

*In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Department, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants described herein, interest on the Series BA Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and interest on the Series BA Bonds is exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the Series BA Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Series BA Bonds. (See “TAX MATTERS” herein.)*



**\$299,590,000**

**STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES  
CENTRAL VALLEY PROJECT WATER SYSTEM REVENUE BONDS  
SERIES BA**

**Dated: Date of Delivery**

**Due: December 1, as shown on Maturity Schedule**

The State of California Department of Water Resources (the “Department”) is issuing its \$299,590,000 Central Valley Project Water System Revenue Bonds, Series BA (the “Series BA Bonds”), for the purpose of refunding a portion of the Department’s outstanding commercial paper notes, funding interest on the Series BA Bonds through December 1, 2019, making a deposit to the Debt Service Reserve Account and paying costs of issuing the Series BA Bonds.

The Series BA Bonds will be issued in fully registered form in denominations of \$5,000 or any integral multiple thereof within a maturity, and will be delivered in book-entry form, without coupons, registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). Purchasers of the Series BA Bonds will not receive physical certificates representing their interests in the Series BA Bonds. DTC will act as securities depository for the Series BA Bonds. The principal of and interest on the Series BA Bonds are payable directly to DTC by the Treasurer of the State of California. Interest is payable semiannually on June 1 and December 1 of each year, commencing on June 1, 2019. Upon receipt of payments of such principal and interest, DTC will in turn remit such principal and interest to the participants in DTC (as described herein) for subsequent disbursement to the beneficial owners of the Series BA Bonds. (See APPENDIX G – “DTC AND BOOK-ENTRY.”)

The Series BA Bonds are subject to redemption prior to maturity as described herein. (See “DESCRIPTION OF THE SERIES BA BONDS – REDEMPTION.”)

Payment of the scheduled principal of and interest on the Series BA Bonds is secured by a pledge of Revenues under the Resolution.

**THE SERIES BA BONDS ARE SPECIAL, LIMITED OBLIGATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES. THE SERIES BA BONDS DO NOT CONSTITUTE A DEBT, LIABILITY, OR OBLIGATION OF THE STATE OF CALIFORNIA. NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES BA BONDS.**

**Maturity Schedule  
(See Pages Following Cover)**

*This cover page contains certain information for quick reference only. It is not intended to be a summary of the security or terms of the bond issue. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision.*

*The Series BA Bonds are offered when, as and if issued and received by the initial purchaser subject to approval of validity by The Honorable Xavier Becerra, Attorney General of the State of California, and by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Department, and certain other matters. It is expected that the Series BA Bonds in book-entry form will be available for delivery through the facilities of DTC on or about April 24, 2019.*

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**Honorable Fiona Ma  
Treasurer of the State of California**

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The Series BA Bonds were sold by competitive bid on April 16, 2019.

**MATURITY SCHEDULE**  
relating to

**\$299,590,000**

**State of California Department of Water Resources**  
**Central Valley Project Water System Revenue Bonds**  
**Series BA**  
**(Base CUSIP<sup>†</sup> 13067W)**

<b>Maturity Date (December 1)</b>	<b>Principal Amount</b>	<b>Interest Rate</b>	<b>Price</b>	<b>Yield</b>	<b>CUSIP<sup>†</sup> Suffix</b>
2020	\$12,660,000	5.000%	105.947%	1.240%	QF2
2021	13,300,000	5.000	109.545	1.260	QG0
2022	13,970,000	5.000	113.018	1.290	QH8
2023	14,660,000	5.000	116.282	1.340	QJ4
2024	15,395,000	5.000	119.154	1.430	QK1
2025	16,160,000	5.000	122.203	1.460	QL9
2026	16,965,000	5.000	125.058	1.500	QM7
2027	17,815,000	5.000	127.684	1.550	QN5
2028	18,705,000	5.000	129.738	1.640	QP0
2029	19,645,000	5.000	130.189 <sup>c</sup>	1.730	QQ8
2030	20,635,000	5.000	128.372 <sup>c</sup>	1.900	QR6
2031	21,655,000	5.000	127.527 <sup>c</sup>	1.980	QS4
2032	22,745,000	5.000	126.585 <sup>c</sup>	2.070	QT2
2033	23,880,000	5.000	125.858 <sup>c</sup>	2.140	QU9
2034	25,070,000	5.000	125.135 <sup>c</sup>	2.210	QV7
2035	26,330,000	5.000	124.622 <sup>c</sup>	2.260	QW5

<sup>†</sup> CUSIP® is a registered trademark of the American Bankers Association. CUSIP Global Services (“CGS”) is managed on behalf of the American Bankers Association by S&P Capital IQ. Copyright© 2019 CUSIP Global Services. All rights reserved. CUSIP data herein is provided by CGS. This data is not intended to create a database and does not serve in any way as a substitute for the CGS data base. CUSIP numbers have been assigned by an independent company not affiliated with the Department and are provided solely for convenience of reference. The Department assumes no responsibility for the accuracy of such numbers.

<sup>c</sup> Priced to par call on June 1, 2029.

The initial reoffering prices and yields have been set by Jefferies LLC.

T H E C A L I F O R N I A

STATE  
WATER  
PROJECT



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No dealer, broker, salesperson or other person has been authorized to give or to make any representations other than those contained herein and, if given or made, such other information or representation must not be relied upon as having been authorized. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Series BA 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 a contract with the purchasers of the Series BA Bonds. Statements contained in this Official Statement that involve estimates, projections, forecasts or matters of opinion, whether or not expressly so described herein, are intended to be solely as such and are not to be construed as representation of fact. The information set forth herein other than that provided by the Department, although obtained from sources which are believed to be reliable, is not guaranteed as to the accuracy or completeness.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with, and may be obtained from the Municipal Securities Rulemaking Board (“MSRB”) through the Electronic Municipal Market Access website of the MSRB, currently located at <http://emma.msrb.org>. The information contained on such website is not part of this Official Statement and is not incorporated herein.

This Official Statement is not to be construed as a contract with the purchasers of the Series BA Bonds.

The Notice of Sale provides that the Initial Purchaser will certify as to the following: The Initial Purchaser has not undertaken any responsibility for the contents of the Official Statement, provided, however, that in accordance with and as part of its responsibilities under Federal securities laws, such Initial Purchaser has reviewed the information in the Official Statement and has not notified the State Treasurer of the need to modify or supplement the Official Statement.

IN CONNECTION WITH THIS OFFERING, THE INITIAL PURCHASER MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT MAY STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES BA BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME. THE INITIAL PURCHASER MAY OFFER AND SELL BONDS TO CERTAIN DEALERS, INSTITUTIONAL INVESTORS AND OTHERS AT PRICES LOWER THAN THE PUBLIC OFFERING PRICES STATED IN THE “MATURITY SCHEDULE” IMMEDIATELY FOLLOWING THE FRONT COVER PAGE HEREOF, AND SAID PUBLIC OFFERING PRICES MAY BE CHANGED FROM TIME TO TIME BY THE INITIAL PURCHASER.

The information and expression of opinions herein are subject to change without notice and neither 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 State of California, the Contractors or the Department since the date hereof.

This Official Statement is delivered for use in connection with the issuance, sale and delivery of the Series BA Bonds.

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**CAUTIONARY STATEMENTS REGARDING  
FORWARD-LOOKING STATEMENTS IN  
THIS OFFICIAL STATEMENT**

Certain statements included or incorporated by reference in this Official Statement constitute forward-looking statements. Such statements generally are identifiable by the terminology used, such as “plan,” “expect,” “estimate,” “budget” or other similar words. Such forward-looking statements include but are not limited to certain statements contained in the information under the captions “Summary

Statement,” “Introduction,” “California State Water Project,” “Power Operations of the State Water Project,” “The Water Supply Contracts,” “The Contractors” and “Litigation” in the forepart of this Official Statement and “Water System Projects” and “Estimated Capital Financing From Water System Revenue Bonds for Existing Water System Projects” in Appendix H to this Official Statement.

The achievement of certain results or other expectations contained in such forward-looking statements involves known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. The Department does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations or events, conditions or circumstances on which such statements are based occur or do not occur, except as described under the caption “CONTINUING DISCLOSURE” and in APPENDIX D.

THE SERIES BA BONDS WILL NOT BE REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON AN EXEMPTION CONTAINED IN SUCH ACT. THE SERIES BA BONDS HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE. THE SERIES BA BONDS HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY, AND THE FOREGOING AUTHORITIES HAVE NEITHER REVIEWED NOR CONFIRMED THE ACCURACY OF THIS DOCUMENT.

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## SUMMARY STATEMENT

*This Summary Statement is subject in all respects to the more complete information and definitions contained elsewhere in this Official Statement, including the Appendices attached hereto. Capitalized terms used in this Official Statement without definition have the respective meanings set forth in the Central Valley Project Water System Revenue Bonds, General Bond Resolution, No. DWR-WS-1 of the State of California Department of Water Resources, adopted as of July 1, 1986, and resolutions supplemental thereto (the "Resolution"), including the supplemental resolution authorizing the Series BA Bonds.*

### **The Department**

The State of California Department of Water Resources is a department within the California Natural Resources Agency of the State of California. The Department is responsible for, among other things, the planning, construction and operation of the State Water Project, the operation of programs for the safety of dams, flood management, local assistance and subventions, other water-related matters and the operation of the Power Supply Program. Unless otherwise expressly noted, the term "Department," as used in this Official Statement, means the State of California Department of Water Resources solely in its capacity with respect to the State Water Project, and not in any other capacity mentioned herein.

### **Authorization of the Series BA Bonds**

The Department will issue the Series BA Bonds pursuant to the provisions of Part 3 (commencing with Section 11100) of Division 6 of the Water Code of the State of California (referred to as the "Central Valley Project Act") and the Resolution.

The Series BA Bonds constitute a series of the Department's Central Valley Project Water System Revenue Bonds issued under the Resolution (all bonds issued under the Resolution, collectively, the "Bonds").

### **Purpose of the Series BA Bonds**

The Series BA Bonds are being issued to (1) refund a portion of the Department's outstanding commercial paper notes, (2) fund interest on the Series BA Bonds through December 1, 2019, (3) fund a deposit to the Debt Service Reserve Account and (4) pay costs of issuance of the Series BA Bonds. (See "ESTIMATED APPLICATION OF SERIES BA BOND PROCEEDS.")

### **Description of the Series BA Bonds**

*Interest.* The Series BA Bonds will bear interest payable semiannually on June 1 and December 1 of each year, commencing on June 1, 2019, at the respective rates (calculated on the basis of a 360-day year composed of twelve 30-day months), as shown on the Maturity Schedule immediately following the cover page of this Official Statement.

*Redemption.* The Series BA Bonds are subject to redemption prior to maturity as described herein. (See "DESCRIPTION OF THE SERIES BA BONDS – Redemption.")

### **Security for the Bonds; Limited Obligations**

The payment of the scheduled principal of and interest on all Bonds, including the Series BA Bonds, is secured by a pledge of the Revenues under the Resolution, which are the portion of the receipts of the Department under the Water Supply Contracts resulting from the construction, acquisition or operation of Water System Projects (but only in the amounts required to meet the rate covenant of the Resolution), income from the investment of moneys held in the Revenue Fund pursuant to the Resolution and certain

other moneys received by the Department under the Water Supply Contracts, which the Department in its discretion determines to be Revenues. The Department estimates (accounting for projected capital expenditures on Water System Projects after the issuance of the Series BA Bonds) that payments from The Metropolitan Water District of Southern California (“Metropolitan”) will account for approximately 41 percent of the Revenues to be derived from Water Supply Contract payments through the final maturity of the Bonds. However, that percentage may change over time. The balance of such Revenues will be receivable from the other Contractors. (See “SECURITY FOR THE BONDS” and “THE WATER SUPPLY CONTRACTS.”)

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### **Rate Covenant**

The Department has covenanted in the Resolution to charge and collect amounts under the Water Supply Contracts sufficient to return the costs of all Water System Projects without regard to whether or not the Department is able to construct, acquire or operate any such Water System Project and that Revenues receivable under all Water Supply Contracts in any year shall be the sum of 1.25 times the aggregate debt service payable from Revenues on all Bonds outstanding in such year, plus the amount estimated by the Department to be sufficient to provide for the costs of operation and maintenance of all Water System Projects, plus the amount, if any, required by a supplemental resolution authorizing a series of Bonds in order to deposit moneys in the Debt Service Reserve Account to meet the requirements of the Resolution for the issuance of additional Bonds. (See “SECURITY FOR THE BONDS – Rate Covenant.”)

### **Debt Service Reserve Account**

The Resolution provides that as of the issuance of each series of Bonds, provision must be made for placing moneys in the Debt Service Reserve Account, so that on the first interest payment date when interest on the Bonds of that series is to be paid from Revenues, there will be on deposit in the Debt Service Reserve Account an amount equal to, for any date of calculation, for all series of Bonds outstanding for which interest is then payable in whole or in part from Revenues, one-half of the maximum Annual Debt Service for the then current Year or any Year after such date of calculation.

Upon the issuance of the Series BA Bonds and the application of the proceeds thereof as described in this Official Statement the amount on deposit in the Debt Service Reserve Account will be equal to or exceed the Reserve Account Requirement for the outstanding Bonds as of such issuance. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Debt Service Reserve Account.”)

### **The State Water Project**

The State Water Project is a complex system of dams, water storage facilities, aqueducts, pumping stations and electric generation facilities, which have been constructed by the Department for the purposes of developing a water supply and conveying water to areas in need within the State of California (the “State”) and providing flood control, recreation, fish and wildlife enhancement, hydroelectric power and other benefits. All 647 miles of the initially planned aqueduct system have been completed. With the addition of the Grizzly Valley pipeline, the Thermalito Powerplant power canal and tail channel, and the extension of the East Branch aqueduct, the entire aqueduct system totals 705 miles. The 443-mile main stem California Aqueduct runs from a point near Stockton southward to a terminus in Riverside County.

