rule 15c2-12 and any amendments or supplements as have been approved by the Underwriters), in such reasonable quantity as the Underwriters shall have requested;

(b) The representations and warranties of the District contained herein shall be true and correct in all material respects on the date hereof and on the Closing Date, as if made on and at the Closing Date;

(c) At the Closing, the District Documents shall have been duly authorized, executed and delivered by the respective parties thereto, and the Official Statement shall have been duly authorized, executed and delivered by the District, all in substantially the forms heretofore submitted to the Underwriters, with only such changes as shall have been agreed to in writing by the Underwriters (which consent shall not be unreasonably withheld), and shall be in full force and effect; and there shall be in full force and effect such resolution or resolutions of the Board of Directors of the District as, in the opinion of Norton Rose Fulbright US LLP, Los Angeles, California, and Curls Bartling P.C., Oakland, California (“Co-Bond Counsel”), and Orrick, Herrington & Sutcliffe LLP, San Francisco, California, counsel to the Underwriters (hereinafter, “Underwriters’ Counsel”), shall be necessary or appropriate in connection with the transactions contemplated hereby;

(d) Between the date hereof and the Closing Date, the market price or marketability, at the initial offering price set forth in the Official Statement, of the Series 2019A Bonds shall not have been materially adversely affected, in the reasonable judgment of the Underwriters (evidenced by a written notice to the District terminating the obligation of the Underwriters to accept delivery of and make any payment for the Series 2019A Bonds), by reason of any of the following:

(1) an amendment to the Constitution of the United States or the State of California shall have been passed or legislation shall have been introduced in or enacted by the Congress of the United States or the legislature of the State of California or legislation pending in the Congress of the United States shall have been amended or legislation shall have been recommended to the Congress of the United States or otherwise endorsed for passage (by press release, other form of notice or otherwise) by the President of the United States, the Treasury Department of the United States, the Internal Revenue Service or the Chairman or ranking minority member of the Committee on Finance of the United States Senate or the Committee on Ways and Means of the United States House of Representatives, or legislation shall have been favorably reported for passage to either House of the Congress of the United States by a Committee of such House to which such legislation has been referred for consideration, or a decision shall have been rendered by a court of the United States or of the State of California or the Tax Court of the United States, or a ruling shall have been made or a regulation or temporary regulation shall have been proposed or made or any other release or announcement shall have been made by the Treasury Department of the United States, the Internal Revenue Service or other federal or State of California authority, with respect to federal or State of California taxation upon revenues or other income of the general character to be derived by the District or upon interest received with respect to obligations of the general character of the Series 2019A Bonds which, in the reasonable judgment of the Underwriters, may have the purpose or effect, directly or indirectly, of affecting the tax status of the District, its property or income, its securities (including the Series 2019A Bonds) or the interest thereon, or any tax exemption granted or authorized by federal or State of California legislation;

(2) legislation shall have been enacted, introduced in the Congress or recommended for passage by the President of the United States, or a decision rendered by a court established under Article III of the Constitution of the United States or by the Tax Court of the United States, or an order, ruling, regulation (final, temporary or proposed) or official statement by or on behalf of the Securities and Exchange Commission, or any other governmental agency

having jurisdiction of the subject matter, shall have been made or issued to the effect that obligations of the general character of the Series 2019A Bonds, or the Series 2019A Bonds, are not exempt from registration under the Securities Act of 1933, as amended, or that the Indenture is not exempt from qualification under the Trust Indenture Act of 1939, as amended;

(3) the declaration of war or the escalation of, or engagement in, military hostilities by the United States or the occurrence of any other national or international emergency or calamity relating to the effective operation of the government of, or the financial community in, the United States;

(4) the declaration of a general banking moratorium by federal, State of New York or State of California authorities, or the general suspension of trading on any national securities exchange;

(5) the imposition by the New York Stock Exchange or other national securities exchange, or any governmental authority, of any material restrictions not now in force with respect to the Series 2019A Bonds or obligations of the general character of the Series 2019A Bonds or securities generally, the material increase of any such restrictions now in force, including those relating to the extension of credit by, or the charge to the net capital requirements of, the Underwriters, the establishment of minimum or maximum prices on any national securities exchange, or a material disruption in securities settlement, payment or clearance services shall have occurred;

(6) an order, decree or injunction of any court of competent jurisdiction, or order, ruling, regulation or official statement by the Securities and Exchange Commission, or any other governmental agency having jurisdiction of the subject matter, issued or made to the effect that the issuance, offering or sale of obligations of the general character of the Series 2019A Bonds, or the issuance, offering or sale of the Series 2019A Bonds, as contemplated hereby or by the Official Statement, is or would be in violation of the federal securities laws as amended and then in effect;

(7) the withdrawal or downgrading of any rating of the Series 2019A Bonds or the underlying rating of any of the District's Water System Revenue Bonds by a national rating agency then rating the Series 2019A Bonds; or

(8) any event occurring, or information becoming known which, in the reasonable judgment of the Underwriters, makes untrue in any material respect any statement or information then contained in the Official Statement, or has the effect that the Official Statement then contains any untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading and, in either such event, the District refuses to permit the Official Statement to be supplemented to supply such statement or information or the effect of the Official Statement as so supplemented is, in the judgment of the Underwriters, to materially adversely affect the market for the Series 2019A Bonds or the sale of the Series 2019A Bonds, at the contemplated offering prices (or yields).

(e) At or prior to the Closing Date, the Underwriters shall have received the following documents, in each case satisfactory in form and substance to the Underwriters and Underwriters' Counsel:

(1) Counterparts of the District Documents, duly executed and delivered by the respective parties thereto;

(2) The approving opinion of Co-Bond Counsel, dated the Closing Date and addressed to the District, in substantially the form attached to the Official Statement in Appendix D thereto, and a letter of such counsel, dated the Closing Date and addressed to the Representative, to the effect that such opinion may be relied upon by the Underwriters to the same extent as if such opinion were addressed to them;

(3) The supplemental opinion of Co-Bond Counsel, dated the Closing Date and addressed to the Representative, in substantially the form attached hereto as Exhibit B;

(4) The opinion of the Office of General Counsel of the District, dated the Closing Date and addressed to the Representative, in substantially the form attached hereto as Exhibit C;

(5) The opinion of counsel to the Trustee, dated the Closing Date and addressed to the District and the Representative, in substantially the form attached hereto as Exhibit D;

(6) The opinion of Underwriters' Counsel, dated the Closing Date and addressed to the Representative, to the effect that (a) the Series 2019A Bonds are exempt from registration under the Securities Act of 1933, as amended, and the Indenture is exempt from qualification under the Trust Indenture Act of 1939, as amended, and the Disclosure Agreement satisfies paragraph (b)(5) of Rule 15c2-12; and (b) without having undertaken to determine independently the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement or the Official Statement and based upon the information made available to them in the course of their participation in the preparation of the Preliminary Official Statement and the Official Statement as counsel for the Underwriters, nothing has come to their attention which would cause them to believe that the Preliminary Official Statement, as of the date of this Purchase Contract, or the Official Statement, as of the date thereof and the Closing Date, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that no opinion need be expressed with respect to the financial statements and the statistical data included in the Official Statement, and Appendices B through G thereto, and information regarding DTC and its book-entry only system;

(7) A certificate or certificates, dated the Closing Date, signed by a duly authorized official of the District, in form and substance satisfactory to the Underwriters, to the effect that (a) the representations and warranties of the District contained in this Purchase Contract are true and correct in all material respects on and as of the Closing Date with the same effect as if made on the Closing Date; (b) to the best of such official's knowledge, no event

affecting the District has occurred since the date of the Official Statement which either makes untrue or incorrect in any material respect as of the Closing Date any statement or information contained in the Official Statement relating to the District or is not reflected in the Official Statement but should be reflected therein in order to make the statements and information therein relating to the District not misleading in any material respect; (c) since June 30, 2018, except as referred to in or as contemplated by the Official Statement, the District has not incurred any financial liabilities, direct or contingent, or entered into any transactions and there has not been any adverse change in the condition, financial or physical, of the Water System, in any such case that would materially and adversely affect the ability of the District to meet its obligations under the Indenture or the Series 2019A Bonds; and (d) the projected operating results and debt service coverage contained in Table [21] in Appendix A to the Official Statement are the District's projections and are based on the stated assumptions, which the District believes to be reasonable;

(8) A certificate, dated the Closing Date, signed by a duly authorized official of the Trustee, satisfactory in form and substance to the Underwriters, to the effect that: (a) the Trustee is a national banking association duly organized and existing under and by virtue of the laws of the United States of America, having the full power and being qualified to enter into and perform its duties under the Indenture and the Disclosure Agreement (collectively, the "Trustee Documents"); (b) the execution and delivery of the Trustee Documents and compliance with the provisions on the Trustee's part contained therein, will not in any material respect conflict with or constitute a breach of or default under any material agreement or material instrument to which the Trustee is as party or by which it is bound or any law, administrative regulation, judgment or decree (except that no representation, warranty or agreement is made with respect to any federal or state securities or blue sky laws or regulations); and (c) to the officer's knowledge, the Trustee has not been served with any action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, governmental agency, public board or body, nor is any such action threatened against the Trustee, as such but not in its individual capacity, affecting the existence of the Trustee, or the titles of its officers to their respective offices, or contesting or affecting the validity or enforceability of the Trustee Documents, or contesting the powers of the Trustee or its authority to enter into, adopt or perform its obligations under the foregoing, wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Trustee Documents;

(9) A certified copy of the general resolution of the Trustee authorizing the execution and delivery of the Trustee Documents;

(10) A copy of the Preliminary Official Statement;

(11) A copy of the Official Statement, executed on behalf of the District by authorized representatives of the District;

(12) A copy of each of the resolutions of the District authorizing the execution and delivery of the Official Statement, the District Documents and the issuance of the Series 2019A Bonds, certified by the Secretary or an Assistant Secretary of the District to be in full force and effect as of the Closing Date;

(13) Evidence that any ratings described in the Official Statement are in full force and effect as of the Closing Date;

(14) A copy of the Blue Sky Memorandum with respect to the Series 2019A Bonds, prepared by Underwriters' Counsel;

(15) A Tax Certificate signed by the District relating to the Series 2019A Bonds, in form and substance satisfactory to Co-Bond Counsel;

(16) A copy of the Blanket Letter of Representations to DTC relating to the Series 2019A Bonds signed by the District; and

(17) Such additional legal opinions, certificates, proceedings, instruments and other documents as the Underwriters, Underwriters' Counsel or Co-Bond Counsel may reasonably request to evidence the truth and accuracy, as of the date hereof and as of the Closing Date, of the representations of the District herein and of the statements and information contained in the Official Statement, and the due performance or satisfaction by the District at or prior to the Closing of all agreements then to be performed and all conditions then to be satisfied by the District in connection with the transactions contemplated hereby and by the District Documents and the Official Statement.

If the District shall be unable to satisfy the conditions to the Underwriters' obligations contained in this Purchase Contract or if the Underwriters' obligations shall be terminated for any reason permitted herein, all obligations of the Underwriters hereunder may be terminated by the Underwriters at, or at any time prior to, the Closing Date by written notice to the District and neither the Underwriters nor the District shall have any further obligations hereunder, except the District's obligation for the payment and reimbursement of expenses, as provided in Section 6 hereof, shall continue in full force and effect.

6. Expenses.

All expenses and costs incident to the authorization, execution, delivery and sale of the Series 2019A Bonds to the Underwriters, including the costs of printing of the Series 2019A Bonds, the Preliminary Official Statement and the Official Statement, the cost of preparing and duplicating the Indenture, the fees of accountants, consultants and rating agencies, the initial fee of the Trustee and its counsel in connection with the execution and delivery of the Series 2019A Bonds and the fees and expenses of Co-Bond Counsel and Underwriters' Counsel shall be paid either from the proceeds of the Series 2019A Bonds or from funds of the District. The District shall pay for expenses (included in the expense component of the Underwriters' discount) incurred on behalf of the District's employees which are incidental to implementing this Purchase Contract, including, but not limited to, meals, transportation and lodging, of those employees. In the event that the Series 2019A Bonds for any reason are not executed and delivered, or to the extent proceeds of the Series 2019A Bonds are insufficient or unavailable therefor, any such fees, costs and expenses owed by the District, which otherwise would have been paid from the proceeds of the Series 2019A Bonds, shall be paid by the District. The District shall pay the reasonable out-of-pocket expenses of the Underwriters (included in the expense component of the Underwriters' discount), including travel and other expenses and the

California Debt and Investment Advisory Commission fee. In the event that the Underwriters incur or advance the cost of any expense for which the District is responsible hereunder, the District shall reimburse the Underwriters at or prior to Closing; if at Closing, reimbursement may be included in the expense component of the Underwriter's discount. To the extent that the Underwriters have incurred expenses on behalf of the District which are to be reimbursed to the Underwriters or included as a component of the Underwriters' discount, the Underwriters agree to provide the District, with a detailed itemization of any such expenses prior to the Closing Date.

7. Notices.

Any notice or other communication to be given under this Purchase Contract may be given by delivering the same in writing to the respective parties at the following address:

District: East Bay Municipal Utility District  
375 Eleventh Street  
Oakland, California 94607  
Attention: Director of Finance

Representative: J.P. Morgan Securities LLC  
560 Mission Street, 3<sup>rd</sup> Floor  
San Francisco, California 94105  
Attention: Alex Burnett, Managing Director

8. Survival of Representations and Warranties.

The representations and warranties of the District set forth in or made pursuant to this Purchase Contract shall not be deemed to have been discharged, satisfied or otherwise rendered void by reason of the Closing or termination of this Purchase Contract and regardless of any investigations or statements as to the results thereof made by or on behalf of the Underwriters and regardless of delivery of and payment for the Series 2019A Bonds. All of the District's representations, warranties and agreements contained in this Purchase Contract shall remain operative and in full force and effect, regardless of: (i) any investigations made by or on behalf of the Underwriters; (ii) delivery of and payment for the Series 2019A Bonds pursuant to this Purchase Contract; and (iii) any termination of this Purchase Contract.

9. Effectiveness and Counterpart Signatures.

This Purchase Contract shall become effective and binding upon the respective parties hereto upon the execution of the acceptance hereof by duly authorized officials of the District and shall be valid and enforceable as of the time of such acceptance. This Purchase Contract may be executed by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument.

10. Parties in Interest.

This Purchase Contract is made solely for the benefit of the District and the Underwriters (including the successors or assigns of the Underwriters) and no other person shall acquire or have any right hereunder or by virtue hereof.

11. Entire Agreement.

This Purchase Contract when accepted by you in writing as heretofore specified shall constitute the entire agreement between the District and the Underwriters with respect to the purchase of the Series 2019A Bonds.

12. Headings.

The headings of the sections of this Purchase Contract are inserted for convenience only and shall not be deemed to be a part hereof.

13. Governing Law.

This Purchase Contract shall be construed in accordance with the laws of the State of California.

(Remainder of Page Intentionally Left Blank)

Very truly yours,

J.P. MORGAN SECURITIES LLC, as  
Representative of the Underwriters

By: \_\_\_\_\_  
Authorized Officer

ACCEPTED:

EAST BAY MUNICIPAL UTILITY DISTRICT

By: \_\_\_\_\_  
Director of Finance

SCHEDULE I

\$[Par]  
EAST BAY MUNICIPAL UTILITY DISTRICT  
WATER SYSTEM REVENUE BONDS,  
SERIES 2019A (GREEN BONDS)

<u>Maturity Date (June 1)[*]</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>Initial Offering Price</u>	<u>10% Test Used</u>	<u>Hold the Offering Price Rule Used</u>
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[\* All of the maturities are 10% Test Maturities.]

[† Yield/Price to par call date of June 1, 20\_\_.]

[‡ Term Bonds. ]

EXHIBIT A

[\$[PAR]]  
EAST BAY MUNICIPAL UTILITY DISTRICT  
WATER SYSTEM REVENUE BONDS,  
SERIES 2019A (GREEN BONDS)

FORM OF ISSUE PRICE CERTIFICATE

The undersigned, on behalf of J.P. Morgan Securities LLC (“JP Morgan”) and the other members of the underwriting syndicate (together, the “Underwriting Group”), hereby certifies as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”) of the East Bay Municipal Utility District (the “Issuer”).

1. *Sale of the [General Rule Maturities][Bonds].*<sup>1</sup> As of the date of this certificate, for each Maturity of the [General Rule Maturities][Bonds],<sup>1</sup> the first price at which at least 10% of such Maturity was sold to the Public is the respective price listed in Schedule A.

[2. *Initial Offering Price of the Hold-the-Offering-Price Maturities.*

(a) The Underwriting Group offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this certificate as Schedule B.

(b) As set forth in the Purchase Contract, the members of the Underwriting Group agreed in writing on or prior to the Sale Date that, (i) for each Maturity of the Hold-the-Offering-Price Maturities, they would neither offer nor sell any of the Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the “hold-the-offering-price rule”), and (ii) any selling group agreement shall contain the agreement of each dealer who is a member of the selling group, and any retail or other third-party distribution agreement shall contain the agreement of each broker-dealer who is a party to the retail or other third-party distribution agreement, to comply with the hold-the-offering-price rule. Neither JP Morgan nor any broker-dealer who is a party to a third-party distribution agreement with JP Morgan offered or sold any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period. Certain members of the Underwriting Group, on behalf of themselves and any broker-dealer who is a party to a third-party distribution agreement with such member of the Underwriting Group, and certain selling group members have represented, in Schedule C to this certificate, that they have complied with such agreement.]<sup>2</sup>

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<sup>1</sup> Note: Use “General Rule Maturities” if there are HTOP maturities. Use “Bonds” if there are no HTOP Maturities.

<sup>2</sup> Delete if there are no HTOP Maturities.

3. *Defined Terms.*

[(a) *General Rule Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “General Rule Maturities.”

(b) *Hold-the-Offering-Price Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the “Hold-the-Offering-Price Maturities.”

(c) *Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day after the Sale Date, or (ii) the date on which the Underwriting Group sold at least 10% of such Hold-the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.]<sup>2</sup>

(d) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate maturities.

(e) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a related party to an Underwriter. The term “related party” for purposes of this certificate generally means any two or more persons who have greater than 50 percent common ownership, directly or indirectly.

(f) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is June [\_\_\_], 2019.

(h) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail or other third-party distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents JP Morgan’s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the tax certificate with respect to the Bonds and with respect to compliance with the federal income tax rules affecting the Bonds, and by Norton Rose Fulbright US LLP in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

J.P. Morgan Securities LLC

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

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Dated: \_\_\_\_\_, 2019

SCHEDULE A

SALE PRICES OF THE [GENERAL RULE MATURITIES AND INITIAL OFFERING  
PRICES OF THE HOLD-THE-OFFERING-PRICE MATURITIES][BONDS]<sup>1</sup>

(Attached)

[SCHEDULE B  
PRICING WIRE OR EQUIVALENT COMMUNICATION  
(Attached)]

ATTACHMENT C TO  
ISSUE PRICE CERTIFICATE

\$[PAR]  
EAST BAY MUNICIPAL UTILITY DISTRICT  
WATER SYSTEM REVENUE BONDS,  
SERIES 2019A (GREEN BONDS)

FORM OF UNDERWRITER CERTIFICATE

The undersigned, on behalf of [UNDERWRITER (“UW”) FULL NAME] (“[UW DEFINED NAME]”), hereby certifies as set forth below with respect to the sale and issuance of the above-captioned obligations (the “Bonds”).

1. *Initial Offering Price of the Hold-the-Offering-Price Maturities.*

(a) [UW DEFINED NAME] and any broker-dealer that is participating in the initial sale of the Bonds as a party to a retail or other third-party distribution agreement with [UW DEFINED NAME] (if any) offered certain Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the “Initial Offering Prices”) to the Issue Price Certificate of J.P. Morgan Securities LLC, as Representative of the Underwriters of the Bonds, to which this certificate is attached as Attachment C on or before the Sale Date. Those Hold-the-Offering Price Maturities that have been offered to the Public by [UW DEFINED NAME] and any broker-dealer that is participating in the initial sale of the Bonds as a party to a retail or other third-party distribution agreement with [UW DEFINED NAME] (if any) are set forth in Schedule A-1 hereto.

(b) Neither [UW DEFINED NAME] nor any broker-dealer that is participating in the initial sale of the Bonds as a party to a retail or other third-party distribution agreement with [UW DEFINED NAME] (if any) has offered or sold any unsold Bonds of any Maturity of the Hold-the-Offering-Price Maturities allocated to [UW DEFINED NAME] identified in Schedule A-1 attached hereto at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period. [UW DEFINED NAME] has not entered into a retail or other third-party distribution agreement, directly or indirectly, to participate in the initial sale of any of the Bonds to the Public [other than] [NAME OF ANY FIRM WITH WHICH [UW DEFINED NAME] HAS A RETAIL OR OTHER THIRD-PARTY DISTRIBUTION AGREEMENT].

2. *Defined Terms.*

(a) *Hold-the-Offering-Price Maturities* means those Maturities of the Bonds where issue price was established under Section § 1.148-1(f)(2)(ii) of the Treasury Regulations, as which Maturities are set forth in Schedule A-1 hereto.

(b) *Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day after the Sale Date, or (ii) the date on which the Underwriters have sold at least 10% of such

Hold-the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.

(c) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates or CUSIP identification numbers, are treated as separate maturities.

(d) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a related party to an Underwriter. The term “related party” for purposes of this certificate generally means any two or more persons who have greater than 50 percent common ownership, directly or indirectly.

(e) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is \_\_\_\_\_, 2019.

(f) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Authority (or with the Representative or lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail or other third-party distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents the [UW DEFINED NAME]’s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by East Bay Municipal Utility District (the “Issuer”) with respect to certain of the representations set forth in the Tax Certificate with respect to the Bonds and with respect to compliance with the federal income tax rules affecting the Bonds, and by Norton Rose Fulbright US LLP, bond counsel with respect to the Bonds, in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

[UW FULL NAME], as Underwriter

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
\_\_\_\_\_

Dated: \_\_\_\_\_, 2019

SCHEDULE A-1

HOLD-THE-OFFERING-PRICE MATURITIES  
ALLOCABLE TO [UW DEFINED NAME]

[Insert any HTOP Maturities for which this UW has an allocation]

EXHIBIT B

FORM OF SUPPLEMENTAL OPINION OF CO-BOND COUNSEL

[CLOSING DATE]

J.P. Morgan Securities LLC,  
as Representative of the Underwriters  
San Francisco, California

    \$[Par]  
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, sale and delivery of the District’s Water System Revenue Bonds, Series 2019A (Green Bonds), in the aggregate principal amount of \$[Par] (the “Bonds”), 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, 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 Bonds (collectively, the “Indenture”).

The Bonds are being sold on the date hereof by the District to J.P. Morgan Securities LLC, as Representative of itself, BofA Securities, Inc., and Siebert Cisneros Shank & Co., L.L.C., as Underwriters, pursuant to a Purchase Contract, dated June [\_\_\_], 2019 (the “Purchase Contract”).

All capitalized terms used herein and not otherwise defined shall have the meaning ascribed to such terms in the Purchase Contract, or if not defined therein, in the Official Statement dated June [\_\_\_], 2019, relating to the Bonds (the “Official Statement”).

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of the District and various public officials furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing and our review of such other information, documents and matters of law as we considered necessary to render this opinion, we are of the opinion that:

1. The statements contained in the Preliminary Official Statement, dated [\_\_\_\_], 2019, relating to the Bonds (the “Preliminary Official Statement”) and in the Official Statement on the cover and under the captions “INTRODUCTION,” “THE SERIES 2019A BONDS,” “SECURITY FOR THE SERIES 2019A BONDS,” “AMENDMENTS TO THE INDENTURE,” and “TAX MATTERS,” and in “APPENDIX C — SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE,” and “APPENDIX F — FORM OF CONTINUING DISCLOSURE AGREEMENT” (excluding the statements under each such caption relating to The Depository Trust Company (“DTC”), Cede & Co. and the book-entry system, as to all of which we express no view); insofar as the statements contained under such captions purport to summarize certain provisions of the Bonds, the Indenture, the Continuing Disclosure Agreement, the Water Interest Rate Swap Agreements and the District’s Commercial Paper Notes (Water Series), present an accurate summary of such provisions for the purpose of use in the Official Statement.

2. The Official Statement and the execution and delivery thereof have been duly approved by the District, and the Purchase Contract and the Continuing Disclosure Agreement have been duly authorized, executed and delivered by the District and (assuming due authorization, execution and delivery by and validity against the other parties thereto) are valid and binding agreements of the District, enforceable against the District in accordance with their respective terms. We call attention to the fact that the rights and obligations under the Purchase Contract and the Continuing Disclosure Agreement and the enforceability thereof are subject to and may be limited by 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. We express no opinion with respect to any indemnification, contribution, penalty, choice of law, choice of forum or waiver (including, without limitation, waiver of jury trial or consent to nonjury trial) provisions contained in the foregoing documents.

3. The Bonds are not subject to the registration requirements of the Securities Act of 1933, as amended, and the Indenture is exempt from qualification pursuant to the Trust Indenture Act of 1939, as amended.

4. The issuance of the Bonds, the execution and delivery of the Twenty-Ninth Supplemental Indenture, the Continuing Disclosure Agreement and the Purchase Contract by the District, and compliance by the District with provisions of the foregoing, as appropriate, do not in any material respect conflict with or constitute on the part of the District a Material Breach or Default under the Indenture or the Bonds issued thereunder or under the issuing and paying agent agreement, dated as of December 1, 2015, relating to the District’s Commercial Paper Notes (Water Series) or, to the best of our knowledge, any loan agreement with any State governmental agency to which the District is a party or to which the District or any of its property or assets are otherwise subject.