The annual water supply available for delivery by the State Water Project in any year will vary depending on various factors, including hydrologic conditions and regulatory mandates. (See “STATE WATER PROJECT WATER SUPPLY.”)

The maximum, contracted amount of State Water Project water each Contractor may request for delivery each year is set forth in “Table A” of the related Water Supply Contract. Under the Water Supply Contracts presently in effect, the Contractors may request Table A water from the State Water Project in a maximum amount of 4,172,786 acre-feet. Payments by the 29 participating local public agencies under the Water Supply Contracts provide for the operation, maintenance, planning and capital costs, including interest, of the State Water Project. (See “CALIFORNIA STATE WATER PROJECT,” “THE WATER SUPPLY CONTRACTS” and “THE CONTRACTORS.”)

### **Financing of the State Water Project**

The Department has previously issued fifty-two series of Bonds totaling \$10,132,815,000 in aggregate principal amount, of which \$2,452,630,000 in aggregate principal amount are outstanding under the Resolution. The Series BA Bonds offered hereby will be the fifty-third series of Bonds to be issued pursuant to the Resolution and secured by the Revenues pledged under, and the funds and accounts established by, the Resolution. The Department may from time to time issue additional Bonds secured by a lien on Revenues under the Resolution equally and ratably with the payment of scheduled principal of and interest on the Series BA Bonds and the currently outstanding Bonds. (See “INTRODUCTION,” “SECURITY FOR THE BONDS – Outstanding Bonds; Additional Bonds,” “FINANCIAL OPERATIONS – Outstanding Revenue Obligations of the Department for the State Water Project.”)

The Department has authorized the issuance of its Water Revenue Commercial Paper Notes, Series 1 (the “Series 1 Notes”) in a principal amount outstanding at any one time not to exceed the lesser of \$600,000,000 or the principal amount of Series 1 Notes supported by the credit agreement then in effect (currently \$600,000,000). The Department has also authorized the issuance of its Water Revenue Commercial Paper Notes, Series 2 (the “Series 2 Notes” and, together with the Series 1 Notes, the “Notes”) in a principal amount outstanding at any one time not to exceed the lesser of \$800,000,000 or the principal amount of Series 2 Notes supported by the credit agreement then in effect (currently \$800,000,000). Absent unusual circumstances, such as the Oroville spillways emergency, the Note program is designed to be an ongoing source of interim financing for Water System Projects prior to long-term financing from the sale of Bonds. The Department’s obligation to make debt service payments on the Notes is subordinate to its payment obligations with respect to the Bonds. Proceeds from the Series 1 Notes are expected to be used to provide funds for costs related to the Oroville Dam Spillways Response, Recovery and Restoration Project as well as costs related to other Water System Projects. Proceeds from the Series 2 Notes are also expected to be used to provide funds for costs related to the Oroville Dam Spillways Response, Recovery and Restoration Project. (See APPENDIX H – “WATER SYSTEM PROJECTS.”) The Department has approximately \$189.9 million in aggregate principal amount of Series 1 Notes currently outstanding. The Department has approximately \$789.1 million in aggregate principal amount of Series 2 Notes outstanding, and expects a portion of those Series 2 Notes to be paid with proceeds of federal reimbursement for costs of the Oroville Dam Spillways Response, Recovery and Restoration Project and other sources of emergency funds to extent available and the remainder with one or more issues of Bonds. To date, approximately \$67 million of the Series 2 Notes have been paid from federal reimbursements. Approximately \$114.5 million of the Series 1 Notes and approximately \$231.5 million of the Series 2 Notes are expected to be paid with proceeds of the Series BA Bonds.

A large portion of the State Water Project has been financed from the issuance of \$1,582,400,000 in aggregate principal amount of State general obligation bonds, of which \$36,890,000 in aggregate principal amount are outstanding as of March 1, 2019. The Department has also issued \$1,526,155,000 in aggregate principal amount of revenue bonds for certain power facilities of the State Water Project, of which \$32,045,000 in aggregate principal amount are outstanding as of March 1, 2019 (the Department’s

Devil Canyon-Castaic Bonds). Such revenue bonds are secured by revenues of the Department other than those that are pledged to secure the Bonds and were and are issued under and secured by resolutions separate and apart from the Resolution authorizing and securing the Bonds. (See “POWER OPERATIONS OF THE STATE WATER PROJECT” and “FINANCIAL OPERATIONS – Financing of the State Water Project.”)

### **Additional Bonds**

The Department may issue, under certain conditions, additional Bonds to provide funds for the cost of any Water System Project or for refunding purposes. Such additional Bonds will be on a parity with outstanding Bonds and secured by an equal lien on the Revenues under the Resolution. (See “SECURITY FOR THE BONDS – Outstanding Bonds; Additional Bonds” and APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Issuance of Bonds.”)

### **The Contractors**

The 29 Contractors are principally located in the San Francisco Bay Area, the Central Coast, the Central Valley and Southern California and their service areas encompass approximately 25 percent of the State’s land area and, as of December 31, 2017, approximately 69 percent of its population and approximately 8 percent of the United States’ entire population, including Puerto Rico. Each Contractor has entered into a Water Supply Contract with the Department, acting on behalf of the State. Certain of the Contractors receive a major portion of their income from *ad valorem* taxes. The ability of Contractors to tax for general purposes and to appropriate tax revenue for general purposes is limited under California law. (See “THE WATER SUPPLY CONTRACTS” and “CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES.”)

### **The Water Supply Contracts**

The Water Supply Contracts are to remain in effect for the longest of 75 years, December 31, 2035 or until all bonds issued to finance construction costs of State Water Project facilities have been repaid, whichever period is longest, subject to an election on the part of each Contractor to receive continued service after such longest period on certain specified continued terms and conditions and other reasonable and equitable terms mutually agreed upon by the Department and the Contractor. (See “THE WATER SUPPLY CONTRACTS – Contract Extension Negotiations.”) As of the date of issuance of the Series BA Bonds, the final maturity of the Bonds to be outstanding upon the issuance of the Series BA Bonds will occur in 2035. Under its Water Supply Contract, each Contractor may request Table A water deliveries from the State Water Project up to a maximum specified annual amount, and agrees to pay its allocated share of the Department’s costs of gathering, storing, conveying and delivering water. Generally, the Department’s costs, including interest, of providing the facilities of the State Water Project, including the Water System Projects, are payable by the Contractors whether or not water is delivered. If a Contractor defaults under its Water Supply Contract, the Department may, upon six months’ notice, suspend water deliveries to that Contractor. During such period, the Contractor remains obligated to make all payments required by the Water Supply Contract. If a Contractor fails or is unable to raise sufficient funds by other means to make Water Supply Contract payments, the Contractor is required by the Water Supply Contract to levy a tax or assessment sufficient for such purpose.

The Department and the various subsets of Contractors (“affected Contractors”) have entered into an Off-Aqueduct Power Facilities Amendment, an East Branch Enlargement Amendment, a Water System Revenue Bond Amendment, a Coastal Branch Extension Amendment, an East Branch Extension Amendment and a South Bay Aqueduct Enlargement Amendment to the Water Supply Contracts for the purpose of financing certain of the Water System Projects. These amendments establish procedures to provide for the payment of construction costs financed with Bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs, including coverage, of the Bonds allocable to such Water System Projects. If any affected Contractor defaults on payment under

certain of such amendments other than the Coastal Branch Extension Amendment, the East Branch Extension Amendment and the South Bay Aqueduct Enlargement Amendment, the shortfall may be collected from non-defaulting affected Contractors, subject to certain limitations. (See “SECURITY FOR THE BONDS” and “THE WATER SUPPLY CONTRACTS.”)

In December 1994, representatives of the Department and certain Contractors adopted a set of principles pursuant to which additional amendments to the Water Supply Contracts have since been negotiated (the “Monterey Amendment”). The Department has covenanted in the Resolution not to amend the Water Supply Contracts in any manner that would materially adversely affect the security for the Bonds, and the Department believes that the Monterey Amendment complies with that covenant. (See “WATER SUPPLY CONTRACT RELATED LITIGATION – Monterey Amendment Litigation,” for a description of certain litigation and the implementation of the settlement thereof that could affect the Monterey Amendment. See also “WATER SUPPLY CONTRACT RELATED LITIGATION – Claims Relating to the Use of Bond Proceeds to Pay Costs Allocable to Recreation and Fish and Wildlife Enhancement.”)

### **Continuing Disclosure**

The Department will covenant for the benefit of the holders and beneficial owners of the Series BA Bonds to provide certain financial information and operating data relating to the Department not later than nine months following the end of each Department fiscal year (which shall be March 31 of each year, so long as the Department’s fiscal year ends on June 30) (the “Annual Report”), commencing with the report containing 2018-2019 Fiscal Year financial information and to provide notices of the occurrence of certain enumerated events (“Event Notices”). The specific nature of the information expected to be contained in the Annual Report or the Event Notices and certain other terms of this continuing disclosure obligation are set forth in APPENDIX D – “FORM OF CONTINUING DISCLOSURE CERTIFICATE.”

### **No Relationship to Power Supply Revenue Bonds**

The Department’s Central Valley Project Water System Revenue Bonds are not secured by the same sources of repayment as, and otherwise bear no material relationship to, bonds issued by the Department to finance and refinance the State of California’s Power Supply Program (the “Power Supply Revenue Bonds”). **The State Water Project and the Power Supply Program are separate and distinct enterprises, and have separate and distinct sources and uses of funds. Revenues pledged to secure payment of the Bonds may not be used to pay the Power Supply Revenue Bonds or any other expenses of the Power Supply Program, and resources pledged to secure the payment of the Power Supply Revenue Bonds may not be used to pay the Bonds or any other expenses of the State Water Project.**

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**STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES  
OFFICIAL STATEMENT**

**Relating to its**

**\$299,590,000**

**Central Valley Project  
Water System Revenue Bonds,  
Series BA**

**INTRODUCTION**

This Official Statement is furnished by the State of California Department of Water Resources, in its capacity as operator of the State Water Project (the “Department”), for the purpose of setting forth information concerning its Central Valley Project Water System Revenue Bonds (the “Bonds” or the “Water System Revenue Bonds”), particularly the \$299,590,000 Central Valley Project Water System Revenue Bonds, Series BA (the “Series BA Bonds”).

The Department will issue the Series BA Bonds pursuant to the provisions of Part 3 (commencing with Section 11100) of Division 6 of the Water Code of the State of California (referred to as the Central Valley Project Act and herein referred to as the “CVP Act”) and the Central Valley Project Water System Revenue Bonds, General Bond Resolution, No. DWR-WS-1 of the Department, adopted as of July 1, 1986, and resolutions supplemental thereto, including the supplemental resolution authorizing the Series BA Bonds (such resolutions being herein, except as the context otherwise indicates, collectively called the “Resolution”). All capitalized terms used in this Official Statement and not defined herein have the same meanings as in the Resolution. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION.”)

This Official Statement also contains certain information with respect to the California State Water Project, the projects financed with the Bonds (the “Water System Projects”) and the contracts for a supply of water from the State Water Project (the “Water Supply Contracts”) between the Department on behalf of the State of California and 29 California public agencies (the “Contractors”). Contractor payments for water pursuant to the Water Supply Contracts are the principal component of the Revenues, as hereinafter defined, pledged for the payment of the interest on and the principal of the Series BA Bonds.

**Purpose of the Series BA Bonds**

The Series BA Bonds are being issued to (1) refund a portion of the Department’s outstanding commercial paper notes, (2) fund interest on the Series BA Bonds through December 1, 2019, (3) fund a deposit to the Debt Service Reserve Account and (4) pay costs of issuance of the Series BA Bonds. (See “ESTIMATED APPLICATION OF SERIES BA BOND PROCEEDS.”)

**ESTIMATED APPLICATION OF SERIES BA BOND PROCEEDS**

The following table sets forth the estimated application of the proceeds of the Series BA Bonds:

Retirement of Notes .....	\$346,045,677.14
Deposit to Debt Service Reserve Account	13,669,303.80
Capitalized Interest <sup>(1)</sup>	9,029,309.77
Cost of Issuance of Series BA Bonds <sup>(2)</sup> .....	<u>1,108,019.44</u>
Total Proceeds of the Series BA Bonds	\$369,852,310.15
Less Original Issue Premium .....	<u>70,262,310.15</u>
Principal Amount of Series BA Bonds .....	<u>\$299,590,000.00</u>

<sup>(1)</sup> Amount necessary to pay interest on the Series BA Bonds through December 1, 2019.

<sup>(2)</sup> Includes initial purchaser’s discount, certain legal fees, printing expenses and other costs.

**DESCRIPTION OF THE SERIES BA BONDS**

**General**

The Series BA Bonds will be dated the date of delivery thereof, expected to be on or about April 24, 2019, will be issued in fully registered form without coupons, will be in denominations of \$5,000 principal amount or any integral multiple thereof within a maturity, and will bear interest payable semiannually on June 1 and December 1 of each year, commencing on June 1, 2019 (each, an “interest payment date”). The Series BA Bonds will mature (subject to the right of prior redemption discussed below) on December 1 in each of the years and in the respective principal amounts, and will bear interest at the respective rates (calculated on the basis of a 360-day year composed of twelve 30-day months), as shown on the Maturity Schedule immediately following the cover page of this Official Statement.