Based upon our participation in the preparation of the Preliminary Official Statement and the Official Statement as co-bond counsel and on the basis of the information made available to us in the course of the foregoing, but without having undertaken to determine or verify independently, or assuming any responsibility for, the accuracy, completeness or fairness of any

of the statements contained in the Preliminary Official Statement or the Official Statement (except to the extent expressly set forth in paragraph 1 above), as of the date hereof no facts have come to the attention of the personnel in our respective firms directly involved in rendering legal advice and assistance in connection with the preparation of the Preliminary Official Statement or the Official Statement that causes us to believe that (a) the Preliminary Official Statement as of the date of the Purchase Contract contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading (excluding therefrom the discussions contained in the Preliminary Official Statement of permits, licenses and approvals required for the construction and operation of any projects of the District, and the status thereof, the description of any litigation, any information relating to DTC, Cede & Co., the book-entry system, forecasts, projections, estimates, assumptions and expressions of opinions and the financial and statistical data included therein, as to all of which we express no view), and except for such information as is permitted to be excluded from the Preliminary Official Statement pursuant to Rule 15c2-12 of the Securities Exchange Act of 1934, as amended, including but not limited to information as to pricing, yields, interest rates, maturities, amortization, redemption provisions, debt service requirements, underwriters' discount, ratings and CUSIP numbers, or (b) the Official Statement as of its date or as of the date hereof contained or contains any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (excluding therefrom the discussions contained in the Official Statement of permits, licenses and approvals required for the construction and operation of any projects of the District, and the status thereof, the description of any litigation, any information relating to DTC, Cede & Co., the book-entry system, forecasts, projections, estimates, assumptions and expressions of opinions and the financial and statistical data included therein, as to all of which we express no view).

During the period from the date of the Official Statement to the date of this opinion, except for our review of the certificates and opinions regarding the Preliminary Official Statement and the Official Statement delivered on the date hereof, we have not undertaken any procedures or taken any actions which were intended to or were likely to elicit information concerning the accuracy, completeness or fairness of any of the statements contained in the Preliminary Official Statement or the Official Statement.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions. Such opinions 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 opinion in light of any such actions or events.

We are furnishing you this letter at the request of the District and solely for the information of, and assistance to, you in conducting and documenting your investigation of the affairs of the District in connection with the offering of the Bonds and it is not to be used, circulated, quoted or otherwise referred to for any other purpose, including but not limited to the purchase or sale of the Bonds, nor is it to be referred to in whole or in part in the Official Statement or any other document, except that it may be included in, and reference may be made to it in any list of, the closing documents pertaining to the delivery of the Bonds. The provision

of this opinion to you shall not create any attorney-client relationship between either of our firms and you. This opinion may not be relied upon by any other person, firm, corporation or other entity without our prior written consent.

Respectfully submitted,

Respectfully submitted,

EXHIBIT C

FORM OF OPINION OF OFFICE OF DISTRICT GENERAL COUNSEL

[CLOSING DATE]

J.P. Morgan Securities LLC,  
as Representative of the Underwriters  
San Francisco, California

[\$Par]  
EAST BAY MUNICIPAL UTILITY DISTRICT  
(Alameda and Contra Costa Counties, California)  
WATER SYSTEM REVENUE BONDS, SERIES 2019A (GREEN BONDS)

Ladies and Gentlemen:

I am General Counsel to the East Bay Municipal Utility District (the “District”), a municipal utility district organized and existing pursuant to the Municipal Utility District Act, constituting Division 6 of the Public Utilities Code of the State of California, as amended. This opinion is rendered pursuant to Section 5(e)(4) of the Purchase Contract (the “Purchase Contract”) dated June [\_\_\_], 2019 between the District and J.P. Morgan Securities LLC, as representative of the underwriters (the “Underwriters”) listed therein, and relating to the sale of \$[Par] aggregate principal amount of District’s Water System Revenue Bonds, Series 2019A (Green Bonds) (the “Series 2019A Bonds”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Purchase Contract or if not defined therein, in the Official Statement dated June [\_\_\_], 2019, relating to the Series 2019A Bonds (the “Official Statement”).

In rendering this opinion, I have examined the following documents: (i) the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, between the District and The Bank of New York Mellon Trust Company, N.A., as successor 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 (collectively, the “Indenture”); (ii) the Continuing Disclosure Agreement, dated June [\_\_\_], 2019, by and between the District and the Trustee; (iii) the Preliminary Official Statement, dated [\_\_\_\_], 2019, relating to the Series 2019A Bonds (the “Preliminary Official Statement”) and the Official Statement; (iv) the Series 2019A Bonds; and (v) such other documents and instruments, including certificates of public officials, and have made such investigations of law and of fact as I have deemed necessary or appropriate for the purpose of rendering the opinions set forth herein. The Indenture, the Continuing Disclosure Agreement and the Purchase Contract are collectively referred to herein as the “District Documents.” In addition, I call attention to the fact that the rights and obligations under the District Documents, the Series 2019A Bonds and the other legal documents and the enforceability thereof are subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors’ rights, to the application

of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public agencies in the State of California.

Based on the foregoing, I am of the opinion that:

(1) The District is, and was at all relevant times, a municipal utility district duly organized and validly existing under the laws of the State of California.

(2) The resolution or resolutions of the District approving and authorizing the execution and delivery of the Series 2019A Bonds, the District Documents and the Official Statement (the “Resolutions”) were duly adopted and/or approved by the District at meetings of the Board of Directors of the District, which were called and held pursuant to law and with all public notice required by law and at which a quorum was present and acting throughout, and each of the District Documents has been duly authorized, executed and delivered by the District and (assuming due authorization, execution and delivery by the other parties thereto) constitutes the legal, valid and binding obligation of the District.

(3) Except as disclosed in the Preliminary Official Statement and the Official Statement or otherwise disclosed in writing by the District to the Underwriters on or prior to the date hereof, there is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, governmental agency, public board or body, pending (with service of process having been accomplished) or, to my actual knowledge after reasonable investigation, threatened against or affecting the District: (i) in any material respect affecting or contesting the existence of the District or the titles of its officers to their respective offices; or (ii) affecting or seeking to prohibit, restrain or enjoin the issuance, sale or delivery of the Series 2019A Bonds; or (iii) contesting or affecting, as to the District, the validity or enforceability of the Series 2019A Bonds or the District Documents; or (iv) contesting the powers of the District or its authority to enter into, adopt or perform its obligations under the Series 2019A Bonds or the District Documents or contesting or affecting the power or authority of the District to impose rates and charges, or the collection thereof, or the pledge of revenues under the Indenture; or (v) which may result in any material adverse change in the ability of the District to pay the Series 2019A Bonds; or (vi) contesting the status of the interest on the Series 2019A Bonds as excludable from federal gross income as described in the Preliminary Official Statement and in the Official Statement; or (vii) contesting in any way the completeness or accuracy of the Preliminary Official Statement or the Official Statement; or (viii) wherein an unfavorable ruling or finding would result in any material adverse change in the business operations or financial condition of the District or the Water System.

(4) The issuance of the Series 2019A Bonds, the execution and delivery of the District Documents and the Official Statement by the District, the adoption of the Resolutions, and compliance by the District with the provisions of the foregoing, as appropriate, to the best of my actual knowledge after reasonable investigation, do not and will not in any material respect conflict with or constitute on the part of the District a Material Breach or Default under any loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the District is a party or to which the District or any of its property or assets is otherwise subject or any existing law, administrative regulation, judgment, decree, court order or consent decree to which the District or any of its property or assets is subject. In rendering the foregoing opinion, I have

relied, in part, upon the opinion of Norton Rose Fulbright US LLP and Curls Bartling P.C. expressed in paragraph (4) of their supplemental opinion delivered on this date.

(5) Except as described in the Preliminary Official Statement and the Official Statement, no authorization, approval, consent, or other order of the State of California or any other governmental authority or agency within the State of California having jurisdiction over the District or its property is required for the valid authorization, execution, delivery and performance by the District of the District Documents or the Official Statement or for the adoption of the Resolutions which has not been obtained, provided that no opinion is expressed with respect to qualification under Blue Sky or other state securities laws.

(6) Without having undertaken to determine independently the accuracy, completeness or fairness of the statements contained in the Preliminary Official Statement or the Official Statement and based upon the information made available to me during the preparation of the Preliminary Official Statement and the Official Statement as General Counsel to the District, nothing has come to my attention which causes me to believe that (i) the information contained in the Preliminary Official Statement under the captions “THE DISTRICT,” “CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES” and “LITIGATION” and in Appendix A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM)” (excluding therefrom forecasts, projections, estimates, assumptions and the financial and statistical data included in the Preliminary Official Statement, as to which no opinion is expressed), as of the date of the Purchase Contract, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (ii) the information contained in the Official Statement under the captions “THE DISTRICT,” “CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES” and “LITIGATION” and in Appendix A – “THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM)” (excluding therefrom forecasts, projections, estimates, assumptions and the financial and statistical data included in the Official Statement, as to which no opinion is expressed), as of the date thereof and as of the date hereof, contained or contains an untrue statement of a material fact or omitted or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(7) The Subordinated Water Revenues are free and clear of and from any and all liens and encumbrances other than as set forth in the Official Statement.

(8) Under the laws of the State of California, the District has the authority to fix and collect rates, fees and charges in connection with the services and facilities furnished by the Water System and is not presently subject to the regulatory jurisdiction of any state, regional or local government regulatory authority in connection with fixing and collecting such rates, fees and charges. No assurance can be given that any such legislation may not be proposed or introduced after the date of this opinion.

I express no opinion as to any matters other than as expressly set forth above and assume no obligation to revise or supplement this opinion should any law on which any opinions are

based or any facts or matters upon which I have relied subsequently change. Without limiting the generality of the foregoing, I specifically express no opinion as to the status of the Series 2019A Bonds or the interest thereon under any federal securities laws or any state securities or “Blue Sky” law or any federal, state or local tax law. Further, I express no opinion on the laws of any jurisdiction other than the State of California and the United States of America.

This opinion is delivered to you as the representative of the Underwriters and is solely for the benefit of the Underwriters and is not to be used by any other person or for any other purpose.

Very truly yours,

Craig S. Spencer  
General Counsel

EXHIBIT D

FORM OF TRUSTEE COUNSEL'S OPINION

[CLOSING DATE]

J.P. Morgan Securities LLC,  
as Representative of the Underwriters  
San Francisco, California

East Bay Municipal Utility District  
Water System Revenue Bonds,  
Series 2019A (Green Bonds)

Ladies and Gentlemen:

I have acted as special counsel to The Bank of New York Mellon Trust Company, N.A., as successor trustee ("BNY"), in connection with the Water System Subordinated Revenue Bond Indenture, dated as of April 1, 1990, between the East Bay Municipal Utility District (the "District") and BNY, as amended and supplemented, including as amended and supplemented by a Twenty-Ninth Supplemental Indenture, dated as of June 1, 2019 (the "Twenty-Ninth Supplemental Indenture" and collectively, the "Indenture") in connection with the issuance of \$[Par] aggregate principal amount of the District's Water System Revenue Bonds, Series 2019A (Green Bonds) (the "Bonds"). This opinion is rendered pursuant to Section 5(e)(5) of the Purchase Contract, dated June [\_\_], 2019 (the "Purchase Contract"), between the District and J.P. Morgan Securities LLC, as Representative of the Underwriters listed therein. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Purchase Contract.

In my capacity as counsel to BNY, I have examined originals or copies identified to my satisfaction of: (i) the Articles of Association and By-Laws of BNY, (ii) the Indenture, (iii) the Continuing Disclosure Agreement, dated June [\_\_], 2019 (the "Continuing Disclosure Agreement"), by and between the District and BNY as dissemination agent and (iv) such other records, certificates and documents as I have considered necessary or appropriate for the purpose of the opinion hereinafter rendered. The Indenture and the Continuing Disclosure Agreement are hereinafter collectively referred to as "Trustee Documents".

In rendering this opinion, I have relied upon the facts and information obtained from the records of BNY, officers of BNY, and other sources believed by me to be reliable, and have not undertaken to independently verify the accuracy of the factual matters represented, warranted, or certified in such documents. I have assumed the genuineness of all signatures other than BNY's, the authenticity of documents, certificates and records submitted to me as originals, the conformity to the originals of all documents, certificates and records submitted to me as copies, the legal capacity of all natural persons executing documents other than BNY's, and the completeness and accuracy as of the date of this opinion letter of the information contained in such documents, certificates and records, which assumptions I have not independently verified.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions.