Interest on the Series BA Bonds is payable to the person whose name appears on the Bond registration books of the Treasurer of the State of California (the “State Treasurer”) as the owner as of the close of business on the fifteenth day of the month immediately preceding an interest payment date, whether or not the day is a business day.

**THE SERIES BA BONDS ARE SPECIAL, LIMITED OBLIGATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES. THE SERIES BA BONDS DO NOT CONSTITUTE A DEBT, LIABILITY, OR OBLIGATION OF THE STATE OF CALIFORNIA. NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES BA BONDS.**

**Book-Entry Only**

The Series BA Bonds will be issued as fully registered bonds and 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 BA Bonds. Purchasers will not receive certificates representing Series BA Bonds purchased by them. The State Treasurer will pay principal of and interest on the Series BA Bonds directly to DTC. Upon receipt of payment of principal and interest DTC is obligated to remit such payments of principal and interest to the DTC Participants for subsequent disbursement to the beneficial owners of the Series BA Bonds. (See APPENDIX G – “DTC AND BOOK ENTRY.”)

## **Redemption**

*Optional Redemption.* The Series BA Bonds maturing on or after December 1, 2029 will be subject to redemption prior to their respective stated maturities, at the option of the Department from any source of available funds, as a whole, or in part, by such maturities as the Department may designate (and by lot within any maturity), on any date on or after June 1, 2029, upon payment of a redemption price equal to the principal amount of the Series BA Bonds to be redeemed, plus accrued interest to the date fixed for redemption, without premium.

*Selection of Bonds for Redemption.* Whenever less than all the outstanding Bonds of any maturity of Series BA Bonds are to be redeemed on any one date, the State Treasurer shall select the Series BA Bonds of such maturity to be redeemed by lot in any manner the State Treasurer deems fair.

*Notice of Redemption.* So long as DTC is acting as securities depository for the Series BA Bonds, notice of redemption with respect to the Series BA Bonds will be given by delivering such notice to DTC, not to the beneficial owners (as defined in APPENDIX G – “DTC AND BOOK-ENTRY” herein) of any Series BA Bonds designated for redemption, at least 20 days but not more than 60 days prior to the date fixed for redemption. The Resolution provides that if notice of redemption has been duly given and moneys for the payment of the redemption price of the Series BA Bonds called for redemption are held by the State Treasurer, then on the redemption date designated in such notice the Series BA Bonds so called for redemption will become due and payable, and from and after the redemption date, interest on the Series BA Bonds so called for redemption will cease to accrue and the holders of such Series BA Bonds will have no rights in respect thereof except to receive payment of the redemption price thereof.

The receipt of such a notice shall not be a condition precedent to such redemption and the failure to so receive any such notice shall not affect the validity of the proceedings for the redemption of Series BA Bonds for which notice of redemption was given.

*Right to Cancel Notice of Redemption.* Upon the written request of the Department, any notice of redemption may be cancelled by giving notice of such cancellation, in the same manner as for giving notices of redemption, at any time prior to the date fixed for redemption designated in such notice of redemption.

*Effect of Redemption.* If, on the date fixed for redemption, moneys equal to the redemption price of Series BA Bonds or portions thereof designated for redemption, together with interest accrued thereon to the date fixed for redemption, shall be held by the State Treasurer for such Series BA Bonds so as to be available for payment of such redemption price and interest on such date, and if notice of redemption shall have been delivered as provided in the Resolution, then such Series BA Bonds or portions thereof, whether or not presented for redemption, shall cease to be entitled to any benefit under the Resolution other than the right to receive payment of the redemption price together with accrued interest to the date fixed for redemption, no interest shall accrue on such Series BA Bonds or portions thereof after the date fixed for redemption, and, except as to the portion not designated for redemption of any such Series BA Bond designated for redemption only in part, the redemption price of and accrued interest on such Series BA Bonds shall be payable only from the moneys held by the State Treasurer for such Series BA Bonds for that purpose.

## **Defeasance**

The obligations of the Department and the pledge, lien, covenants and agreements of the Department made or provided for in the Resolution will be fully discharged and satisfied as to any Series BA Bond and such Bond shall no longer be deemed to be outstanding thereunder if certain conditions set forth in the Resolution are satisfied. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Discharge of Obligations Under the Resolution.”)

## SECURITY FOR THE BONDS

### Sources of Revenues

Under the Water Supply Contracts, the Contractors are required to pay to the Department amounts calculated by the Department to be sufficient to return to the Department its annual costs of the State Water Project allocated to water and power supply. The revenues pledged to the payment of the scheduled principal of and interest on all Bonds (the “Revenues”) are the portion of the receipts of the Department under the Water Supply Contracts resulting from the construction, acquisition or operation of Water System Projects (but only in the amounts required to meet the rate covenant of the Resolution), income from the investment of moneys held in the Revenue Fund pursuant to the Resolution and certain other moneys received by the Department under the Water Supply Contracts, which the Department in its discretion determines to be Revenues. Revenues do not include any other income or receipts resulting from the construction, acquisition or operation of a Water System Project other than the income and receipts specified in the immediately preceding sentence. Revenues from facilities constructed or acquired with the proceeds of CVP Act revenue bonds, including the Bonds, are not subject to the provisions of the Burns-Porter Act pledging other Water Supply Contract revenues to the payment of State general obligation bonds issued under the Burns-Porter Act. (See “FINANCIAL OPERATIONS – Allocation of State Water Project Revenues.”) The respective obligations of the Contractors to make payments in amounts sufficient to pay debt service on the Bonds are not conditioned on the amount of water delivered. (See “SECURITY FOR THE BONDS – Sources of Revenues” and “THE WATER SUPPLY CONTRACTS” and “STATE WATER PROJECT WATER SUPPLY – General.”)

Under the Resolution, the Department is required to charge the Contractors amounts under the Water Supply Contracts sufficient to repay the costs of all Water System Projects, whether or not the Department is able to construct or operate the Water System Projects or to produce, make available or deliver water from the Water System Projects. The terms of the Water Supply Contracts provide for such charges. The Resolution requires that the Revenues receivable in each year, after deduction of the costs of operation and maintenance (excluding depreciation but including appropriate amounts for operating and replacement reserves) of the Water System Projects for such year (the “Water System Operating Expenses”) shall be at least equal to the sum of 1.25 times the debt service payable from Revenues on all Bonds outstanding in such year and the amount, if any, required by a supplemental resolution authorizing a series of Bonds in order to deposit moneys in the debt service reserve account established under the Resolution (the “Debt Service Reserve Account”) to meet the requirements of the Resolution for the issuance of additional Bonds. (See “SECURITY FOR THE BONDS – Rate Covenant” and “– Debt Service Reserve Account.”) Amounts received in excess of operation, maintenance and debt service needs are held by the Department and refunded to Contractors approximately one year following receipt. Under the CVP Act, the payment of debt service has priority over the payment of operating expenses. Under current law, the charges of the Department under the Water Supply Contracts are not subject to regulation by any state or federal regulatory authority. (See “THE WATER SUPPLY CONTRACTS – Amendments Providing Certain Revenues to Pay Water System Revenue Bonds.”)

The Department estimates that upon issuance of the Series BA Bonds, payments from Metropolitan will account for approximately 41 percent of the Revenues to be derived from Water Supply Contract payments. (See “THE CONTRACTORS – Selected Contractor Financial Information.”) However, that percentage may change over time.

### Pledge of Revenues

The principal of, and premium, if any, and interest on the Bonds are payable from and secured by a lien upon and pledge of the Revenues. The Bonds are also payable from Bond proceeds and other available funds (except amounts, if any, in any Rebate Account) to the extent provided in the Resolution.

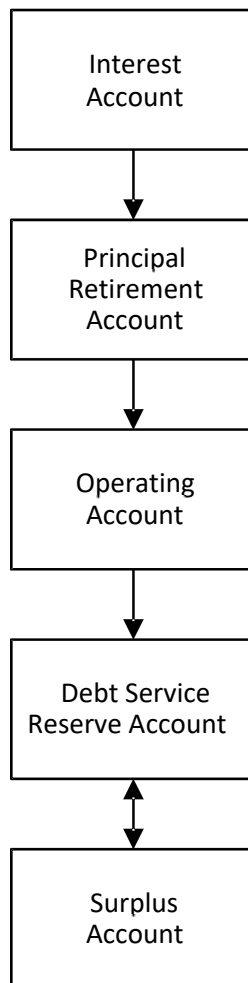
THE SERIES BA BONDS ARE SPECIAL, LIMITED OBLIGATIONS OF THE DEPARTMENT. THE SERIES BA BONDS DO NOT CONSTITUTE A DEBT, LIABILITY, OR OBLIGATION OF THE STATE OF CALIFORNIA. NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF CALIFORNIA IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES BA BONDS.

**Flow of Funds**

The portion of each Contractor’s payments under its Water Supply Contract attributable to Water System Projects will be deposited in the Revenue Fund.

The diagram below illustrates the priority of allocations to various accounts within the Revenue Fund. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Disposition of Revenues.”)

**Priority of Allocation of Revenues**



Moneys in the Operating Account may be used only for the purpose of paying Water System Operating Expenses.

Moneys in the Debt Service Reserve Account may be used only to make up any deficiency in the Interest Account or Principal Retirement Account, in that priority.

Moneys in the Surplus Account are available for any lawful purpose, including transfer to funds not subject to the pledge of the Resolution.

In the event that moneys held in the Operating Account or the Surplus Account are required for debt service, the Department, the State Controller, and the State Treasurer shall take all actions necessary to disburse such moneys, in the amount required, for the payment of debt service.

### **Rate Covenant**

The Department has covenanted in the Resolution to charge and collect amounts under the Water Supply Contracts sufficient to return the costs of all Water System Projects without regard to whether or not the Department is able to construct, acquire or operate any such Water System Project and that Revenues receivable under all Water Supply Contracts in any year shall be the sum of 1.25 times the aggregate debt service payable from Revenues on all Bonds outstanding in such year, plus the amount estimated by the Department to be sufficient to provide for Water System Operating Expenses, plus the amount, if any, required by a supplemental resolution authorizing a series of Bonds in order to deposit moneys in the Debt Service Reserve Account to meet requirements of the Resolution for the issuance of additional Bonds. Amounts received in excess of operation, maintenance and debt service needs are held by the Department and refunded to Contractors approximately one year following receipt. The manner in which charges under the Water Supply Contracts are established and collected is described under “THE WATER SUPPLY CONTRACTS – Basic Contract – Water Charges” and “– Payment of Water Charges.”

### **Debt Service Reserve Account**

The Resolution provides that on the issuance of each series of Bonds, provision must be made for placing moneys in the Debt Service Reserve Account, so that on the first interest payment date when interest on the Bonds of that series is to be paid from Revenues, there will be on deposit in the Debt Service Reserve Account an amount equal to, for any date of calculation, for all series of Bonds outstanding for which interest is then payable in whole or in part from Revenues, one-half of the maximum Annual Debt Service for the then current Year or any Year after such date of calculation. For purposes of calculating the Reserve Account Requirement for any fiscal year, Bonds bearing interest at a variable rate shall be assumed to bear interest during such fiscal year at a rate equal to the rate most recently reported by The Bond Buyer as the Bond Buyer Index for long-term revenue bonds; provided that if on the date of calculation the interest rate on such Bonds shall then be fixed for a specified period during such fiscal year, the interest rate assumed for such Bonds for such fiscal year shall be the actual interest rate.

Upon the issuance of the Series BA Bonds the amount on deposit in the Debt Service Reserve Account will be equal to or exceed the Reserve Account Requirement for the outstanding Bonds as of such issuance date. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Debt Service Reserve Account.”)

On the date of issuance of the Series BA Bonds, the amount of the Reserve Account Requirement for the outstanding Bonds will be approximately \$142,806,169. The Department anticipates that approximately 72 percent of the amount held in the Debt Service Reserve Account on the date of issuance of the Series BA Bonds will be invested in the State Treasurer’s Pooled Money Investment Account, with the balance invested directly in U.S. Government securities. (See “THE DEPARTMENT – Investments of Department Moneys.”) This percentage may change. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Debt Service Reserve Account.”)

## **Outstanding Bonds; Additional Bonds**

Bonds in an aggregate principal amount of \$2,452,630,000 are currently Outstanding and all Outstanding Bonds (including any additional Bonds) are secured equally and ratably with the Series BA Bonds. (See “FINANCIAL OPERATIONS – Outstanding Revenue Obligations of the Department for the State Water Project” and “– Estimated Annual Debt Service.”)

The Department may issue additional Bonds on a parity basis with outstanding Bonds to finance the costs allocated to any Water System Project, including the cost of planning, construction or acquisition, or to refund bonds if, among other things, the Department certifies that (a) after the issuance of such Bonds, estimated Revenues in each year will not be less than the sum of (i) 1.25 times debt service to be paid from Revenues, plus (ii) estimated Water System Operating Expenses, (b) the Debt Service Reserve Account established pursuant to the Resolution is projected to contain on the first interest payment date on which interest for such additional Bonds is payable from Revenues, an amount equal to the Reserve Account Requirement, and (c) the State Treasurer must have received evidence that the issuance of the additional Bonds will not result in the lowering of any rating then assigned to any then outstanding Bonds by any nationally recognized rating agency. (See APPENDIX C – “SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – Issuance of Bonds.”)

Pursuant to Section 11731 and 11751 of the CVP Act, the Department may issue revenue bonds bearing interest at a rate not exceeding 12 percent per annum and may sell revenue bonds at a price of not less than 94 percent of the principal amount thereof. If the Department determines that interest on revenue bonds will be subject to federal income taxation and to the extent permitted by applicable law, such bonds may bear interest at such rate or rates, and may be sold at such price or prices, as the Department may determine.