Based upon and subject to the foregoing and subject to the qualifications set forth below, I am of the opinion that:

1. BNY is a national banking association duly organized and validly existing under and by virtue of the laws of the United States of America, having full power and being qualified to enter into and perform its duties under the Trustee Documents.

2. BNY has taken all corporate action necessary to assume the duties and obligations of trustee under the Indenture and of dissemination agent under the Continuing Disclosure Agreement and to authorize in such respective capacities the execution and delivery of the Twenty-Ninth Supplemental Indenture and the Continuing Disclosure Agreement and the acceptance of the duties of BNY under each of the foregoing does not and will not contravene any law of governmental regulation or order presently binding on BNY or its Articles of Association or By-Laws or, to my knowledge, contravene any provision or constitute a default under any indenture, contract or other instrument to which BNY is a party or by which BNY is or may be bound.

3. BNY has duly executed and delivered the Twenty-Ninth Supplemental Indenture and the Continuing Disclosure Agreement, and the Trustee Documents, assuming due authorization, execution and delivery by the District, constitute the legal, valid and binding obligations of BNY, enforceable in accordance with their terms, except to the extent the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent conveyance, and other similar laws affecting the rights and remedies of creditors generally, and by the effect of general principles of equity, including without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, whether considered in a proceeding at law or in equity.

4. All approvals, consents and orders of any governmental authority or agency having jurisdiction in the matter which would constitute a condition precedent to the performance by BNY of any of its duties and obligations under the Trustee Documents (insofar as it has the obligation to obtain any such approval, consent or order) have been obtained and are in full force and effect.

I express no opinion as to any matter other than as expressly set forth above, and, in conjunction therewith, I specifically express no opinion as to the status of the Bonds or the interest thereon under any federal securities laws, including but not limited to the Securities Act of 1933, as amended, and the Trust Indenture Act of 1939, as amended, or any state securities or "Blue Sky" law, or any federal, state or local tax law.

This opinion is as of the date hereof, and I have undertaken no, and hereby disclaim any, obligation to advise you of any change in any matter set forth herein even though the changes may affect a legal analysis or conclusion in this opinion letter. Further, this opinion

neither implies, nor should it be viewed to imply, an approval or recommendation of any investment in any Bond.

I express no opinion as to the effect of any law other than the law of California and the federal laws of the United States of America on the matters referred to herein, in each case as they exist on the date hereof. I express no opinion with respect to the laws, regulations, or ordinances of any county, municipal or other local governmental agency.

This opinion is furnished by me solely for your benefit. This opinion letter may be relied upon by you only in connection with the transaction described in the initial paragraph of this opinion letter and may not be used or relied upon by you for any other purpose or by any other person for any purpose whatsoever without, in each instance, my prior written consent.

Respectfully submitted,



**PRELIMINARY OFFICIAL STATEMENT DATED JUNE \_\_\_, 2019****NEW ISSUE – BOOK ENTRY ONLY**

**Ratings: S&P: “\_\_\_”  
Moody’s: “\_\_\_”  
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.*

**[DISTRICT LOGO]**

\$ \_\_\_\_\_ \*

**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 \_\_\_, 2019.*

**J.P. Morgan****BofA Merrill Lynch****Siebert Cisneros Shank & Co., L.L.C.**

Dated: \_\_\_\_\_, 2019

\* Preliminary; subject to change.

74155641.6

\$ \_\_\_\_\_\*

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

**MATURITY SCHEDULE\***

\$ \_\_\_\_\_ Serial Series 2019A Bonds

<i>Maturity Date</i> <i>(June 1)</i>	<i>Principal</i> <i>Amount*</i>	<i>Interest</i> <i>Rate</i>	<i>Yield</i>	<i>CUSIP</i> <sup>†</sup>
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\$ \_\_\_\_\_\* \_\_\_\_\_% Term Series 2019A Bonds due June 1, 20\_\_\_\_, Price \_\_\_\_\_%; CUSIP<sup>†</sup>: 271014\_\_\_\_\_

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<sup>†</sup> 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

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**Board of Directors**

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Doug A. Linney, *Vice President*  
John A. Coleman  
Andy Katz  
Lesla R. McIntosh  
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Eileen M. White, *Director of Wastewater*  
Rischa S. Cole, *Secretary of the District*  
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.

## TABLE OF CONTENTS

	Page
INTRODUCTION .....	1
Purpose.....	1
The District .....	1
Security for the Series 2019A Bonds.....	2
Rate Covenant.....	3
Continuing Disclosure .....	3
Professionals Involved in the Issue.....	3
Summaries Not Definitive .....	3
Additional Information .....	4
THE DISTRICT .....	4
PLAN OF FINANCE.....	4
General.....	4
Series 2019A Bonds Designation as Green Bonds .....	5
ESTIMATED SOURCES AND USES OF FUNDS .....	7
THE SERIES 2019A BONDS .....	7
General Description .....	7
Redemption.....	7
SECURITY FOR THE SERIES 2019A BONDS.....	9
General.....	9
Pledge of Subordinated Water Revenues.....	9
Allocation of Subordinated Water Revenues Under the Indenture.....	10
No Bond Reserve Fund for Series 2019A Bonds .....	11
Rate Covenant.....	11
Outstanding Water System Revenue Obligations.....	11
Issuance of Additional Water System Revenue Bonds and Parity Debt; Junior and Subordinate Obligations .....	15
Investment of Moneys in Funds and Accounts Under the Indenture.....	16
Limitations on Remedies .....	16
AMENDMENTS TO THE INDENTURE .....	16
CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS AND FEES AND CHARGES.....	19
Tax Limitations – Proposition 13 .....	19
Spending Limitations.....	20
Proposition 62.....	21
Proposition 218.....	21
Proposition 26.....	23
Other Initiatives .....	24
CERTAIN RISK FACTORS .....	24
Limited Obligations; General .....	24
No Bond Reserve Fund.....	25
Water Supply and Demand; Drought; Climate Change.....	25
Limitations on Rate-Setting .....	25

## TABLE OF CONTENTS

(continued)

	Page
Statutory and Regulatory Compliance .....	26
Costs of Capital Improvement Program; Construction Risks .....	26
Casualty Risks .....	26
Cybersecurity; Other Safety and Security Risks .....	27
Uncertainties of Projections, Forecasts and Assumptions .....	27
Limitations on Remedies .....	27
Certain Other Obligations May Be Subject to Acceleration .....	28
Green Bonds .....	28
Tax Law Proposals; Risk of Audit .....	29
CONTINUING DISCLOSURE .....	29
LITIGATION .....	29
RATINGS .....	30
TAX MATTERS .....	30
Federal Tax-Exemption .....	30
Tax Accounting Treatment of Bond Premium and Original Issue Discount .....	31
Information Reporting and Backup Withholding .....	32
State Tax Exemption .....	32
Future Developments .....	32
UNDERWRITING .....	32
CERTAIN RELATIONSHIPS .....	33
APPROVAL OF LEGAL PROCEEDINGS .....	33
MUNICIPAL ADVISOR .....	33
INDEPENDENT ACCOUNTANTS .....	33
MISCELLANEOUS .....	34
APPENDIX A – THE EAST BAY MUNICIPAL UTILITY DISTRICT (THE WATER SYSTEM) .....	A-1
APPENDIX B – EAST BAY MUNICIPAL UTILITY DISTRICT AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED JUNE 30, 2018 AND 2017 .....	B-1
APPENDIX C – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE .....	C-1
APPENDIX D – PROPOSED FORM OF CO-BOND COUNSEL OPINIONS .....	D-1
APPENDIX E – DTC AND THE BOOK-ENTRY ONLY SYSTEM .....	E-1
APPENDIX F – FORM OF CONTINUING DISCLOSURE AGREEMENT .....	F-1
APPENDIX G – EXPECTED SERIES 2019A GREEN BOND PROJECTS .....	G-1

## OFFICIAL STATEMENT

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**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 \$ \_\_\_\_\_\* 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.

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\* 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:

<b>Sources</b>	
Principal Amount	\$
Original Issue Premium/Discount	_____
Total	\$ _____
<b>Uses</b>	
Series 2019A Water System Fund <sup>(1)</sup>	\$
Underwriters' Discount	
Costs of Issuance <sup>(2)</sup>	
Total	\$ _____ _____

<sup>(1)</sup> Includes previous expenditures to be reimbursed to the District.

<sup>(2)</sup> 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>
	\$

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† 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] *{confirm no additional disbursements before mailing}*. 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 “situs.” 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 XIII D 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 XIII D 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 XIII D 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.4<sup>th</sup> 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, XIII C and XIII D 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 XIII D.” 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 XIII D. 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, XIII C and XIII D 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 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. 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 normal course of operations of the Water System. Such matters could, if determined adversely to the District, affect expenditures by the District, and in some cases, Water Revenues. In the view of the District’s management and General Counsel, there is no litigation, present or pending, which will individually or in the aggregate materially impair the District’s ability to service its indebtedness or which will have a material adverse effect on the business operations of the District.

## **RATINGS**

S&P Global Ratings (“S&P”) and Moody’s Investors Service, Inc. (“Moody’s”) have assigned the Series 2019A Bonds the ratings of “\_\_\_” and “\_\_\_,” 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 Curly 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 Curly Bartling P.C., or in reliance upon the advice of counsel other than Norton Rose Fulbright US LLP and Curly 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.