The Department may also undertake additional capital projects in the future, which could result in the issuance of obligations secured by revenues under the Water Supply Contracts, other than Notes issued under the related resolution and Bonds issued under the Resolution. These obligations could be issued in substantial amounts. (See “STATE WATER PROJECT WATER SUPPLY – Long Term Planning Efforts for the Delta – Bay Delta Conservation Plan/California WaterFix.”)

## **THE DEPARTMENT**

### **Introduction**

The Department is a department within the California Natural Resources Agency of the State of California (the “State”) and is responsible for the planning, construction, operation and maintenance of the State Water Project. The Department is also responsible for, among other things, the operation of programs for the safety of dams, flood management, local assistance and subventions and other water-related matters. The Department was established in 1956 by an act of the State Legislature that combined the functions of the Water Project Authority and certain responsibilities of the Department of Public Works’ former Division of Water Resources. As of January 1, 2019, the Department employs approximately 3,060 full-time staff throughout the State.

### **Management**

The Director of Water Resources oversees the Department’s activities, with the assistance of a Chief Deputy Director and eight Deputy Directors. The Director, the Chief Deputy Director, the Deputy Director for the State Water Project, and the Chief Counsel are each appointed by the Governor. The Director reports to the Governor through the Secretary of the California Natural Resources Agency. Biographical information for the management officials of the Department currently responsible for the State Water Project is as follows.

*Karla Nemeth* was appointed Director of Water Resources by Governor Edmund G. Brown on January 10, 2018. Prior to her appointment as Director, Ms. Nemeth had worked at the California Natural Resources Agency as the Governor’s Deputy Secretary and Senior Advisor for Water Policy since 2014. Ms. Nemeth was

Bay Delta Conservation Plan Project Manager from 2009 to 2014. Prior to joining the California Natural Resources Agency, Ms. Nemeth was Environmental and Public Affairs Director for the Alameda County Flood Control and Water Conservation District from 2005 to 2009 and Community Affairs Manager at Jones and Stokes from 2003 to 2005. Ms. Nemeth has a Master of Public Administration from the University of Washington.

*Cindy Messer* was appointed Chief Deputy Director of the Department in February 2017. The Chief Deputy Director is responsible for many of the Department's water management and administrative policy issues. Ms. Messer served as Assistant Chief Deputy Director from January 2016 until February 2017. Prior to joining the Department, Ms. Messer was the Deputy Director of the Planning, Performance and Technology Division at the Delta Stewardship Council since 2012. Ms. Messer has a Bachelor's Degree in Environmental Policy Analysis and Planning from the University of California, Davis, and a Master's Degree in Conservation Biology from California State University, Sacramento.

*Joel Ledesma* was appointed Deputy Director for the State Water Project, effective July 17, 2017. Mr. Ledesma has over 25 years of experience in State Water Project operations and maintenance within the Department's Joint Operations Center and Field Divisions. He has served in many leadership roles at the Department, including Chief of the Energy Management Systems Branch, Chief of the Systems Support Office, Chief of the Delta Field Division, Chief of the Plant Asset Management Office, and Assistant Division Chief of the Division of Operations and Maintenance. During the Oroville Dam Spillways Emergency Response effort, Mr. Ledesma served as an Incident Commander. Mr. Ledesma has a Bachelor of Science degree in Electrical/Electronic Engineering with a concentration in power from California State University, Sacramento.

*Spencer Kenner* has served as Chief Counsel of the Department since February 2016. He oversees a staff of more than 40 attorneys working on the Department's varied and complex legal issues. Mr. Kenner joined the Department in 2008 and prior to serving as Chief Counsel he served as the Assistant Chief Counsel responsible for the State Water Project, environmental compliance, and grant and loan programs since 2012. Mr. Kenner has a Juris Doctor Degree from Brigham Young University.

*Vinay Narjit Singh Behl* has served as the Chief of the Division of Fiscal Services since April 2017 and as such is the Controller and Chief Financial Officer of the Department. Mr. Behl manages and directs the activities of the Budget Office, General Accounting Branch, Enterprise Accounting Branch, Financial Analysis and Risk Management Office, Administration/Out of State Travel, and Master Data Office, which includes the long term financial planning of the State Water Project and management of the outstanding debt of the department. Prior to joining the Department Mr. Behl served as Chief Financial Officer of a subsidiary of Guardian Life Insurance Corporation from 2015 through 2017, Chief Financial Officer of an operating division of the United States Department of Health and Human Services from 2010 to 2015 and Vice President of Finance for multinational software companies from 1997 to 2010. Mr. Behl has a Master's Degree in International Financial Management and a Master's Degree in Business Administration from the University of California, Davis. Mr. Behl is a licensed Certified Public Accountant in Delaware and California with various certifications in Accounting, Audit and Finance.

## **Fund Accounting**

The Department's operations with respect to the State Water Project are accounted for and conducted under enterprise funds established by the California Water Code, principally the State Water Resources Development Bond Fund, the Central Valley Project Construction Fund (the "Construction Fund") and the Central Valley Project Revenue Fund (the "Revenue Fund"). The Department's operations with respect to the State Water Project are separate and apart from the Department's operations that are primarily funded by State General Fund appropriations and from charges collected from customers of certain of the State's investor owned utilities related to the Department's Power Supply Revenue Bonds. (See "FINANCIAL OPERATIONS – Allocation of State Water Project Revenues.")



## **Employee Relations**

The Ralph C. Dills Act, enacted in 1977, provides that State employees have a right to form, join, and participate in the activities of employee organizations for the purpose of representation on all matters of employer-employee relations. However, once an employee organization is recognized as the exclusive representative of a bargaining unit, only that organization may represent the bargaining unit employees. As of January 1, 2019, the Department has approximately 3,060 full-time employees of whom approximately 2,171 are represented in 9 of the 21 statewide bargaining units adopted by the Public Employment Relations Board (“PERB”) for collective bargaining purposes. The remainder of the Department’s employees are not covered by collective bargaining agreements because of their managerial, supervisory or confidential status.

The scope of representation is limited to wages, hours, and other terms and conditions of employment. Representatives of the Governor are required to meet and confer in good faith and endeavor to reach agreement with the employee organization, and, if agreements are reached, to prepare a memorandum of understanding and present them to the Legislature for approval. In cases where the parties are unable to reach agreement, either party may request the PERB to appoint a mediator to assist them in reconciling a dispute.

Nine bargaining units represent employees of the Department. The nine memoranda of understanding (each an “MOU”) with the bargaining units are current and in effect. If an MOU expires without a successor MOU in place, as provided by State law, the current MOU remains in effect until the successor MOU or an extension of the current MOU is negotiated and approved by the respective bargaining unit and the Legislature.

## **Pension Obligations**

State departments and agencies, including the Department, participate in the California Public Employees’ Retirement System (“PERS”), an agent multiple-employer pension system that provides a contributory defined-benefit pension for substantially all State employees. PERS has unfunded liabilities in the tens of billions of dollars. For the years ended June 30, 2018 and June 30, 2017, the allocable share of annual pension contributions paid by the Department with respect to the State Water Project were approximately \$58.3 million and \$51.6 million, respectively. In addition, for the year ended June 30, 2018, the State Water Project recognized a \$60.9 million supplemental pension contribution to PERS. This was the State Water Project’s allocation of a \$6.0 billion supplemental pension contribution made by the State to PERS in such fiscal year. This supplemental pension contribution was funded by an internal State loan. The Department will be required to repay its allocated amount of this loan over a period ending no later than June 30, 2030. For more information on this supplemental pension contribution, see Note 8 of the financial statements of the State Water Resources Development System appearing in APPENDIX B. The level of future required annual pension contributions by the Department depends on a variety of factors, including changes in policy by the PERS Board of Administration, future investment portfolio performance, actuarial methods and assumptions, and additional potential changes in retirement benefits. Due to recent changes in actuarial assumptions and other factors, required contributions to PERS are expected to increase. There can be no assurances that the Department’s required annual contribution to PERS will not significantly increase.

Additional information concerning State Water Project pension obligations, including a description of the actuarial assumptions and methods used to determine required contributions, is set forth in Note 8 of the financial statements of the State Water Resources Development System appearing in APPENDIX B. Such information is reported in part on the basis of State Miscellaneous Category Tier I and Tier II employees, of which State Water Project employees represent only a portion. For the years ended June 30, 2018 and June 30, 2017, Department pensionable compensation with respect to the State Water Project represented approximately 1.73 percent and 1.68 percent, respectively, of contributions for all of State Miscellaneous Category Tier I and Tier II.

## **Post-employment Benefits Other Than Pensions**

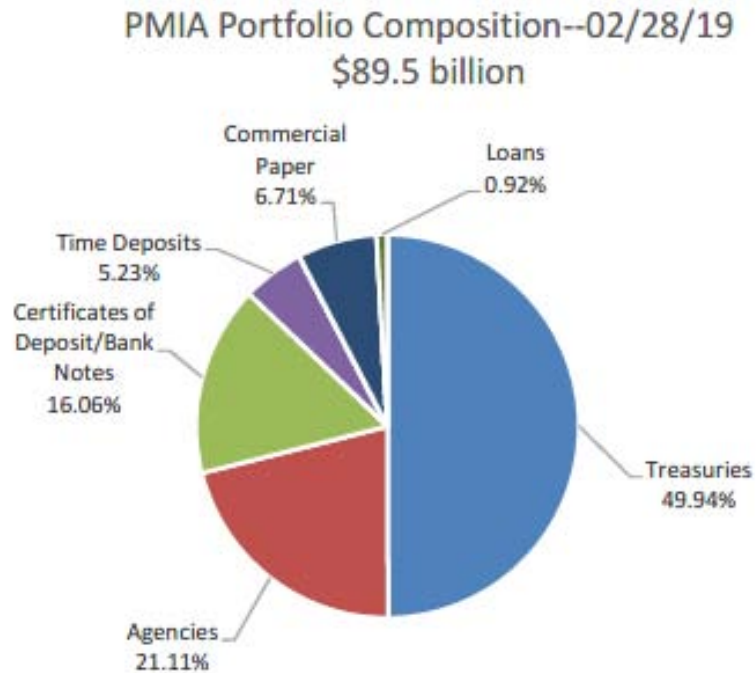
In addition to the pension benefits provided by the State, the State also provides post-retirement health care benefits, in accordance with California Government Code section 22760(g), to all employees who retire from the State on or after attaining certain age and length of service requirements. The post-retirement health care benefits are funded by the State General Fund on a pay-as-you-go basis. During the fiscal year ended June 30, 2018, the Department adopted Governmental Accounting Standards Board Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (“GASB No. 75”). GASB No. 75 requires that the Department recognize and measure a post-retirement health care benefits liability using actuarial methods and assumptions to project benefit payments, discount projected benefit payments to the actuarial present value, and attribute that present value to periods of employee service. These actuarially determined amounts will be allocated by the California State Controller using actuarial methods and assumptions adopted by the PERS Board of Administration. The State Water Project allocated contributions made for post-retirement health care benefits were \$21 million for the year ended June 30, 2018. The State Water Project recognized a post-retirement health care benefit expense of \$52.5 million for the year ended June 30, 2018. Additional information concerning State Water Project post-employment benefits other than pension obligations is set forth in Note 9 of the financial statements of the State Water Resources Development System appearing in APPENDIX B.

## **Investments of Department Moneys**

The Department uses the State’s Centralized Treasury System. Moneys on deposit in the State’s Centralized Treasury System are invested by the State Treasurer in the PMIA. As of February 28, 2019, the PMIA held approximately \$89.5 billion of State moneys, and approximately \$22.3 billion invested for about 2,371 local governmental entities through the Local Agency Investment Fund (the “LAIF”). The assets of the PMIA as of February 28, 2019, are shown in the following chart:

**Analysis of the Pooled Money Investment Account Portfolio**

(as of February 28, 2019)



Source: State of California, Office of the State Treasurer.

The State's treasury operations are managed in compliance with the California Government Code and according to a statement of investment policy that sets forth permitted investment vehicles, liquidity parameters and maximum maturity of investments. The PMIA operates with the oversight of the Pooled Money Investment Board (consisting of the State Treasurer, the State Controller and the Director of Finance).

The PMIA is not now invested, nor has it ever been invested, in structured investment vehicles or collateralized debt obligations. The PMIA Portfolio performance under the PMIA's holdings are displayed quarterly on the State Treasurer's website and may be accessed under PMIA Quarterly Reports. The PMIA does not currently invest in auction rate securities.

The State Treasurer does not invest in leveraged products or inverse floating rate securities. The investment policy permits the use of reverse repurchase agreements subject to limits of no more than 10 percent of the total amount in the PMIA. All reverse repurchase agreements are cash matched either to the maturity of the reinvestment or an adequately positive cash management date which is approximate to the maturity of the reinvestment.

The average life of the investment portfolio of the PMIA as of February 28, 2019, was 184 days.

As of January 1, 2019, the Department had approximately \$809,213,000 invested in the PMIA. Department moneys held in the PMIA consist of Contractor payments to the Department. Department moneys held in the PMIA are invested on a short-term basis until they are expended for their designated purpose, replacement reserves, construction funds and debt service reserves.