### **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

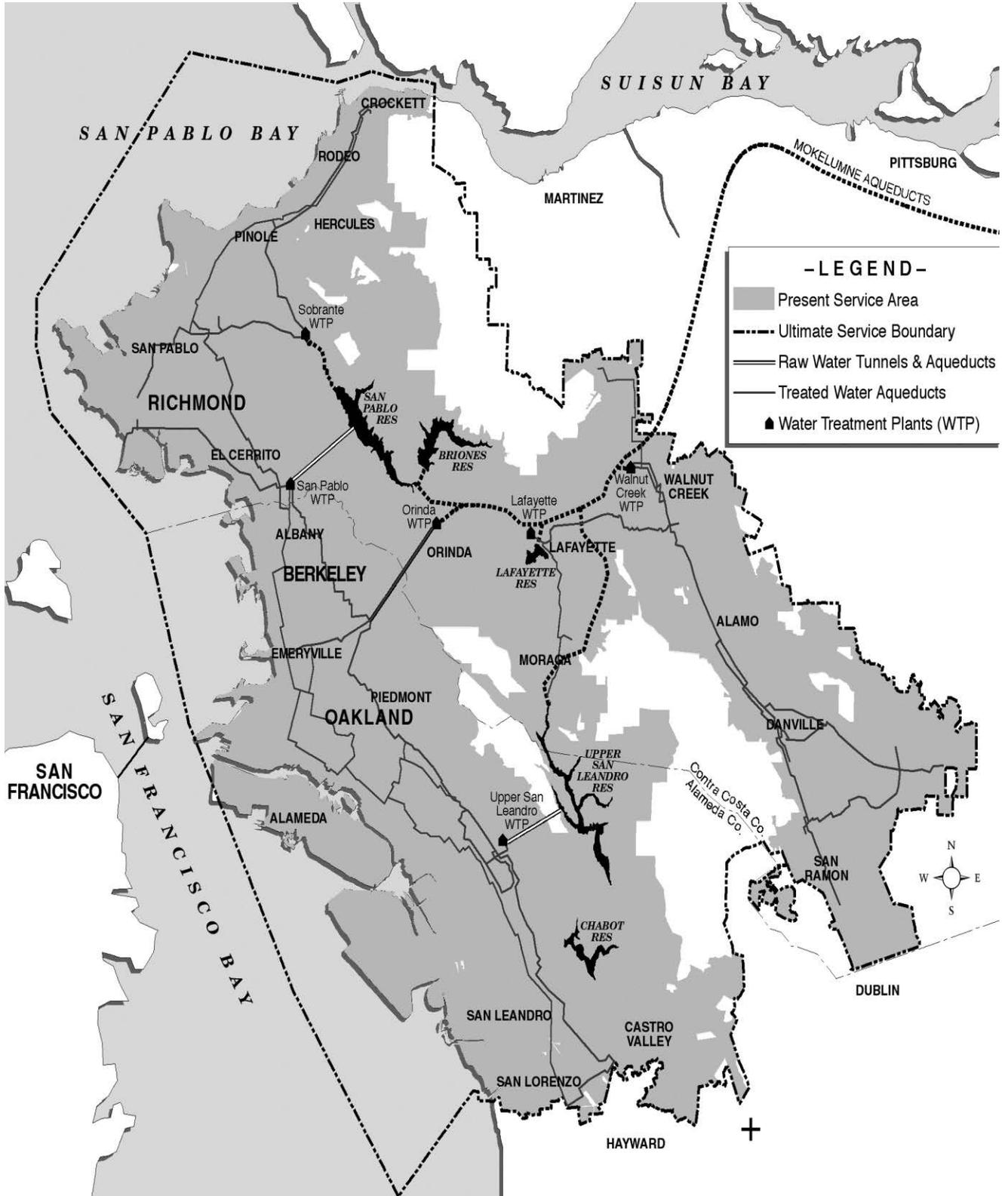
**APPENDIX A**

**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



## TABLE OF CONTENTS

	<u>Page</u>
THE DISTRICT .....	A-1
Organization.....	A-1
District Board.....	A-1
District Management.....	A-3
Employees and Employee Relations.....	A-5
Geographic Area and Services.....	A-5
Taxation of the District .....	A-6
THE WATER SYSTEM.....	A-6
Service Area.....	A-6
Water Supply .....	A-9
Current Water Conditions .....	A-18
Water Rights and Related Proceedings.....	A-19
Water Supply Management Plan .....	A-20
Water Conservation .....	A-22
Drought Management .....	A-23
Water Facilities .....	A-25
Water Supply Operations.....	A-28
Water Quality and Treatment; Other Regulatory Matters.....	A-32
Statewide Water Issues .....	A-33
Climate Change.....	A-35
Seismic Matters.....	A-35
Dam Licensing and Safety Issues .....	A-36
Security and Emergency Preparedness; Cybersecurity.....	A-37
Insurance .....	A-38
Capital Improvement Program.....	A-39
WATER SYSTEM FINANCES .....	A-44
Basis of Accounting.....	A-44
Sources of Funds.....	A-44
Water Sales Revenues.....	A-45
Rates and Charges.....	A-46
Drought Surcharges .....	A-49
Comparison of Annual Water Service Charges .....	A-50
Billing and Collection Procedures .....	A-51
System Capacity Charge .....	A-52
Property Tax Revenues .....	A-52
Power Sales Revenues .....	A-54
Earned Contributions on Construction.....	A-54
Grants and Other Reimbursements .....	A-55
Operation and Maintenance Costs .....	A-55
Outstanding Debt .....	A-55
Variable Rate and Swap Obligations .....	A-57
Parity State Loans .....	A-61
Subordinate Commercial Paper Programs .....	A-62
Debt Service Requirements.....	A-62
Financial Management Policies .....	A-64
District Investment Policy.....	A-64

**TABLE OF CONTENTS**  
**(continued)**

	<b><u>Page</u></b>
Cash and Investments .....	A-65
Historical Operating Results .....	A-65
District Management’s Discussion of Fiscal Year 2018 Operating Results .....	A-67
Projected Operating Results.....	A-67
Discussion of Projected Operating Results for Fiscal Year 2019 .....	A-70
Discussion of Budget Projections for Fiscal Years 2020 through 2024 .....	A-71
Employees’ Retirement System.....	A-72

## 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/5<sup>th</sup> 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, responsible for managing all aspects of the District's resource recovery program. Before joining the District, Ms. Skoda spent nine years with consulting firms providing 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, Ollum, 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<sup>(1)</sup>**

	<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

<sup>(1)</sup> 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**

<b>Year and Area</b>	<b>Civilian Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
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

*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**

	<b>Year and Area</b>	<b>Median Household Income<sup>(1)</sup></b>
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	\$89,979
	Contra Costa County	91,045
	California	67,739
	United States	57,617
2017	Alameda County	\$96,296
	Contra Costa County	95,339
	California	71,805
	United States	60,336

<sup>(1)</sup> 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” below. 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 “– Water Supply Management Plan” 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<sup>(1)</sup>**

<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

<sup>(1)</sup> 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” below.

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 “– Water Supply Management Plan” below.

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.

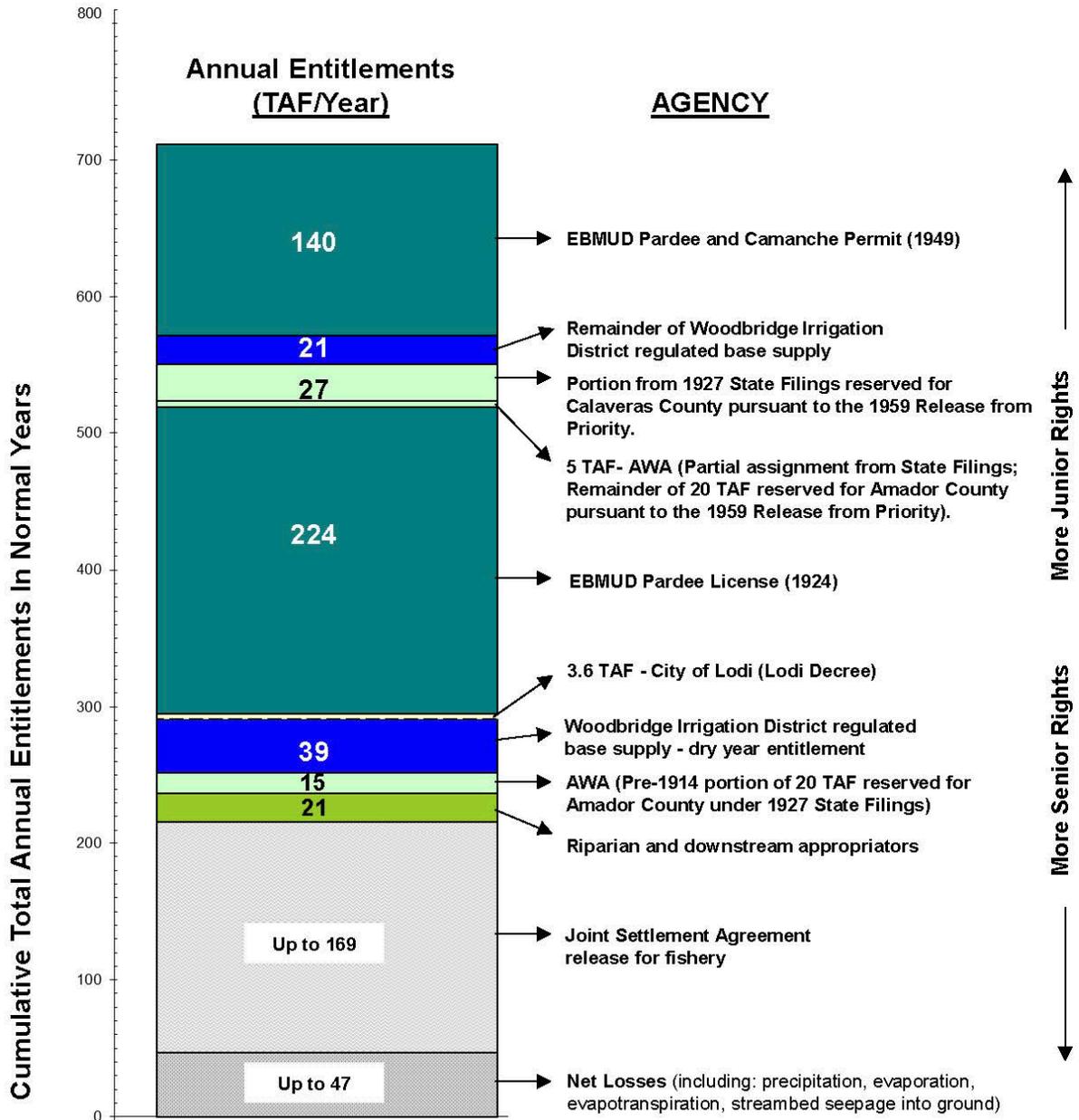
In the Mokelumne River watershed there are entities with water rights that are junior and senior to those of the District as illustrated on the graphic below. The most senior water rights are those of riparian landowners and senior appropriators who diverted water prior to 1914, including Amador County 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 (“CCWD”) 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. 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 “– Water Supply Management Plan.” In addition, 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”)), 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 average of from 22,500 to 65,000 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 166,000 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. The Bureau expects to begin negotiations on May 30, 2019. The repayment contract 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 year 2046, when the current Long-Term Renewal Contract is set 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 additional sources 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 is may 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. 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. 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. 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, 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 “– Water Supply Management Plan” below.

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 their 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. 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 funding resources. 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. 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 (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 March 10, 2019, the District had 651,690 acre-feet of water stored in all of its reservoirs combined. As of such date, the District’s reservoirs were approximately 84% of capacity, or approximately 108% of average (based on 10-year average from 2001-2011). Season-to-date precipitation in the Mokelumne basin was 51.83 inches, or approximately 143% of average (based on 60-year average from 1952-2012). Additionally, the water content in the 2019 snowpack as of March 10, 2019 was approximately twice the average.

Table 5 sets forth the capacity and water storage levels at the District’s water reservoirs as of March 10, 2019.

**Table 5**  
**DISTRICT WATER RESERVOIRS**  
**Current Capacity and Storage Levels**

<u>Data as of March 10, 2019</u>	<u>Capacity (acre-feet)</u>	<u>Current Storage (acre-feet)</u>	<u>% of Capacity</u>	<u>% of Average<sup>(1)</sup></u>
<b>Mokelumne</b>				
Pardee	203,795	193,230	95%	105%
Camanche	<u>417,120</u>	<u>323,450</u>	78	115
Total Mokelumne	<b>620,915</b>	<b>516,680</b>	<b>83</b>	<b>111</b>
<b>Terminal Reservoirs</b>				
Briones	58,960	48,010	81	86
Upper San Leandro	38,905	37,560	97	115
San Pablo	37,915	36,440	96	108
Chabot	10,350	9,550	92	103
Lafayette	<u>4,250</u>	<u>3,450</u>	81	90
Total Terminal Reservoirs	<b>150,380</b>	<b>135,010</b>	<b>90</b>	<b>100</b>
<b>Total System Storage</b>	<b>771,295</b>	<b>651,690</b>	<b>84</b>	<b>108</b>

<sup>(1)</sup> 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 appropriative 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, a minimum average of from 22,500 to 65,000 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 166,000 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 Central Valley Project Improvement Act. 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 I 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, CCWD, CPUD, San Joaquin County, North San Joaquin Water Conservation District 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.

### **Water Supply Management Plan**

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” below.

The District’s water supply planning efforts are revisited and documented in the District’s Urban Water Management Plan (“UWMP”), which is completed every five years in compliance with State regulatory requirements. The most recent update, the UWMP 2015, also included an update of the WSMP’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 (“CCWD”), an adjacent water agency, to secure from 20,000 to 30,000 acre-feet of storage in CCWD’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 CCWD for the potential use of Los Vaqueros Reservoir; later that year, the District signed a cost sharing agreement with CCWD to support planning efforts related to expanding the reservoir from 160,000 to 275,000 acre feet. The District supported CCWD in its successful application for State grant funding for the project. In April 2019, the District joined CCWD 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 North San Joaquin Water Conservation District 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 North San Joaquin Water Conservation District, 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 North San Joaquin Water Conservation District 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"), CCWD, 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 state 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 Matters" 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 and the District provided 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 an 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 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, 124 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, 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, the City of Hayward (“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 (the “Bay-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.

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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.

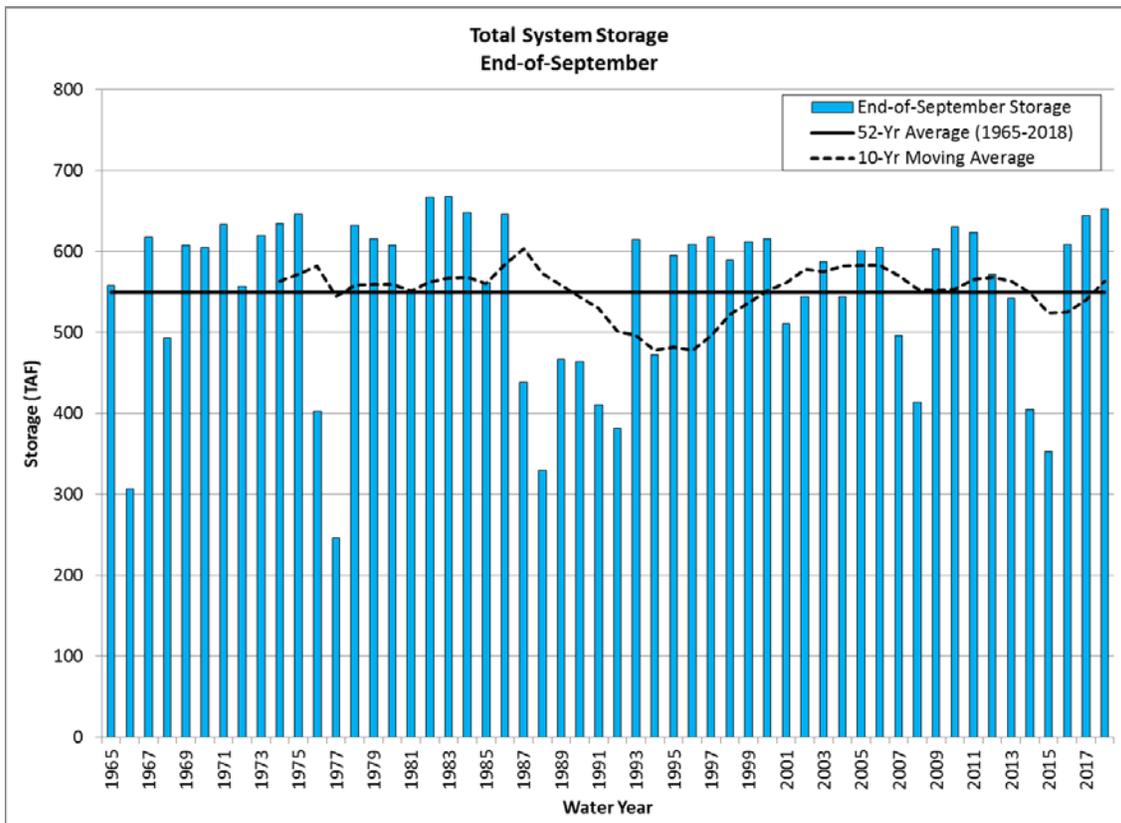
The District operates the Water System to achieve multiple objectives. These objectives are to provide municipal water supply benefits, stream flow regulation, fishery/public trust interests, flood control, recreation, temperature management and obligations to downstream diverters. All of the components 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.