# CALIFORNIA STATE WATER PROJECT

## Introduction

The State Water Project is one of the largest water supply projects undertaken in the history of water development and encompasses a complex of dams, reservoirs, pumping facilities, power plants, aqueducts and pipelines owned and operated by the State. The Department is responsible for the planning, construction, operation and maintenance of the State Water Project. After a construction program that commenced in 1957, the project is now providing water to all 29 Contractors. The maximum, contracted amount of State Water Project water each Contractor may request for delivery each year is set forth in “Table A” of the related Water Supply Contract. Under the Water Supply Contracts presently in effect, the Contractors may request Table A water from the State Water Project in a maximum amount of 4,172,786 acre-feet. (See “THE WATER SUPPLY CONTRACTS.”) An acre-foot is the amount of water that will cover one acre of land to a depth of one foot, and is equivalent to 325,900 gallons. However, the amount of water that may be made available for delivery by the State Water Project in any year will depend on various factors, and the Water Supply Contracts provide for reductions in Table A water deliveries if the total amount available for delivery is insufficient to satisfy all Contractor requests. (See “STATE WATER PROJECT WATER SUPPLY.”)

More than two-thirds of California’s natural water supply originates in the northern third of the State, but more than three-quarters of the demand for water is in the southern two-thirds, which includes the San Francisco Bay area, the San Joaquin Valley, the central California coast and Southern California. The State Water Project was developed in order to deliver water to areas of need throughout the State for domestic, industrial and agricultural purposes, as well as to provide flood control, recreation, fish and wildlife enhancement, hydroelectric power and other benefits.

The State Water Project includes aqueducts, dams and reservoirs, pipelines, pumping facilities, hydroelectric generating facilities and other power plants. The State Water Project does not include any water treatment facilities or any desalination or other facilities for the production of water.

Portions of the State Water Project system consist of facilities developed and used jointly with the federal Central Valley Project operated by the U.S. Bureau of Reclamation (the “Bureau”). In addition, both projects have primary sources of water north of the delta formed by the confluence of the Sacramento and San Joaquin Rivers (the “Delta”), transport water across the Delta, and draw water from the southern edge of the Delta. The federal Central Valley Project, like the State Water Project, provides water for irrigation in the Central Valley, urban water supply, water quality, flood control, power, recreation, and fish and wildlife enhancement. Costs for the jointly developed facilities are shared, with approximately 55 percent being paid by the State and 45 percent being paid by the federal government. In 1986, the Department and the Bureau entered into a Coordinated Operation Agreement (the “COA”) under which the State Water Project and the federal Central Valley Project coordinate operations, including releases from upstream reservoirs and pumping from the Delta. The COA permits increased operational efficiency for both projects, ensures that each project receives an equitable share of available surplus water, and provides for sharing responsibilities in meeting certain Delta water quality standards.

On December 12, 2018, the Department and the Bureau executed an amendment to the COA that, among other things, revised the sharing responsibilities related to Delta water quality standards. Under the amended COA, in certain water year types the Department’s share of responsibility for meeting water quality standards for the Delta would be larger. On the same date, the Department and the Bureau also entered into an agreement regarding the potential effects of the California WaterFix (as described below) on the Central Valley Project. Under the agreement the Department would, in specific circumstances, avoid, mitigate or offset water supply impacts to the Central Valley Project arising from California WaterFix. On January 16, 2019, several environmental groups filed a lawsuit challenging the approval of the amendment and the agreement on public trust grounds and on the bases of alleged failures to comply with the California Environmental Quality Act (“CEQA”) and the Delta Reform Act of 2009 (the “Delta Reform Act”). This lawsuit is currently pending.

## **Aqueduct System; Pumping Facilities**

All 647 miles of the initially planned aqueduct system have been completed. With the addition of the Grizzly Valley pipeline, the Thermalito Powerplant power canal and tail channel, and the extension of the East Branch aqueduct, the entire aqueduct system totals 705 miles. The main stem of the aqueduct system, the California Aqueduct, is 443 miles in length and transports water from the Delta through the Central Valley of California, over the Tehachapi Mountains and then into Southern California. Major branch aqueducts include the 28-mile North Bay Aqueduct north of the San Francisco Bay, the 45-mile South Bay Aqueduct in the southern San Francisco Bay area, the 116-mile Coastal Branch aqueduct from the southern San Joaquin Valley over the coastal mountains to the central California coast north of Los Angeles, the 32-mile West Branch aqueduct in Southern California and the 33-mile extension of the East Branch aqueduct in Southern California. Aqueducts consist primarily of open concrete lined canals, siphons and underground pipelines. The main stem of the California Aqueduct has 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs. The branch aqueducts are mostly pipelines and tunnels rather than canals.

State Water Project facilities also include 20 pumping plants and stations, four pumping-generating plants, and five hydroelectric power plants.

See the fold-out entitled “State Water Project Facilities” at the end of this Official Statement.

## **Storage Facilities**

State Water Project facilities include 36 storage facilities, of which 21 are primary reservoirs and lakes. Reservoirs are used to provide long term water storage, manage water flows, provide recreation, and generate power.

See the fold-out entitled “State Water Project Facilities” at the end of this Official Statement.

Proceeds from the Department’s Water Revenue Commercial Paper Notes, Series 1 (the “Series 1 Notes”) are expected to be used to provide funds for costs related to certain Water System Projects, including the Oroville Dam Spillways Response, Recovery and Restoration Project. Proceeds from the Department’s Water Revenue Commercial Paper Notes, Series 2 (the “Series 2 Notes” and, together with the Series 1 Notes, the “Notes”) are also expected to be used to provide funds for costs related to the Oroville Dam Spillways Response, Recovery and Restoration Project. (See “CALIFORNIA STATE WATER PROJECT – Oroville Dam Spillways Response, Recovery and Restoration Project and Related Claims.”)

The Division of Safety of Dams (within the Department) routinely inspects operating dams and may impose operating restrictions on dams and reservoirs that could adversely affect the operation of the State Water Project. (See APPENDIX H – “WATER SYSTEM PROJECTS – Project Descriptions – *Perris Dam Remediation Program.*”)

In addition to the Department’s internal dam safety efforts, independent reviews and inspections by external dam safety experts of State Water Project dams are conducted on a five-year frequency in accordance with the California Water Code and Title 18, Subpart 12 D of the Code of Federal Regulations. These independent reviews and inspections commonly result in recommendations for updated seismic, hydrology, and stability studies to evaluate a dam’s safety and predicted performance. As the dam safety industry and regulatory requirements have advanced over time, these reviews have become increasingly detailed and led to a greater number of recommended studies. If a study finds that a dam or one of its components requires retrofitting or rehabilitation, the Department incorporates the project into its strategic planning process for future design and construction. For example, following the Oroville Dam spillways emergency, the Department completed spillway inspections and condition assessments at a number of the dams it operates other than the Oroville Dam, the spillways of which were undergoing reconstruction (see “CALIFORNIA STATE WATER PROJECT – Oroville

Dam Spillways Response, Recovery and Restoration Project and Related Claims”). These inspections and assessments identified the need for potentially significant capital outlays over the next ten years.

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 public agencies in legal actions brought by property holders for damages caused by such public agencies’ infrastructure. Thus, if certain facilities of the Department, such as water storage or transportation facilities or its electric distribution and transmission lines, are determined to be the substantial cause of damage to property from flooding, fire or otherwise, and the doctrine of inverse condemnation applies, the Department could be liable for property damage, business interruption, interest, and attorneys’ fees without having been found negligent, which liability, in the aggregate, could be substantial. In addition to such claims for property damage, business interruption, interest, and attorneys’ fees, the Department could be liable for flood or fire suppression costs, evacuation costs, medical expenses, personal injury damages, punitive damages, and other damages under other theories of liability, including if the Department were found to have been negligent, which liability, in the aggregate, could be substantial. (See “CALIFORNIA STATE WATER PROJECT – Aqueduct System; Pumping Facilities” and “POWER OPERATIONS OF THE STATE WATER PROJECT – Power Transmission.”)

### **Oroville Dam Spillways Response, Recovery and Restoration Project and Related Claims**

A steady barrage of storms in early 2017 led to the wettest January and February in 110 years of Feather River hydrologic record. With releases from the Oroville Dam, the main spillway chute experienced damage to a section of the main spillway chute, and when the emergency spillway overtopped erosion occurred downstream of the emergency spillway. California Governor Edmund G. Brown issued four Proclamations of a State of Emergency between January 23, 2017 and March 7, 2017, addressing areas of flooding and potential flooding, throughout the State, including at Oroville Dam.

A concern regarding the potential of failure of the earthen emergency spillway prompted the Butte County Sheriff, on February 12, 2017, to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities. The Department successfully dropped the water level of the lake while crews worked 24 hours a day to repair erosion areas, place large rocks and pour concrete into the eroded gullies, remove eroded debris, construct or improve access roads, and begin the design for reconstruction efforts. The evacuation order was lifted on February 14, 2017.

To ensure public safety, the Department set a goal of November 1, 2017, to reconstruct the main spillway to handle flows of 100,000 cubic feet per second. While the Department met its November 1, 2017 goal, work continued to return the main spillway to full capacity. Due to the magnitude of the project, construction will be done over multiple phases. The Department completed construction of a cut-off wall 750 feet downhill of the emergency spillway in March 2017, which will prevent uphill erosion beyond the wall if the emergency spillway is ever used again. The Department also planned on constructing a buttress and splash pad on the emergency spillway, which will bolster the integrity of the spillway and the hillside downstream. The splash pad was completed in November 2018, and the buttress is scheduled to be completed in spring 2019. In spring of 2018, work on the main spillway ramped back up and was returned to operational status in December 2018, which brought it back to its original design capacity of 270,000 cubic feet per second. The Department continues to work on restoration activities around the spillway structures. Civil construction activities will be completed by the end of 2019 followed by environmental restoration activities in 2020 and 2022.

Members of the U.S. Army Corps of Engineers, Federal Energy Regulatory Commission, the Division of Safety of Dams, as well as dam experts on a board of consultants remain actively engaged with the Department throughout the project.

On April 1, 2017, the President issued a Federal Major Disaster Declaration for areas in California affected by the severe storms and flooding, which will continue to provide for a federal contribution to the costs of the Department's emergency response activities and to the repair and replacement work at Oroville Dam. It was envisioned that costs associated with the recovery and restoration efforts at the Oroville Dam spillways would be approximately \$1.1 billion, with up to 75% expected to be reimbursed by the Federal Government. As of March 2019, the Federal Emergency Management Agency ("FEMA") has authorized approximately \$333 million of reimbursement, with approximately \$56 million pending authorization and \$73 million in federal reimbursement received by the Department. Authorized amounts are based upon preliminary estimates and may be materially revised as work progresses. In March 2019, FEMA informed the Department that it does not consider approximately \$306 million in recovery costs for the upper portion of the main spillway and the recovery of the emergency spillway to be eligible for reimbursement. The Department plans to appeal FEMA's determination and will provide additional information to support the Department's assertion that these costs should be eligible for reimbursement. The remaining costs financed with proceeds of the Notes are expected to be financed long-term with Bonds, such Bonds to be paid by the Contractors under the Water Supply Contracts. Currently a portion of these costs are being financed with Notes. To the extent the Department deems advisable and/or necessary, these costs will also be financed with a portion of the Series 1 Notes and are expected to be financed long-term with Bonds. The Department does not believe the costs arising from this project will materially impact the Department's operations or ability to pay debt service on the Bonds.

A number of lawsuits seeking compensation from the Department for damages claimed to have been caused by the Oroville Dam emergency have now been filed. Two lawsuits have been filed as a class action on behalf of approximately 188,000 potential class members residing in areas along the Feather River, including Oroville, Marysville, and Yuba City. These suits allege, among other things, loss of business due to fears of dam failure and costs incurred in complying with the emergency evacuation order. The City of Oroville and the County of Butte have each filed separate lawsuits seeking damages to reimburse each such public entity for costs and losses they claim they suffered as a result of the response to this emergency, including the evacuation order. Other lawsuits have been filed by agricultural land owners and other land owners whose property adjacent to the Feather River was flooded. These lawsuits allege, among other things, that the Department's operation of the Oroville Dam facilities caused damages to their property and agricultural crops. In addition, Pacific Gas and Electric Company filed a lawsuit seeking reimbursement and damages for costs it incurred to relocate electric facilities and to engineer and construct temporary electric facilities in the vicinity of Oroville Dam during the emergency. The Butte County District Attorney also filed a lawsuit on behalf of the People of the State of California, seeking civil penalties of up to \$51 billion for an alleged violation of the Fish and Game Code arising from the release of sediment into the Feather River during the emergency, which lawsuit will be vigorously contested by the Department. All of the above lawsuits have been coordinated for purposes of pre-trial activities and been transferred to the Sacramento County Superior Court. Discovery and depositions in the coordinated cases have been and are continuing to be conducted. Other pre-trial motions, including the motion to certify the class in the class action lawsuit, will take place in May 2019. The Department believes that these claims and lawsuits will not have a material adverse effect on its ability to continue to operate and maintain the State Water Project or on the security for, or the Department's ability to repay, its Bonds.

### **Power Resources**

State Water Project facilities include a number of power generation and transmission resources. (See "POWER OPERATIONS OF THE STATE WATER PROJECT.")

### **Operational Control**

The Department schedules and controls the operation of the State Water Project from a central operations center. This central operations center uses the communication and Supervisory Control and Data Acquisition ("SCADA") systems to monitor and control the water and power movements in the aqueducts, pipelines and

tunnels of the State Water Project in addition to the 29 pumping and generating plants of the State Water Project. The communications systems upgrade and the SCADA systems upgrade associated with the Centralized Control System Migration (CCSM) Phase 3 – Main Aqueduct and Release Facilities are now complete. Upgrading of additional SCADA assets associated with CCSM Phase 4 – Pumping and Generating Plants (the “Phase 4 Upgrade”) continues and is currently scheduled to be completed in 2023. The Phase 4 Upgrade is the final phase of the current upgrades to the communications systems and the SCADA systems. When the upgrades are complete the central operations center will continue to monitor and remotely control all State Water Project facilities. Effective remote operations include start-up and shut down of pumping and generating units and opening or closing of gates and valves which control the flow of water throughout the State Water Project in a coordinated manner. Under emergency or back-up operation mode, the operations of each field division are handled at the local field division level.