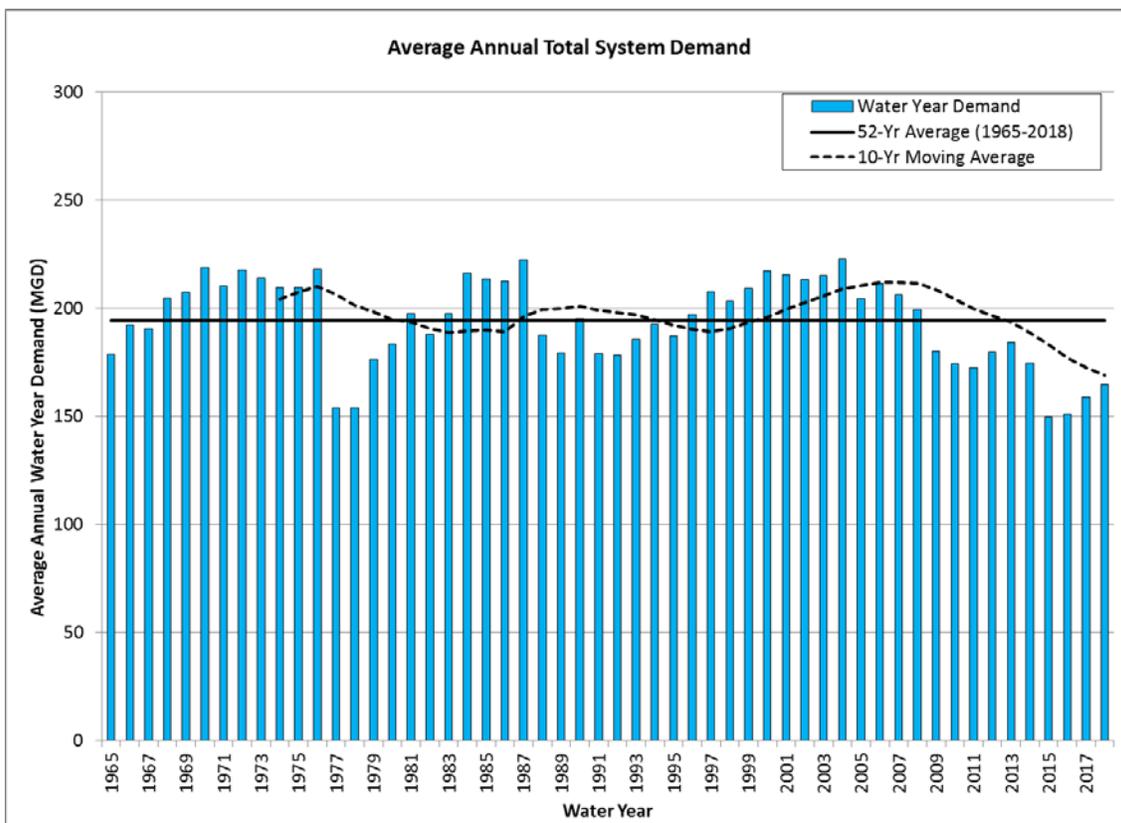
The District begins the Water Year by committing to provide the required minimum fish flows, associated with the projected November 5th storage levels for Pardee and Camanche Reservoirs, for the period October through March. Through fall and winter, the District continues to track rainfall, runoff, storage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

On April 1<sup>st</sup> 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 Response Actions.”

### **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 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 Supply Operations.” The District’s water rights are not directly affected by the California WaterFix proceedings because the SWRCB will only be granting permits under existing water rights held by the Bureau and CDWR, and the SWRCB has explicitly indicated that other water rights holders are not intended to be harmed by any permits granted to the WaterFix. Although the District’s water rights would not be affected, the District did file a lawsuit challenging the project’s environmental impact report and also filed a protest against the WaterFix’s water rights change petition, which would allow the WaterFix to divert water from new intakes on the Sacramento River. The District’s suit and protest are based on the following:

- the District’s fishery restoration efforts on the Mokelumne could be impacted by operation of the WaterFix;
- the WaterFix tunnels will intersect the District’s aqueduct alignment and potential future District tunnel alignment through property owned by the District, and any construction impacts will need to be mitigated; and
- operation of the WaterFix may 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.

The California WaterFix is subject to numerous lawsuits, primarily relating to CDWR’s powers to finance and construct the project and various environmental approvals and related matters. In addition, CDWR was undertaking other permitting and approval proceedings relating to the project. On February 12, 2019, recently elected Governor Gavin Newsom presented a conceptual proposal at the State of the State address supporting a single-tunnel configuration for California WaterFix, rather than the current two-tunnel configuration. On May 2, 2019, CDWR took action to rescind various permitting applications for the California WaterFix, including the petition for the California WaterFix change in point of diversion before the SWRCB. Concurrently, the California Natural Resources Agency announced that it will begin a new environmental review and planning process to modernize the State’s water infrastructure, and reaffirmed its commitment to a single tunnel project in the Delta. The lawsuits, permitting and administrative proceedings in regard to California WaterFix are likely to be dismissed as a result of the cancellation of the California WaterFix project. 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 reconfigured Delta conveyance project or any related projects.

## **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 Matters**

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" below. 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.

### **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 Matters" 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 (EOP) 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 (BCPP) 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 (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-insures, 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

sublimit 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 proposed 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 is scheduled for consideration for adoption 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 proposed biennial budget for Fiscal Years 2020 and 2021.

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

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>Total<sup>(2)</sup></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	37,03	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 <sup>(1)</sup>	<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 <sup>(3)</sup>	\$337,748	\$385,500	\$399,707	\$385,138	\$387,816	\$1,895,900	100.0%

<sup>(1)</sup> Cash expenditures include spending for projects appropriated in earlier Fiscal Years.

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

<sup>(3)</sup> 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 proposed 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 130 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 the 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 proposed biennial budget for Fiscal Years 2020 and 2021 are set forth in Table 7:

**Table 7**  
**Fiscal Years 2020-2024**  
**Proposed 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 <sup>(1)</sup>	<u>161.8</u>	<u>8.5</u>
Total	<u>\$1,895.9</u>	<u>100.0%</u>

<sup>(1)</sup> 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.

**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 <sup>(1)</sup>	1.7	3.5	2.2	3.3	7.9
Taxes	25.5	27.9	29.9	32.0	34.7
Other <sup>(2)</sup>	<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 <sup>(6)</sup>	<u>\$416.0</u>	<u>\$411.0</u>	<u>\$470.8</u>	<u>\$478.3</u>	<u>\$544.6</u>
Capital Contributions:					
Seismic Surcharge <sup>(3)</sup>	\$ 22.6	\$ 22.2	\$ 0.0	\$ 0.0	\$ 0.0
System Capacity Charge <sup>(4)</sup>	20.4	29.7	39.3	51.5	69.3
Earned contributions on construction <sup>(5)</sup>	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 <sup>(6)</sup>	<u>\$ 49.0</u>	<u>\$ 71.5</u>	<u>\$ 60.8</u>	<u>\$ 75.9</u>	<u>\$ 87.6</u>
<b>Total<sup>(6)</sup></b>	<b><u>\$465.0</u></b>	<b><u>\$482.5</u></b>	<b><u>\$531.5</u></b>	<b><u>\$554.2</u></b>	<b><u>\$632.2</u></b>

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

<sup>(2)</sup> 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.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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.

<sup>(5)</sup> Includes contributions for facility relocations, main extensions and service installations.

<sup>(6)</sup> 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<sup>(1)</sup></i>	<i>Percent of Revenues</i>	<i>Consumption (MGD)</i>	<i>Percent of Consumption</i>	<i>Number of Connections<sup>(2)</sup></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 <sup>(3)</sup>	<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>

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

<sup>(2)</sup> Connections as of June 30, 2018.

<sup>(3)</sup> 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 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 – 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 2014 through Fiscal Year 2018, residential rates for water service have increased by an average of approximately 8.6% 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 8.8%. The District's most recent increases in water service rates and charges included 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.

At a public hearing scheduled for June 11, 2019, the Board will consider for adoption proposed 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 proposed average residential rate increases 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<sup>(1)</sup></i>
2015	9.43%	9.50%
2016 <sup>(2)</sup>	7.35 <sup>(2)</sup>	8.00 <sup>(2)</sup>
2017 <sup>(3)</sup>	7.02 <sup>(3)</sup>	7.00 <sup>(3)</sup>
2018	9.21	9.25
2019	8.99	9.00
Proposed 2020 <sup>(4)</sup>	6.45 <sup>(4)</sup>	6.50 <sup>(4)</sup>
Proposed 2021 <sup>(4)</sup>	6.24 <sup>(4)</sup>	6.25 <sup>(4)</sup>

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

<sup>(2)</sup> 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 are 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.

<sup>(3)</sup> Excludes drought surcharge.

<sup>(4)</sup> A public hearing on the proposed rate increases for Fiscal Years 2020 and 2021 is scheduled for June 11, 2019 at which time the Board will consider the proposed Fiscal Year 2020 and 2021 rate increases for adoption. If adopted, the proposed rate increase for Fiscal Year 2020 would be effective on bills issued on or after July 1, 2019 and the proposed rate increase for Fiscal Year 2021 would 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 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 proposed 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 proposed for Fiscal Year 2020 reflect a uniform 6.5% increase to the individual water rates in the Fiscal Year 2019 water rate schedule. If approved there would 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 proposed rate schedule to be effective July 1, 2019 for Fiscal Year 2020, if approved. 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 proposed rates for Fiscal Year 2020, if adopted, would 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>Proposed July 1, 2019</i>
	<i>Per Month</i>	<i>Per Month</i>
5/8-inch and 3/4-inch	\$24.63	\$26.23
1-inch	37.20	39.62
1 1/2-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>Proposed July 1, 2019</i>
	<i>Per Hundred Cubic Feet (Ccf)</i>	<i>Per Hundred Cubic Feet (Ccf)</i>
Basic Rate – Single Family <sup>(1)</sup>	\$3.76	\$4.00
Basic Rate – Multi Family	5.31	5.66
Basic Rate – Other	5.29	5.63
Elevation Band Surcharges <sup>(2)</sup> –		
Band 2: Pressure Zones 2 through 5	0.76	0.81
Band 3: Pressure Zones 6 and higher	1.58	1.68

<sup>(1)</sup> 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 proposed rates for Fiscal Year 2020, additional consumption by residential customers would 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.

<sup>(2)</sup> 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 adopted 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 proposed 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**

	<b>Maximum Applicable Drought Surcharge Percentage in 4 Stages</b>			
	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 Response Actions.”

**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 proposed rate for the District in the table below, if adopted, is expected 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<sup>(1)(2)</sup>**

<i>Water Supplier</i>	<i>Average Annual Household Water Service Charge<sup>(3)</sup></i>
City and County of San Francisco	\$997
City of Palo Alto <sup>(4)</sup>	926
City of San Jose	885
City of Livermore	759
Alameda County Water District	751
City of Los Altos	726
<b>East Bay Municipal Utility District<sup>(5)</sup></b>	<b>717</b>
City of Hayward	701
Contra Costa Water District	689
Marin Municipal Water District <sup>(4)</sup>	670
North Marin Water District	634
Dublin San Ramon Services District	630
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 for each agency. The comparison is based on 8 Ccf/mo usage, which represents 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) Fiscal Year ended June 30, 2019 rates, possible rate increases to occur in July 2019 for Fiscal Year 2020.
- (5) Reflects the District’s proposed rates for Fiscal Year 2020.

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 <sup>(1)(2)</sup>					
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 <sup>(3)</sup>					
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 <sup>(4)</sup>					
Amount	\$211,831	\$198,418	\$239,980	\$236,737	\$213,655
Percent	0.83%	0.71%	0.80%	0.74%	0.62%

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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" 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 Marin Clean Energy ("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 purchase 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**

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

### **Grants and Other Reimbursements**

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 its proposed biennial budget, the District has budgeted the receipt of no grants in Fiscal Year 2020 or 2021. Grants and other reimbursements 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" below. 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)**

<u>Issue</u>	<u>Date of Issue</u>	<u>Last Maturity</u>	<u>Amount Issued</u>	<u>Outstanding June 10, 2019</u>
<b>Water System Revenue Bonds</b>				
Revenue Refunding Bonds, Series 2008A <sup>(1)</sup>	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
<b>Parity Debt:</b>				
Safe Drinking Water State Revolving Fund Loan (Upper San Leandro Reservoir)	01/01/03	01/01/24	2,188,000 <sup>(4)</sup>	653,000 <sup>(6)</sup>
State Water Resources Control Board Loan (East Bayshore Recycled Water Project)	05/22/08	04/01/28	20,100,000 <sup>(4)</sup>	10,093,000 <sup>(6)</sup>
State Water Resources Control Board Loan (South Reservoir Replacement)	12/14/17 <sup>(2)</sup>	07/01/48 <sup>(3)</sup>	18,946,632 <sup>(5)</sup>	2,260,000 <sup>(7)</sup>
State Water Resources Control Board Loan (MacArthur Davenport Pipeline Replacement Project)	04/18/18 <sup>(2)</sup>	07/01/49 <sup>(3)</sup>	<u>18,041,600<sup>(5)</sup></u>	<u>0<sup>(7)</sup></u>
Total Parity State Loans			\$ 59,276,232	\$ 13,006,000
<b>Subordinate Debt:</b>				
Commercial Paper Notes (Water Series)	Various	Various	<u>359,800,000<sup>(8)</sup></u>	<u>359,800,000</u>
<b>Total Debt</b>			<u>\$3,488,946,232</u>	<u>\$2,672,611,000</u>

<sup>(1)</sup> 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 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 2017 BONDS – Outstanding Water System Revenue Obligations – *Interest Rate Swap Agreements*.”

<sup>(2)</sup> Date of State Loan contract execution.

<sup>(3)</sup> Expected final repayment date.

<sup>(4)</sup> Full amount disbursed to the District.

<sup>(5)</sup> Full Loan commitment amount eligible for disbursement to the District.

<sup>(6)</sup> Outstanding balance remaining to be repaid

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

<sup>(8)</sup> 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 \$7.1 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 State Board, 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<sup>(1)</sup>**

<i>Fiscal Year Ending June 30</i>	<i>Series 2008A Through Series 2017B</i>			<i>Series 2019A Bonds</i>			<i>State Parity Loans<sup>(3)</sup></i>	<i>Total Bonds and Parity Debt</i>	<i>Water System CP Notes<sup>(4)</sup></i>	<i>Total Debt Service<sup>(5)</sup></i>
	<i>Principal</i>	<i>Interest<sup>(2)</sup></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
<b>Total<sup>(5)</sup></b>	<b>\$2,299,805,000</b>	<b>\$1,559,258,294</b>	<b>\$3,859,063,294</b>				<b>\$59,109,661</b>	<b>\$3,918,172,956</b>	<b>\$334,614,000</b>	<b>\$4,252,786,956</b>

(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.

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

(5) 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.

(6) 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<sup>(1)</sup>**  
**Fiscal Years 2014 through 2018**

	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
<b>WATER REVENUES<sup>(2):</sup></b>					
Water Sales <sup>(3)</sup>	\$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 <sup>(4)</sup>	20,365,047	29,725,090	39,323,341	51,463,496	69,272,188
Seismic Rate Surcharge <sup>(5)</sup>	22,628,261	22,258,683	38,793	9,270	392
Other Revenue <sup>(6)</sup>	<u>19,937,710</u>	<u>15,291,924</u>	<u>13,972,663</u>	<u>14,852,674</u>	<u>14,765,959</u>
<b>TOTAL WATER REVENUES</b>	<b><u>\$433,550,561</u></b>	<b><u>\$435,070,694</u></b>	<b><u>\$480,295,210</u></b>	<b><u>\$497,771,044</u></b>	<b><u>\$579,160,123</u></b>
<b>RATE STABILIZATION FUND TRANSFERS:</b>					
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>
<b>WATER REVENUES AFTER RATE STABILIZATION TRANSFER</b>	<b><u>\$398,550,561</u></b>	<b><u>\$425,070,694</u></b>	<b><u>\$480,295,210</u></b>	<b><u>\$497,771,044</u></b>	<b><u>\$579,160,123</u></b>
<b>WATER OPERATION &amp; MAINTENANCE COSTS:</b>					
Operating Expenses	\$213,692,428	\$210,786,463	\$238,624,710	\$219,844,980	\$232,959,911
(Less Tax Receipts) <sup>(7)</sup>	<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>
<b>TOTAL WATER OPERATION &amp; MAINTENANCE COSTS</b>	<b><u>\$188,200,037</u></b>	<b><u>\$182,864,343</u></b>	<b><u>\$208,755,277</u></b>	<b><u>\$187,873,891</u></b>	<b><u>\$198,254,344</u></b>
<b>NET WATER REVENUES</b>	<b>\$210,350,524</b>	<b>\$242,206,351</b>	<b>\$271,539,933</b>	<b>\$309,897,153</b>	<b>\$380,905,779</b>
<b>PARITY DEBT SERVICE:</b>					
Water System Revenue Bonds <sup>(8)</sup>	\$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>
<b>TOTAL PARITY DEBT SERVICE</b>	<b>\$126,416,994</b>	<b>\$145,720,227</b>	<b>\$164,209,856</b>	<b>\$165,613,997</b>	<b>\$177,161,175</b>
<b>PARITY DEBT SERVICE COVERAGE</b>	<b>1.66</b>	<b>1.66</b>	<b>1.65</b>	<b>1.87</b>	<b>2.15</b>
<b>SUBORDINATE WATER SYSTEM DEBT SERVICE<sup>(9)</sup></b>	<b>\$ 13,562,675</b>	<b>\$ 335,794</b>	<b>\$ 340,580</b>	<b>\$ 3,627,676</b>	<b>\$ 5,011,892</b>
<b>TOTAL PARITY AND SUBORDINATE DEBT SERVICE</b>	<b>\$139,979,669</b>	<b>\$146,056,021</b>	<b>\$164,550,436</b>	<b>\$169,241,673</b>	<b>\$182,173,067</b>
<b>TOTAL PARITY AND SUBORDINATE DEBT SERVICE COVERAGE</b>	<b>1.50</b>	<b>1.66</b>	<b>1.65</b>	<b>1.83</b>	<b>2.09</b>

(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, System Capacity Charge ("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 [proposed] biennial budget for Fiscal Years 2020 and 2021[; they have not yet been approved by the Board]. The District's [proposed] biennial budget and rate increases for Fiscal Years 2020 and 2021 are [scheduled for consideration for adoption] 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, [limited 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 1.60 times for debt service coverage on its Water System Revenue Bonds will require annual rate increases.] The projection period reflects the proposed 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 rate increases will be subject to 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 capital plan which is largely comprised of renewal and replacement projects.

[The District's proposed biennial budget for Fiscal Years 2020 and 2021 includes a new 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 is scheduled for consideration for adoption by the Board on June 11, 2019. No assurance can be given that the proposed biennial budget for Fiscal Years 2020 and 2021 will be adopted in its current form.]

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

	<i>Proposed FY 2020 and 2021 Budget Five Year Financial Forecast</i>					
	<u>2019<sup>(1)</sup></u>	<u>2020<sup>(2)</sup></u>	<u>2021<sup>(2)</sup></u>	<u>2022<sup>(2)</sup></u>	<u>2023<sup>(2)</sup></u>	<u>2024<sup>(2)</sup></u>
<b>WATER REVENUES<sup>(3)</sup>:</b>						
Water Sales <sup>(4)</sup>	\$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 <sup>(5)</sup>	7.3	9.3	9.6	9.8	10.5	11.1
SCC Revenue <sup>(6)</sup>	70.0	40.0	40.0	40.0	40.0	40.0
Other Revenue <sup>(7)</sup>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.4</u>	<u>13.5</u>
<b>TOTAL WATER REVENUES</b>	<u><b>\$611.4</b></u>	<u><b>\$611.1</b></u>	<u><b>\$650.4</b></u>	<u><b>\$685.4</b></u>	<u><b>\$722.6</b></u>	<u><b>\$761.9</b></u>
<b>RATE STABILIZATION FUND TRANSFERS:</b>						
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>
<b>WATER REVENUES AFTER RATE STABILIZATION TRANSFER</b>	<u><b>\$611.4</b></u>	<u><b>\$611.1</b></u>	<u><b>\$645.4</b></u>	<u><b>\$675.4</b></u>	<u><b>\$712.6</b></u>	<u><b>\$751.9</b></u>
<b>WATER OPERATION &amp; MAINTENANCE COSTS:</b>						
Operating Expense <sup>(8)</sup>	\$254.8	\$282.0	\$297.7	\$310.0	\$323.1	\$336.7
(Less Tax Receipts) <sup>(9)</sup>	<u>(34.7)</u>	<u>(35.0)</u>	<u>(35.8)</u>	<u>(36.7)</u>	<u>(37.6)</u>	<u>(38.5)</u>
<b>TOTAL WATER OPERATION &amp; MAINTENANCE COSTS</b>	<u><b>\$220.1</b></u>	<u><b>\$247.0</b></u>	<u><b>\$261.9</b></u>	<u><b>\$273.3</b></u>	<u><b>\$285.5</b></u>	<u><b>\$298.2</b></u>
<b>NET WATER REVENUES</b>	\$391.3	\$364.0	\$383.5	\$402.1	\$427.1	\$453.7
<b>PARITY DEBT SERVICE:</b>						
Water System Revenue Bonds <sup>(10)</sup>	\$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>
<b>TOTAL PARITY DEBT SERVICE</b>	\$178.8	\$194.0	\$203.4	\$217.4	\$228.9	\$240.5
<b>PARITY DEBT SERVICE COVERAGE</b>	2.19	1.88	1.89	1.85	1.87	1.89
<b>SUBORDINATE WATER SYSTEM CP NOTES DEBT SERVICE<sup>(11)</sup></b>	7.1	12.0	12.0	12.0	12.0	12.0
<b>TOTAL PARITY AND SUBORDINATE DEBT SERVICE</b>	\$185.9	\$206.0	\$215.4	\$229.4	\$240.9	\$252.5
<b>PARITY AND SUBORDINATE DEBT SERVICE COVERAGE</b>	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]. For a discussion of currently expected operating results based upon performance to date, see "-- 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 [is scheduled for consideration for adoption] 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 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 rate increases will be subject to Board approval. See “CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS.”
- (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 originally adopted by the Board on June 9, 2015, [and which were maintained (as 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 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. Assumes interest only at 2.5% per annum in Fiscal Year 2019 and 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 Fiscal Year 2018 and 2019 Budget 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 [reflect][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 [is scheduled for consideration for adoption] by the Board on June 11, 2019. In conjunction with the Board's consideration for adoption of the District's proposed biennial budget, the Board will consider for adoption proposed rate increases for Fiscal Years 2020 and 2021, following a public hearing on such proposed rate increases to be held on June 11, 2019. See "– Rates and Charges" above.

[Based upon][utilizing] 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 ratio is projected to be 1.88x. In Fiscal Year 2021 revenue bond debt service coverage ratio 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 between 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 2012-2015, but it does not include the impact of a 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 137MGD 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 assumed overall increases to base rates and charges for Fiscal Years 2020 and 2021 are 6.50% and 6.25%, consistent with the [proposed] budget and Proposition 218 notice. Lower overall rate increases of 5.0%,

5.0% and 5.0% per annum are assumed for Fiscal Years 2022, 2023 and 2024, respectively. 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 ("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 2018-19 (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 2019-20, 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 2019-20, 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 2018-19 for Fiscal Year 2019-20 (*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<sup>(1)</sup>**

<i>Fiscal Year Ended June 30</i>	<i>Active (Non-Retired) Members<sup>(2)</sup></i>	<i>Total Plan Assets<sup>(3)</sup></i>	<i>District Contribution<sup>(4)</sup></i>	<i>Member Contributions</i>	<i>Allowances Paid From Retirement Plan<sup>(5)</sup></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<sup>(1)</sup></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 <sup>(2)</sup>	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<sup>(1)</sup></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 <sup>(2)</sup>	9,764	9,764	100
2018	5.10	9,875	9,875	100

<sup>(1)</sup> 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.