### **Seismic Considerations**

State Water Project facilities were designed to withstand earthquakes without incurring major damage, in accordance with the Division of Safety of Dams criteria in effect at the time of their construction. Dams, for example, were designed to accommodate movement under and within their foundations and to resist earthquake forces on their embankments. Earthquake loads were taken into consideration in the design of project facilities such as pumping plants and power plants. Should further scientific and/or engineering research indicate that as-built seismic loads may be exceeded in future earthquakes, these criteria will need to be re-evaluated, and affected State Water Project facilities may need to be strengthened accordingly.

Major portions of the California Aqueduct are located parallel to and near the San Andreas Fault and other active faults. Faults known to be seismically active are crossed either by canal at ground level or by pipeline at very shallow depths, to ease repair in case of damage from movement along a fault. The location of check structures on the canal allows for hydraulic isolation of any needed fault-crossing repairs.

Since the Loma Prieta earthquake of October 1989, 13 earthquakes of magnitude 6.5 or greater have occurred either in, or within 100 miles of, California. Of those earthquakes, only the January 1994 Northridge earthquake occurred close enough to the State Water Project to cause damage to State Water Project facilities, however, the damage caused was minor. The Napa earthquake of August 2014 had a 6.0 magnitude and did not cause damage to State Water Project facilities. Large earthquakes will continue to occur in and near California for the foreseeable future. Their magnitude, location and time of occurrence cannot currently be predicted. Under the Water Supply Contracts, the Contractors are required to continue making all payments to the Department when due despite any interruption in water supply due to an earthquake.

A major seismic event causing damage to State Water Project facilities could disrupt the operation of the State Water Project or require significant unexpected capital expenditures. Such an event could also have an impact on Central Valley and Delta levees. (See “STATE WATER PROJECT WATER SUPPLY – Central Valley and Delta Levees.”)

### **Self-Insurance; Financing of Emergency Repairs**

The State does not maintain commercial insurance for the State Water Project, nor does it maintain a funded insurance reserve. However, the Department maintains a replacement reserve, currently in the approximate amount of \$38.9 million, as of January 1, 2019, which it uses to replace certain equipment periodically. The Department is authorized to cause the issuance of notes, payable from available revenues or federal reimbursements under the National Disaster Act, for the purpose of providing funds for emergency repairs to power projects or the State Water Project necessitated by natural disasters, provided that certain conditions can be met.



## **Security Efforts; Emergency Preparedness**

Department operations staff and security personnel undertake security efforts to safeguard the infrastructure, key facilities, information technology systems, public, personnel and the water supply of the State Water Project. Security measures include restrictions on public access to recreational and other State Water Project facilities, monitoring of State Water Project facilities, and a State Water Project-wide security plan.

The Department coordinates its emergency management and security efforts with the California Governor's Office of Emergency Services, other State departments, and various local, State and federal law enforcement agencies as a matter of routine security procedure, and coordinates with other water, health, environmental and public safety agencies as needed. In addition, the Department is a participant on various California Emergency Management Agency committees.

Although the Department has undertaken many emergency preparedness and security improvements, a terrorist attack, or other attack on the State Water Project, or significant natural disaster could materially impair system operations and water deliveries.

The Department's cyber security program leverages a defense-in-depth approach to maintain the confidentiality, integrity, and availability of the Department's systems and data. The Department has adopted and maintains an active Cyber Security Program ("CSP") that is based on National Institute of Standards and Technology cybersecurity guidance and employs industry standard Center for Internet Security critical security controls. The CSP policies and controls are reviewed regularly by the internal Information Security Team, and State and independent third-party auditors. The Department has appointed a Chief Information Security Officer who oversees the internal Information Security Team. The Information Security Team is responsible for providing security guidance and reviews on the implementation of new technologies based on the Department's CSP as well as overseeing the monitoring of potential threats and vulnerabilities, utilizing and executing security controls to validate policy enforcement, protecting against cyber-attacks, and investigating any potential unauthorized activity or threats to the Department's information technology environment. The information systems and security controls are continuously tested with internal vulnerability assessments that include daily updates. Department staff are required to participate in the Department's information security education and awareness training.

While the Department's cyber security program is periodically reviewed, no assurances can be given by the Department that such measures will ensure the Department won't be subject to material cybersecurity threats and attacks. Cybersecurity breaches could damage the Department's systems and data and cause material disruption to the Department's operations. The costs of remedying any such damage or protecting against future attacks could be substantial. Further, cybersecurity breaches could expose the Department to material litigation and other legal risks, which could cause the Department to incur material costs related to such legal claims or proceedings. The Department does not purchase liability insurance covering cyber-losses and does not require its vendors to purchase technology errors and omissions insurance coverage.

## **Environmental Considerations**

Projects undertaken by the Department are generally subject to CEQA and certain projects involving the participation of the Bureau or other federal agencies are also subject to the National Environmental Policy Act of 1969, as amended (42 U.S.C. Section 4321) ("NEPA").

Under CEQA, a project that may have a significant effect on the environment and is to be carried out or approved by a public agency must comply with a comprehensive environmental review process, including the preparation of an Environmental Impact Report ("EIR"). The EIR reflects not only an independent technical analysis of the project's potential impacts, but also the comments of other agencies with some form of jurisdiction over the project and the comments of interested members of the public. Contents of the EIR include a detailed

statement of the project’s significant environmental effects; any such effects that cannot be avoided if the project is implemented; mitigation measures proposed to minimize such effects; alternatives to the proposed project; the relationship between local and short-term uses and long-term productivity; any significant irreversible environmental changes that would result from the project; the project’s growth-inducing impacts; and a brief statement setting forth the agency’s reasons for determining that certain effects are not significant and hence do not require discussion in the EIR. Before approving a project the agency must make findings on whether or how it can mitigate the significant environmental effects of the project. If the agency requires mitigation, the agency must adopt a mitigation monitoring plan to determine whether the mitigation is carried out during project implementation. If the agency determines that the project itself will not have a significant effect on the environment, it may adopt a written statement (called a negative declaration) to that effect and need not prepare an EIR. After deciding to approve or carry out a project, either following the EIR process or after adopting a negative declaration, the agency must file notice of such determination. Any action or proceeding challenging the agency’s determination must be brought within 30 days following the filing of such notice. Actions have been, and in the future may be, filed against the Department challenging the Department’s compliance with CEQA, including the adequacy of the EIR or other environmental documents, for a particular project. If the action is successful, the particular project could be delayed, revised, suspended or canceled. CEQA also contains a number of exemptions, which the Department uses for its projects when appropriate.

As part of its regular planning and budgetary process, the Department gives careful attention to environmental considerations. All projects are evaluated under the Department’s environmental impact review procedures, developed in compliance with federal and State laws and regulations.

## **STATE WATER PROJECT WATER SUPPLY**

### **General**

This section describes the historical water supply available for delivery by the State Water Project and certain factors that have had or may in the future have an effect on the availability of such water supply. The Department can give no assurances that future legislation or regulation in any of the areas discussed in this section will not affect State Water Project operations including, but not limited to, reductions in the water supply available to the State Water Project. The respective obligations of the Contractors to make payments in amounts sufficient to pay debt service on the Bonds are not conditioned on the amount of water delivered. (See “SECURITY FOR THE BONDS – Sources of Revenues” and “THE WATER SUPPLY CONTRACTS” and “STATE WATER PROJECT WATER SUPPLY – General.”)

### **Annual Water Deliveries**

The annual water supply available for delivery by the State Water Project will vary from year to year depending on many factors including hydrologic conditions. The Department’s annual determination of the State Water Project’s delivery capability is based on extensive and ongoing analyses of operational capability taking into account (i) storage levels at the beginning of the year, (ii) target storage levels at the end of the year, (iii) the actual amount of snow and rainfall that has occurred to date in the year and a conservative estimate of the amount of snow and rainfall that may occur over the remainder of the year, (iv) the operational capacity of State Water Project facilities, and (v) operational mandates for in-stream water requirements and environmental protection of the Delta as imposed by federal and state regulatory agencies. For each of the last ten years, each Contractor has requested 100 percent of their Annual Table A Amount for that year. (See “THE WATER SUPPLY CONTRACTS – Basic Contract – Annual Table A Amount.”) If delivery capability was less than 100 percent of such requests, using the analysis described above the Department allocated Table A water to the Contractors as a percentage of Contractor requests. The following table provides the percentage of allocated Table A water, the Table A water delivered, and the total water delivered to the Contractors for the last ten years.

**Annual Water Deliveries of the State Water Project  
(Percentage of Contractor Requests)  
(Acre-Feet in Thousands)**

<b>Calendar Year</b>	<b>Allocated Table A Water<sup>(1)</sup></b>	<b>Table A Water Delivered to Contractors in Acre-Feet<sup>(2)</sup></b>	<b>Total Water Delivered to Contractors in Acre-Feet<sup>(3)</sup></b>
2009	40%	1,485	2,222
2010	50	2,011	2,831
2011	80	2,848	3,662
2012	65	2,594	2,886
2013	35	1,620	2,213
2014	5	474	1,239
2015	20	852	1,499
2016	60	2,016	2,351
2017	85	3,401	3,768
2018	35	1,570	2,047

- (1) The allocation of annual Table A water for each calendar year is determined in the Spring of that year and based on hydrological conditions at the time of determination and other factors as described in the preceding paragraph. The Spring determination of annual water for a given calendar year is evaluated throughout the winter and may be revised in response to hydrologic conditions and regulatory mandates.
- (2) Historical deliveries reflect changes resulting from the reclassification of water to or from these water types; flexible withdrawal, Non-State Water Project local water rights, or Non-State Water Project water. Contractors also may choose to receive allocated Table A water in a later year subject to operational constraints (carryover). Water available as determined by the Department, on behalf of the State, not needed for fulfilling contractors' maximum annual Table A deliveries under the applicable Water Supply Contract or for meeting operational needs of the State Water Project, including water storage goals ("Article 21 water") is delivered along with Table A allocations.
- (3) All water delivered to Contractors, including but not limited to, Table A water for that year; Table A water allocated to a previous year (carryover); water surplus to operational needs, water quality, and Delta requirements; Article 21 water, transfer; purchased; and Non-State Water Project water.

The delivery of less than 100 percent of Contractor requests for Table A water in the ten years listed in the preceding table reflects the impact of one or more of the factors listed in the preceding paragraph affecting the Department's annual determination of the State Water Project's delivery capability in each such year.

According to the Technical Addendum to the Final State Water Project Delivery Capability Report 2017, dated March 2018, the Department estimates that if annual precipitation conditions vary in the same manner as they have over the eighty-two year period of analysis (water years 1922-2003, a water year consists of twelve consecutive calendar months beginning with the month of October and is identified by the calendar year in which it ends), the State Water Project would be capable of delivering at least 2,077,000 acre-feet of water in approximately 75 percent of the water years, at least 2,641,000 acre-feet of water in approximately 50 percent of the water years, and at least 3,141,000 acre-feet of water in approximately 25 percent of the water years. Under the Water Supply Contracts presently in effect, the Contractors may request Table A water from the State Water Project in a maximum amount of 4,172,786 acre-feet. The maximum, contracted amount of Table A water each Contractor may request for delivery each year was established when the Water Supply Contracts were executed and delivered, prior to the final determination of the scope of the State Water Project.

## **Drought**

From time to time California will be impacted by drought. California has experienced many droughts, recorded as far back as 1841, with the most recent occurring from late 2011 to early 2017. Subsequently, record high precipitation amounts in many locations across the California have relieved those drought conditions. California has one of the most variable climates of any state in the United States, and often experiences very wet years followed by extremely dry ones. As the most populous state in the U.S. and a major agricultural producer, drought in California can have an economic as well as environmental impact. The annual water supply available for delivery by the State Water Project in any year will vary depending on various factors, including hydrologic conditions and regulatory mandates.

## **State and Federal Regulations Affecting the State Water Project**

The following subsections describe certain state and federal regulations affecting the State Water Project and related litigation that could impact the ability of the Department to deliver water to the Contractors. The respective obligations of the Contractors to make payments in amounts sufficient to pay debt service on the Bonds are not conditioned on the amount of water delivered. (See “SECURITY FOR THE BONDS – Sources of Revenues” and “THE WATER SUPPLY CONTRACTS” and “STATE WATER PROJECT WATER SUPPLY – General.”)

*Bay-Delta Water Rights and Water Quality Regulation.* The State Water Project diverts unregulated flow, and rediverts water it has stored upstream and later released into the Feather River, from the Delta. The Delta is also the source of water for local agricultural, municipal and industrial needs, and, in addition, supports significant resident and anadromous fish and wildlife resources and important recreational uses of water.