<sup>(2)</sup> 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 2016-17 the higher total employer contribution rates previously adopted by the Board for Fiscal Year 2015-16, 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<sup>(1)</sup>**  
**(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 Liability (UAAL)<sup>(2)</sup></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 <sup>(3)</sup>	1,714,364	1,753,240	627,650	73.20	74.86

<sup>(1)</sup> Dollars rounded to nearest thousand.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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 multiyear 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<sup>(1)</sup></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

<sup>(1)</sup> 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 HEALTHCARE 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<sup>(1)</sup></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

<sup>(1)</sup> 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)**

	<b>June 30, 2018</b>	<b>June 30, 2017</b>
Total Pension Liability	\$ 2,220,977	\$ 2,068,015
Plan’s Fiduciary Net Position	(1,716,478)	(1,580,556)
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 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)**

	June 30, 2018	June 30, 2017
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."

**APPENDIX B**

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

## 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 an 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.

**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,

## 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](http://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 15<sup>th</sup> 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.

**APPENDIX F**

**FORM OF CONTINUING DISCLOSURE AGREEMENT**

## 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
- East Bay Watershed Projects
- Fish and Wildlife Projects
- Fueling Facility Upgrades
- Large Diameter Pipeline Replacement and Improvements
- Meter Replacements
- New Hydrants
- Open Cut Reservoir Rehabilitation
- Pipeline Appurtenances
- Pipeline Infrastructure Renewals
- Pipeline System Extensions
- Pipeline System Improvements
- Polybutylene Service Lateral Replacement
- Powerhouse Improvements
- Pressure Zone Improvements
- Pumping Plant Rehabilitation
- Rate Control Station Rehab
- Raw Water Aqueduct Improvements
- Recycled Water Facility Improvements
- Regulator Rehabilitation
- Reservoir Rehab/Maintenance
- Reservoir Tower Modifications
- Treatment Plant Upgrades
- 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.



ITEM 14

GENERAL MANAGER'S  
REPORT

WILL BE PROVIDED  
AS AN ORAL REPORT



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DATE: May 23, 2019

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Rischa S. Cole, Secretary of the District *RC*

SUBJECT: Special Sustainability/Energy Committee Minutes – May 3, 2019

Chair Doug Linney called to order the Special Sustainability/Energy Committee in the AC Transit Transportation Building at 1:35 p.m. Director Andy Katz arrived at 1:44 p.m. EBMUD staff present included Director of Wastewater Eileen M. White, Director of Operations and Maintenance Clifford C. Chan, Manager of Wastewater Environmental Services Alicia R. Chakrabarti, Senior Civil Engineer John M. Hake, Associate Civil Engineer Michael J. Hyatt, Senior Civil Engineer Matthew R. Hoefft, and Secretary of the District Rischa S. Cole. AC Transit staff present included Board member H.E. Christian Peoples, Chief Operating Officer Salvador Llamas, and Director of Capital Projects Joe Callaway. Members of the public included Kenneth Gibson, Sierra Club, San Francisco Bay Chapter.

**Public Comment.** None.

**AC Transit Fuel Cell Bus Program.** AC Transit Board member Christian Peoples presented an overview of the agency's fuel cell bus program. He reviewed the composition of the AC Transit Board of Directors, the Transit District's service area, fuel cell bus program advancements since 2003, and the current number and types of buses in their fleet. Director Peoples discussed the functions of their hydrogen stations in Richmond and Oakland and noted the Oakland station was built in partnership with Chevron. AC Transit Director of Capital Projects Joe Callaway discussed the solar panels installed at the Oakland hydrogen station and Chief Operating Officer Salvador Llamas concluded with an overview of fuel cell fleet advancements and targets met to date as well as the program implemented to train mechanics to maintain their fleet.

There was discussion on whether the methane generated by EBMUD at the Main Wastewater Treatment Plant could be converted to hydrogen to fuel AC Transit buses; the amount of hydrogen required to fuel AC Transit's current fleet of buses; the rules and legislation requiring AC Transit to have zero emission buses on the road by 2040; alternative fuel analyses performed by AC Transit to date; EBMUD's decision to decline the \$3 million grant from the California Energy Commission and to hold off on pursuing its proposed biogas upgrade project at its Main Wastewater Treatment Plant; the regulatory implications of biogas upgrading and pipeline injection for EBMUD; the goals of EBMUD's Resource Recovery Program and efforts to reduce biogas flaring; and alternative fuel sources for EBMUD's fleet and equipment. AC Transit Board member Peoples advised he will email a list of contacts not included in the slide presentation to Secretary Cole to distribute to EBMUD Sustainability/Energy Committee members and staff. Director Peoples conducted a tour of the hydrogen fueling station facilities after the meeting.

Board of Directors  
Special Sustainability/Energy Committee  
Minutes of May 3, 2019  
May 23, 2019  
Page 2 of 2

- Filed with the Committee was a presentation entitled, “Alameda-Contra Costa Transit District Fuel Cell Bus Program – East Bay Municipal Utility District Resource Recovery Team, AC Transit, Division 2, Emeryville,” dated May 3, 2019.

**Adjournment.** Chair Linney adjourned the meeting at 2:49 p.m.

ARC/RSC

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DATE: May 23, 2019

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Rischa S. Cole, Secretary of the District *RC*

SUBJECT: Planning Committee Minutes – May 14, 2019

Chair Doug Linney called to order the Planning Committee at 9:45 a.m. in the Training Resource Center. Director Frank Mellon was present at roll call. Director Lesa R. McIntosh was absent (excused). Staff present included General Manager Alexander R. Coate, General Counsel Craig S. Spencer, Director of Engineering and Construction Xavier J. Irias, Director of Wastewater Eileen M. White, Associate Civil Engineer Emily L. Sing, Associate Civil Engineer Reena G. Thomas, Special Assistant to the General Manager Kelly A. Zito, and Secretary of the District Rischa S. Cole.

**Public Comment.** None.

**Bayfair Pumping Plant and Estudillo Avenue Pipeline Replacement Project Update.**

Associate Civil Engineer Emily L. Sing presented an overview of the project and its purpose. The Bayfair Pumping Plant, which is located in the City of San Leandro's Chabot Park and adjacent to East Bay Regional Park District's (EBRPD) West Shore Trail, will be demolished and upgraded with higher pumping capability to meet future demands and relocated away from the main trace of the Hayward Fault. Approximately one-half mile of 24-inch diameter pipeline on Estudillo Avenue, which is connected to the Bayfair Pumping Plant will also be replaced. The Peralta, South and May Pumping Plants will also be demolished during this project as they are no longer needed for operations. She reviewed the rationale for completing a portion of the project work with a contractor and described the work that will be completed by District staff. Staff met with EBRPD and City of San Leandro staff to discuss ways to reduce impacts to public access to Chabot Park and the West Shore Trail during construction. Staff will continue coordinating with EBRPD and the city throughout the project; ensure neighbors and park visitors are notified and proper signage is posted during construction; and will provide a project update at the next liaison meeting with EBRPD. The Board will be asked to consider approving the construction contract at its meeting on June 25, 2019. If approved, construction is expected to take place between August 2019 and July 2021. Committee member Mellon asked that project information be included in his upcoming ward briefing materials.

**San Ramon Valley Recycled Water Program Pump Station R3000 Project Update.**

Associate Civil Engineer Reena G. Thomas presented an update on the project which is part of Phase 3 of the San Ramon Valley Recycled Water Program. Pump Station R3000 would pump recycled water to the existing Reservoir R3000, providing recycled water to parts of San Ramon, Danville, and Blackhawk and is necessary due to the communities' elevation at about 570 feet above sea level. Beginning in 2016, staff worked with the City of San Ramon and completed a site selection analysis that evaluated seven potential pump station locations titled Sites A1-A7. Site A2 was chosen because it best met the site selection criteria. An Initial Study/Mitigated Negative Declaration (IS/MND) was prepared that included analysis of Site A2, the preferred

project location, and Site A4, an alternative location. Site A4 was included in the analysis because it is located on property owned by DERWA and would not require property acquisition. In response to comments received during the MND public review period in 2018, staff conducted a review of seven additional sites. Staff's analysis determined that Site A2 remained the preferred site as each of the seven additional sites would cause more significant impacts and would require thousands of feet of additional pipeline than Site A2. Ms. Thomas discussed the benefits of Site A2 which include its location adjacent to Dougherty Road; being situated at a lower elevation than adjacent residential developments, which further minimizes visual and noise impacts to residences; and its natural visual screening from surrounding vegetation. She reviewed the CEQA analysis and public outreach efforts conducted between 2016 and 2018, the key comments received on the Draft IS/MND and the District's responses, as well as key mitigation measures to be implemented. The final MND will be presented for Board consideration in late spring/summer 2019. If approved, the District will complete a property purchase from the City for Site A2 and secure funding from the Army Corps of Engineers for the pump station real estate before the end of 2019. Project construction could begin in 2020 and 2022, respectively depending on the availability of recycled water from DERWA. The Committee asked staff to consider growing ivy or other screening vegetation on the proposed retaining walls to further enhance the aesthetics of the new pump station.

**Adjournment.** Chair Linney adjourned the meeting at 10:09 a.m.

ARC/RSC

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DATE: May 23, 2019

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *AMC*

FROM: Rischa S. Cole, Secretary of the District *RC*

SUBJECT: Legislative/Human Resources Committee Minutes – May 14, 2019

Chair John A. Coleman called to order the Legislative/Human Resources Committee at 10:15 a.m. in the Training Resource Center. Director William B. Patterson was present at roll call. Director Lesa R. McIntosh was absent (excused). Staff present included General Manager Alexander R. Coate, General Counsel Craig S. Spencer, Manager of Legislative Affairs Marlaigne K. Dumaine, Manager of Human Resources Laura A. Acosta, Technical Training and Writing Administrator Kevin R. Dickison, Special Assistant to the General Manager Kelly A. Zito, and Secretary of the District Rischa S. Cole.

**Public Comment.** Addressing the Committee was Mark Foley, President, AFSCME Local 2019 who requested time on the July 9, 2019 Legislative/Human Resources Committee agenda to discuss recruitment efforts for Electrical Engineers.

**Legislative Update.** Manager of Legislative Affairs Marlaigne K. Dumaine summarized the bills in Legislative Report No. 03-19. The Committee raised no questions. It was moved by Director Patterson, seconded by Director Coleman and unanimously carried (2-0) to forward the staff recommendations for the legislative report to the full Board. Director McIntosh was absent (excused).

**Workforce Development Strategies – Center for Employment Opportunities (CEO) Pilot**

**Project.** Manager of Human Resources Laura A. Acosta presented an overview of plans to conduct a 30-day pilot project with CEO participants to supplement District fire hydrant painting efforts. She reviewed CEO's background and mission to provide comprehensive employment services exclusively to formerly incarcerated individuals and discussed the benefits of partnering with CEO. The District maintains over 29,000 fire hydrants throughout its service area. Staff currently paints approximately 800 hydrants each year, largely in response to customer complaints about aesthetics or corrosion. In addition to supplementing hydrant painting performed by staff, the pilot project will provide employment opportunities for individuals living in the District's service area. District staff and members of AFSCME Local 444 developed the pilot with CEO. The estimated cost for the pilot is \$30,000 and funding is included in the proposed FY20/21 budget. The pilot is expected to begin this summer and when completed, the District will evaluate it by fall 2019 and determine if a longer-term partnership with CEO should continue. Ms. Acosta discussed additional opportunities to partner with CEO and other members of Oakland Unite, a 9-agency workforce development collaborative, on the District's workforce planning efforts including possible partnerships for civil service test preparation and other

jobseeker support services. Addressing the Committee was: 1) Lonnie Tuck, CEO Director who commented on the goals of CEO's programs and the benefits of partnering with CEO; and 2) Brittany Murrey, CEO Director of Enterprise Sales who commented on the functions of CEO's various program components. The Committee thanked staff and AFSCME Local 444 for working collaboratively to develop the pilot project.

**Wastewater Plant Operator Training Program.** Technical Training and Writing Administrator Kevin R. Dickison provided an overview of the formalized in-house training program that is managed and implemented by the District's incumbent operators and supervisors. The program was initiated in 2006 to address challenges filling vacancies and impending retirements. He discussed current wastewater operations job classifications and staffing and the following program aspects: its origins, philosophy, benefits, advantages, challenges, recruitment strategies, candidate selection process, training materials and the up-or-out approach which requires incoming operators to promote to journey level within a set period of time. Eighty-five percent of the training occurs through direct on-the-job experience and this training component is provided by journey-level staff. Mr. Dickison reported that 75 percent of the wastewater operations team is comprised of program trainees or graduates with a 95 percent retention rate for graduates. Program components are continuously updated and enhanced to meet the needs of the team. He reviewed the planned enhancements and improvements for the near term and noted the program recently received the National Association of Clean Water Agencies' Workforce Development Award. Mr. Dickison responded to Committee questions regarding incentives for trainers and how the program could potentially benefit from the passage of Assembly Bill 1588.

**Adjournment.** Chair Coleman adjourned the meeting at 10:48 a.m.

ARC/RSC