The State Water Resources Control Board (the “SWRCB”) is responsible for regulating the State Water Project (along with the federal Central Valley Project operated by the Bureau) under the SWRCB’s water quality and water rights authorities to protect the reasonable needs of all beneficial uses of Delta waters. In this regard, in 1978, the SWRCB adopted a Water Quality Control Plan for the Bay-Delta estuary which has been amended periodically in 1995 and most recently in 2006. The Water Quality Control Plan for the Bay-Delta estuary as amended through 2006 is referred to herein as the “2006 Plan.” In March 2000, the SWRCB implemented the Water Quality Control Plan, as amended through 1995, through a water rights decision known as “D 1641.” D 1641 is still in effect and requires the State Water Project and the federal Central Valley Project to meet the Water Quality Control Plan’s objectives for maintaining water quality. The SWRCB is currently updating the 2006 Plan through two separate plan amendment processes. In 2009, as part of these processes, the SWRCB issued a notice of preparation and began scoping for environmental documentation to evaluate the effects of potential modifications to the southern Delta salinity and San Joaquin River flow objectives and adopted related amendments to these objectives in December 2018. Various stakeholders have since filed suit against the SWRCB challenging these amendments, and these suits are in the pretrial stage. A framework document for the second plan amendment process concerning the Sacramento/Delta Flows and Cold Water, Delta Outflows, and Interior Delta Flows was released in July 2018. In response to potential conflicts with federal law, the Bureau issued a letter indicating that state regulation that fully frustrates the statutory purpose of the Central Valley Project would be preempted by federal law. The Bureau and the Department currently share responsibility for achieving many of the standards in the 2006 Plan. The Department believes that should the SWRCB impose regulations that are preempted by federal law this would likely impact State Water Project yield but would not have a material adverse effect on its ability to continue to operate and maintain the State Water Project or on the security for, or the Department’s ability to repay, the Bonds.

In February 2006, the SWRCB ordered the Department and the Bureau to take corrective actions to address threatened violations of their respective water rights permits implementing the southern Delta summer water quality objective for agricultural uses. Under this action, the Department and the Bureau were to provide a

schedule to the SWRCB of the proposed construction and operation of permanent operable gates in the southern Delta to help improve water quality. Other requirements of the enforcement action addressed the extent of the obligations of the State Water Project and federal Central Valley Project to protect water quality in the southern Delta. In response to a lawsuit filed against the SWRCB by the Bureau, certain Contractors and certain federal water contractors, the SWRCB clarified the enforcement order and the parties to the lawsuit entered into a stipulation for dismissal without prejudice and a tolling agreement, which extends to April 30, 2020. In addition, a June 2009 federal biological opinion for salmon, steelhead trout and green sturgeon states that the Department shall not implement the permanent operable gates because that project would adversely modify critical habitat. As a result, in January, 2010, the SWRCB issued an order that modified its February 2006 enforcement order by, among other things, allowing the Department and the Bureau to defer the construction of the permanent operable gates and requiring the Department and the Bureau to develop a plan (“South Delta Salinity Management Plan”) for studies and other measures to address water quality in the southern Delta until the SWRCB issues a new water quality control plan and related water rights decision for the Delta. The Department submitted an updated South Delta Salinity Management Plan to the SWRCB in June 2017.

In December 2007, the SWRCB adopted a resolution setting out a process for the review of beneficial uses in the Delta in response to scientific studies showing a decline in native species and in support of the current efforts of the Bay Delta Conservation Plan Steering Committee and Delta Vision Task Force to develop plans to improve the Delta ecosystem. (See “STATE WATER PROJECT WATER SUPPLY – Long Term Planning Efforts for the Delta,” “– *The Delta Vision*” and “–*Bay Delta Conservation Plan/California WaterFix*.”) In accordance with the resolution, in July 2008 the SWRCB adopted the Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the “Strategic Workplan”) that describes a number of activities the SWRCB and Regional Water Quality Control Boards intend to pursue to address the water supply and environmental situation in the Bay-Delta. The Strategic Workplan activities are responsive to priorities identified by the Delta Vision Task Force, build on existing processes, such as the Bay Delta Conservation Plan, and identify a wide range of flow-related and water quality actions to better protect the Bay-Delta. The Strategic Workplan includes plans to review and update the 2006 Plan and to review the Bay Delta Conservation Plan, water rights, and other requirements to protect fish and wildlife beneficial uses.

In June 2015, four environmental organizations filed a lawsuit in federal court against the Bureau claiming its operations in the Delta violate, among other things, D 1641 and the federal Clean Water Act. The SWRCB and the Department were named in this lawsuit as real parties in interest. This case has been dismissed. In July 2015, one of the four environmental organizations filed an administrative complaint with the SWRCB against the Department and the Bureau alleging violations of, among other things, D 1641 and water quality control plan standards, and requesting the SWRCB to take action to address the alleged violations. In addition, in August 2015 three of the same four environmental groups filed a petition for writ of mandate in State court seeking to have the SWRCB’s April 6, 2015, order relaxing salinity and other Delta water quality standards set aside on grounds that it violated, among other laws, the Clean Water Act, the Public Trust Doctrine and both the State and federal Endangered Species Acts. The Department and the Bureau are named as real parties in interest in the suit. Cross-motions for summary judgment and an appeal were heard and denied. Trial is currently scheduled for November 12, 2019. In June 2015, a different environmental organization filed a complaint challenging the SWRCB’s issuance of the orders under similar theories to the lawsuit described above. The State defendants were dismissed from the case. And, in April 2016, three environmental groups filed a lawsuit against the U.S. Environmental Protection Agency in federal court alleging that the EPA failed to comply with its duty under the federal Clean Water Act to review and take appropriate action regarding the SWRCB’s revisions to the Water Quality Control Plan. The complaint alleges that the exceptions to the Water Quality Control Plan made during the drought are injurious to fish. A motion for summary judgment in this matter was granted on November 30, 2017.

In August 2017, the City of Antioch (“Antioch”) filed a complaint against the Department seeking substantial damages and injunctive relief. In its first amended complaint, Antioch claims the Department breached a 1968 agreement relating to water quality available to Antioch in the Delta. Contra Costa Water District

(“CCWD”) was named as real party in interest in the case because Antioch’s claim that the Department breached the 1968 agreement relates to an agreement that the Department and CCWD entered into in 2016. This case has been set for trial in October 2019. The Department believes that even if Antioch is successful in its claims, the outcome would not have a material adverse effect on its ability to continue to operate and maintain the State Water Project or on the security for, or the Department’s ability to repay, the Bonds.

*Federal Endangered Species Act: General.* The Department joins the Bureau in consultations with the U.S. Fish and Wildlife Service (“USFWS”) and the National Oceanic and Atmospheric Administration-Fisheries (“NOAAF”) regarding the impacts to endangered fish species from the operations of the State Water Project and federal Central Valley Project. This process results in the issuance of biological opinions pursuant to the Endangered Species Act (“ESA”). These biological opinions update, extend, and consolidate prior opinions and authorize the incidental taking of the listed species of fish by the two projects. Biological opinions are generally valid until changed conditions or new listings of species would require re-initiation of consultation.

*Federal Endangered Species Act: Delta Smelt.* In December 2008, the USFWS issued a biological opinion for Delta smelt and related water projects operations (“2008 Biological Opinion”), which superseded a previously issued Delta smelt biological opinion. The issuance of the 2008 Biological Opinion is now the operation-criteria for the State Water Project and federal Central Valley Project. The 2008 Biological Opinion requires operational measures to protect Delta smelt and, in addition, includes a measure specifying outflow requirements in the Delta during the fall season in wet years. This fall measure requires the two water projects to control salinity incursion in the Delta through increased water releases from water storage and fewer water diversions during wet years. In August 2016, the Department and the Bureau requested reinitiation of ESA Section 7 consultation with the USFWS because of the continued decline of Delta smelt, impacts from recent droughts and evolution of science in the area. The consultation is underway and anticipated to be completed in the summer of 2019 with the issuance of a new biological opinion.

*Federal Endangered Species Act: Salmon, Steelhead Trout and Green Sturgeon.* In June 2009, following consultation with the Department and the Bureau, NOAAF issued a new salmon, steelhead trout, green sturgeon and killer whale biological opinion (“2009 Biological Opinion”), which superseded a previously issued biological opinion for these fish species. The 2009 Biological Opinion imposes restrictions on the Department’s pumping and operational activities in the Delta based upon the level of flows from the San Joaquin River and the presence of salmon and steelhead trout in the vicinity of the Delta pumping plant. In August 2016, the Department and the Bureau requested reinitiation of ESA Section 7 consultation with the NOAAF because of the continued decline of salmon, steelhead trout and green sturgeon, impacts from recent droughts and evolution of science in the area. The consultation is underway and anticipated to be completed in the summer of 2019 with the issuance of a new biological opinion.

*Federal Endangered Species Act: Longfin Smelt.* In April 2012, the USFWS found that the longfin smelt warrants consideration for protection under the ESA, but that it is currently precluded from listing the species because of the need to address other higher priority species. As a result, the USFWS has added the longfin smelt to the list of candidates for ESA protection, where the status will be reviewed annually. In the meantime, there will be no specific restrictions regarding the longfin smelt imposed under the ESA. The longfin smelt is listed as threatened under the California Endangered Species Act (“CESA”) and the Department is already taking actions to protect the longfin smelt consistent with the take permit the Department received from the California Department of Fish and Wildlife (the “DFW”). The Department’s CESA take permit will expire on December 31, 2019, and the Department is currently pursuing CESA coverage beyond 2019. (See “STATE WATER PROJECT WATER SUPPLY – State and Federal Regulations Affecting the State Water Project – State Endangered Species Act.”)

*State Endangered Species Act.* To obtain the authority under the CESA to “take” Delta smelt and salmon, the Department requested a “consistency determination” from DFW for the 2008 Biological Opinion and for the 2009 Biological Opinion. In July 2009, DFW issued its determination that the 2008 Biological Opinion was consistent with CESA and in September 2009, that the 2009 Biological Opinion was consistent with CESA. (See “STATE WATER PROJECT WATER SUPPLY – State and Federal Regulations Affecting the State Water Project – *Federal Endangered Species Act: Delta Smelt*” and “– *Federal Endangered Species Act: Salmon, Steelhead Trout and Green Sturgeon.*”)

The Department’s incidental “take” permit for longfin smelt under CESA incorporates the 2008 Biological Opinion for Delta smelt as an element of the take permit for longfin smelt. As a result, under most conditions, when certain flow restrictions for the protection of Delta smelt are being implemented, the permit imposes no additional requirements for the protection of adult longfin smelt. However, under the permit, the presence of adult or larval longfin smelt at certain locations during certain times of the year could cause a reduction in water deliveries.

Both the consistency determinations for Delta smelt and salmon and the incidental take permit for longfin smelt incorporate conditions from the federal Biological Opinions for Delta smelt and salmon. The Department is currently working with DFW to ensure continued CESA coverage for the “take” of Delta smelt and salmon following the issuance of new biological opinions, which are anticipated during the summer of 2019, as well as for the “take” of longfin smelt following the expiration of the current permit on December 31, 2019. (See “STATE WATER PROJECT WATER SUPPLY – State and Federal Regulations Affecting the State Water Project – *Federal Endangered Species Act: Delta Smelt*” and “– *Federal Endangered Species Act: Salmon, Steelhead Trout and Green Sturgeon.*”)

### **Long-Term Planning Efforts for the Delta**

The activities and programs described in this section “Long-Term Planning Efforts for the Delta” build on prior activities and programs, including the CALFED Bay-Delta Program begun in 1995 with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Delta.

*The Delta Vision.* In 2006 Governor Arnold Schwarzenegger established a task force to develop a long-term sustainable vision for the Delta. The task force issued a Delta Vision strategic plan in November 2008 and an implementation report for the strategic plan in January 2009, which included specific recommendations to the Governor. Fundamental actions in the plan include developing a new system of dual water conveyance through and around the Delta, additional water storage projects, an emergency preparedness strategy and water conservation goals, restoring the ecosystem and establishing a Delta governance structure. The task force also created a non-profit organization, the Delta Vision Foundation, following the conclusion of their recommendations to the Governor. The new organization provides updates to the public on its view of the progress of the Delta Vision’s implementation.

*Delta Stewardship Council and Related Legislation.* The Delta Stewardship Council was created pursuant to the Delta Reform Act, part of a legislative package enacted in November 2009. The legislative package addressed California’s statewide water situation, with particular emphasis on the Delta. The package included an \$11.1 billion general obligation bond measure, which measure was subsequently amended, including a reduction in the amount of bonds authorized to \$7.1 billion. This \$7.1 billion bond measure was approved by the voters in November 2014. (See “STATE WATER PROJECT WATER SUPPLY – Statewide Water Considerations – Sources of Funding for Water Related Improvements” below.) The Delta Stewardship Council is charged with developing and implementing a Delta Plan. The Delta Protection Commission, which is a State commission with certain land use responsibilities in the Delta, was directed in the same legislation to prepare an economic

sustainability plan for the Delta and to provide information and recommendations to the Delta Stewardship Council. In 2012, the Delta Protection Commission completed the economic sustainability plan and provided its recommendations to the Delta Stewardship Council. The Delta Stewardship Council adopted the Delta Plan, along with regulations to implement the policies of the plan, in May 2013. The Delta Stewardship Council also certified the final program EIR for the Delta Plan on that date. Starting in May 2013, a number of legal actions were filed by certain federal water contractors, Contractors, local water agencies and environmental groups challenging the Delta Plan, associated regulations and the program EIR. The cases were coordinated in a single proceeding in Sacramento Superior Court. The Department has filed an amicus curiae brief in support of the Delta Stewardship Council in the litigation. In June 2016, the trial court ruled that the Delta Plan was invalid, until such time as the Delta Stewardship Council is able to remedy three specifically identified Delta Plan deficiencies. The Delta Stewardship Council and all, but one, of the other parties have filed appeals with the Court of Appeal challenging the judgements in their respective cases. Briefing has been completed, and oral argument has not yet been scheduled.

In March 2017, the Delta Stewardship Council proposed Delta Plan amendments and in November 2017, it issued the draft program EIR for public review and comment. The Delta Stewardship Council then approved the Delta Plan amendments. In May 2018, several groups filed four lawsuits against the Delta Stewardship Council in State court, seeking a writ of mandate and relief directing the Delta Stewardship Council to vacate its approval of the Delta Plan amendments. Hearings on this matter have not yet been scheduled.

*Bay Delta Conservation Plan/California WaterFix.* In 2006, the Department, the Bureau, DFW, federal and state fish and wildlife agencies and the agencies that purchase water from the Department and the Bureau began a planning process to promote and improve the overall ecological health of the Delta and the species that inhabit the Delta. This resulted in the proposed Bay Delta Conservation Plan (“BDCP”). The BDCP eventually transitioned to the California WaterFix, as described below. Considerations for the BDCP and the California WaterFix included an analysis of water conveyance options, including conveyance through Delta channels and alternative conveyance, such as a canal or tunnel.

In April 2015, based in part on comments received through this comment period, the Department and State and federal agencies decided to consider additional alternatives to the BDCP and announced a change in the proposed project to accomplish the dual goals of improving the ecological health of the Delta and securing reliable water supplies. Under the new proposed project, referred to as California WaterFix, implementation of new water conveyance facilities would be authorized under the different provisions of the ESA and CESA, and not as part of a Habitat Conservation Plan or Natural Community Conservation Plan under federal and State law, and that large scale environmental restoration in the Delta would be implemented through a separate program designated as California EcoRestore (discussed below). California WaterFix consists of an underground conveyance facility, three northern Delta intakes, and mitigation measures and environmental commitments to meet the requirements of CEQA, NEPA, Section 7 of ESA, and Section 2081 of CESA and other environmental requirements. This modified alternative does not carry forward the habitat restoration measures of the BDCP, except to the extent it mitigates potential impacts of the water conveyance facilities for the California WaterFix.

Following completion of the public review and comment period, the Department and the Bureau issued a final EIR and Environmental Impact Statement, respectively, in December 2016. On July 21, 2017, the Department certified the final EIR, adopted findings and a statement of overriding considerations, adopted the Mitigation, Monitoring and Reporting Program for the Bay Delta Conservation Plan/California WaterFix, and approved the California WaterFix. The Notice of Determination (“NOD”) was filed with the Office of Planning and Research on July 21, 2017, as well. Timing of the Bureau’s issuance of the Record of Decision under NEPA will depend upon several factors and has yet to be determined. The Department continues to work with the Bureau and the Contractors and federal water contractors to address these factors for the California WaterFix.



Eighteen separate lawsuits were filed challenging the Department's decision under CEQA. Several of these lawsuits included causes of action against DFW regarding issuance of an incidental take permit to the Department under CESA. The Department has conducted settlement meetings with these plaintiffs, with one lawsuit being settled, and is now working with the parties to finalize the administrative record for the CEQA litigation. On the same day as the filing of the NOD, the Department filed a validation action in Sacramento County Superior Court to confirm the validity of a proposed financing approach for the California WaterFix, which may involve the Department issuing bonds that are not issued under the Resolution or secured by Revenues but instead are issued under a separate authorizing resolution and are secured by a separate payment stream paid by the Contractors. Numerous entities and organizations supporting and opposing the California WaterFix have filed answers to this action. The validation action has been coordinated with the previously described CEQA and CESA lawsuits in Sacramento County Superior Court. On March 15, 2019, following Governor Gavin Newsom's state of the State address, as described below, the Sacramento County Superior Court ordered a temporary stay of all proceedings in the coordinated cases pending a hearing scheduled for May 2, 2019.

In August 2015, the Department and the Bureau filed a joint petition with the SWRCB to add three new points of diversion and rediversion under existing water right permits. Changes to the Department's water rights are required for the construction of new intakes for the proposed California WaterFix. The hearing is being conducted in two parts, the first addressing potential effects of the change on agricultural, municipal and industrial uses of water and the second focusing on fish and wildlife, recreational uses and the consideration of appropriate Delta flow criteria. The hearing on part one began in July 2016. Numerous entities/parties opposing the proposed project filed protests with the SWRCB and are participating in the hearing. The Department and the Bureau are discussing settlements with some of the entities/parties, which will reduce the number of issues in, and time expected for, the hearing. Part one was completed in July 2017, while part two of the hearing began in February 2018 and concluded in August 2018. Additional hearing days may occur to address recent agreements with the Bureau regarding State Water Project/Central Valley Project joint operations and the California WaterFix as well as the potential change in scope of the California WaterFix, as described in the Governor Newsom's state of the State address described below. On March 5, 2019, following the Governor's state of the State address, the SWRCB granted the Department's and the Bureau's joint request for a 60-day stay of proceedings. Closing briefs are expected after any additional hearing days, with a draft order on the petition for change in point of diversion from the SWRCB issued thereafter.

In June 2017, federal agencies responsible for the protection of species listed under the ESA provided biological opinions on the proposed construction and operation of California WaterFix. The USFWS prepared a biological opinion evaluating the effects of California WaterFix on Delta smelt and other listed species, and the NOAAF prepared its biological opinion evaluating the effects on listed salmon, green sturgeon, steelhead, and killer whale. Both biological opinions found the construction and operations of California WaterFix as proposed would not jeopardize the continued existence of the subject species or destroy or adversely modify critical habitat for those species, in the action area. The biological opinions include an adaptive management component that outlines a collaborative process for assessing and adapting to effects to listed species stemming from the ongoing operation of the Central Valley Project and State Water Project, including the operation of the proposed California WaterFix. In late June 2017, several environmental organizations filed two separate lawsuits in federal court against USFWS and NOAAF challenging the issuance of these biological opinions. The Department was granted intervenor status in these lawsuits in October 2017. Briefing on issues related to the administrative record for the USFWS litigation occurred during fall 2018, and court determination of those issues is pending. Briefing on the issues in the NOAAF litigation concluded in early 2019, and court determination is expected later in the year. On March 1, 2019, in the USFWS and NOAAF litigation, the Department filed motions requesting a 90-day stay of the proceedings. In the NOAAF litigation, the Department's motion requesting a stay was unopposed; the court has not issued an order on the unopposed motion. In the USFWS litigation, the Department subsequently withdrew its motion requesting a stay and presently is proceeding with briefing on the merits of the case.

As part of the information gathering process for the BDCP, the Department sought permission to access Delta properties for the purposes of environmental surveys and geotechnical exploration. Beginning in 2008, the Department filed petitions in court to gain access to the property of owners who had not granted permission. In early 2011, the trial court allowed access for Department environmental surveys, but denied access for the geotechnical exploration, which includes drilling activities. The property owners appealed the order allowing environmental surveys on their property and the Department appealed the order denying access for geological exploration. In March 2014, the Court of Appeal affirmed the trial court's order denying the Department entry to conduct the geological activities and reversed the order granting the Department entry to conduct the environmental surveys. The California Supreme Court accepted the Department's petition for review of the Court of Appeal decision, and in July 2016 issued its decision reversing the Court of Appeal in all respects. The California Supreme Court held that the trial court may issue right of entry permits to the Department to conduct environmental surveys and geotechnical exploration and that such permits, with appropriate conditions to protect the interests of the property owners, comply with the State's eminent domain laws and the California Constitution. After the case was remanded to the trial court, the trial court reissued orders permitting entry for environmental surveys and issued new orders permitting entry and investigation for geotechnical and drilling purposes. The Department dismissed those parcels subject to the litigation which were no longer relevant to the current conveyance plans. Environmental surveys under the order were completed in 2018. On August 9, 2018 the Court granted an extension to complete the geotechnical and drilling activities on the remaining parcels to July 31, 2019.

In his first State of the State Address, delivered on February 12, 2019, Governor Gavin Newsom laid out a new direction for Delta conveyance and expressed his support for a revised project consisting of a single tunnel. The Department is assessing the nature and extent of any new permit and planning work that may be necessary as a result of the potential change in scope of the California WaterFix described in the Governor's address, including the impact, if any, on CEQA approval. The lawsuits, administrative proceedings and other matters disclosed in regard to the California WaterFix may be delayed or impacted in other ways as a result of the potential change in scope of the California WaterFix, as described in the Governor's address, and the specific effect of any such change in scope on any particular matter is unknown at this time.

The costs of any conveyance system, if ultimately approved and constructed through the impending legal and regulatory processes, could be substantial. Capital costs to construct a conveyance system as envisioned by California WaterFix, including design and mitigation, are estimated to be \$16.73 billion (in undiscounted 2017 dollars). This includes an estimated \$400 million required for mitigation and environmental commitments and all such costs would be paid by the Contractors and the federal water contractors benefiting from the project. Information about the BDCP, California WaterFix and EcoRestore (described below) can be found on the website of the California Natural Resources Agency. The information contained on such website is not part of this Official Statement and is not incorporated herein.

Whether and/or the extent to which the California WaterFix will be implemented, the final form of any implementation, the process and cost of any implementation, the scope and specifics of any conveyance system, the specific allocation of costs and the method of any financing are all still under discussion with relevant stakeholders.

In October 2010, the Department entered into a Fish Restoration Program Agreement with DFW to coordinate efforts regarding the Department's expenditure of funds for fish benefits. To date the Department has spent approximately \$126 million and over the first 8 years of the agreement expects to spend in total approximately \$280 million for certain habitat restoration activities. These activities are intended to be credited towards CESA and ESA habitat restoration requirements.

Separate from the California WaterFix and BDCP, the State intends to pursue more than 30,000 acres of Delta habitat restoration. This new approach to improving the ecological health of the Delta, independent from California WaterFix, has been designated California EcoRestore. Among other things, EcoRestore will implement

restoration projects required by the 2008 and 2009 Biological Opinions. EcoRestore is estimated to cost \$300 million in the first four years, and includes amounts to be paid by the Contractors for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions.

### **Central Valley and Delta Levees**

Water delivered to Southern California through the State Water Project must traverse the Delta through channels protected by levees that are susceptible to major failures due to decay, inadequate maintenance, flooding, overtopping and seismic events. If a major levee failure were to occur in the Delta or on the Sacramento River flood control system, it could adversely affect the ability of the Department to deliver water through the Delta. In the event of such a failure, the quality of the Delta's water could be compromised from an increase in salinity and other adverse water quality conditions caused by an influx of water from the San Francisco Bay and could result in curtailing pumping of water from the Delta southward to the Central Valley and Southern California.

After Governor Arnold Schwarzenegger declared an emergency in 2006 for California's Central Valley levee system, including the Delta and Sacramento River flood control systems, and subsequent to the passage of Proposition 1E (the Disaster Preparedness and Flood Prevention Bond Act of 2006) and Proposition 84 (the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006), the Department, the United States Army Corps of Engineers and local flood control agencies have been working together to fund, design and construct levee improvements and repairs. The Department, through its Delta Levees Program, has funded significant repairs and improvements to the Delta levee system. In 2012, the Department, as required by statute with regard to its flood management responsibilities, completed, and the Central Valley Flood Protection Board adopted, a Central Valley Flood Protection Plan that analyzes flood risks and potential measures to address those risks in the Delta and in certain other areas of the California Central Valley. The Department prepared an update to that plan and the Central Valley Flood Protection Board adopted the updated plan in August 2017.

### **Statewide Water Considerations**

*Climate Change.* Climate change caused by human activities is having, and is likely to continue to have, an effect on California water resources, as evidenced by a reduction in mountain snowpack, a rise in sea level, and a change in the amount and seasonal timing of river flows. In the foreseeable future, more of the precipitation in California is likely to fall as rain instead of snow. This potential change in weather patterns will exacerbate flood risks and add additional challenges for water supply reliability.

Currently, the Sierra snowpack provides as much as a third of California's water supply by accumulating snow during winter and releasing it slowly during spring and summer. Warming temperatures will cause the snowpack to melt faster and earlier, making it more difficult to store and use water released by the melting snowpack. Climate change is also expected to result in more variable weather patterns throughout California. More variability can lead to longer and more severe droughts. In addition, the sea level is expected to continue to rise, potentially threatening the existing channels within the Delta, which could impact the ability of the Department to deliver water through the Delta.

The Department considers the potential effects of climate change in both its project-level and long-term planning. The Department's Climate Action Plan ("CAP") covers both mitigation and adaptation planning and is available on its website. Phase I: Greenhouse Gas Emissions Reduction Plan, originally released in 2012, is being updated in 2019. In September 2018, the Department released Phase II: Climate Change Analysis, which provides guidance for the Department's decision making and assists Department managers in incorporating climate change analysis into their planning for Department activities. Phase III: Climate Change Vulnerability Assessment will be released in May 2019, with the Adaptation Plan to be ready in 2020. Although it is clear that climate change has affected and will continue to affect the State Water Project, the Department's ability to recover costs necessary

to support debt service has not been impacted by the effects of climate change, and it is not expected to impact cost recovery.

*Sources of Funding for Water Related Improvements.* In 1992, Congress enacted the Central Valley Project Improvement Act (the “CVPIA”), which required, among other things, many environmental restoration studies and projects, the cost of which is to be shared by the federal government and the State. In 1994, the Department entered into a cost sharing agreement with DFW, the Bureau and the USFWS (the “Cost Sharing Agreement”) for those projects. The State’s cost share is approximately \$175 million and is funded by general fund appropriations, general obligation bond financing and other sources. The Department does not expect State Water Project funds to be used for such purpose.

In addition to the CVPIA, California voter-approved measures such as Proposition 13 (the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act, approved in 2000), Proposition 50 (the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002), Proposition 84 (the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006) and Proposition 1E (the Disaster Preparedness and Flood Prevention Bond Act of 2006) have or will require the State to undertake a variety of projects for environmental restoration, water use efficiency and conservation, water supply enhancement and reliability, ecosystem restoration, watershed protection, water conveyance, delta levee restoration and water storage planning and studies. These measures authorize the issuance of State general obligation bonds to fund such projects. More recently, in November 2014, the voters approved Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014, which authorizes \$7.1 billion in general obligation bonds to fund various water projects and programs. These include projects and programs designed to address water quality, safety and reliability, ecosystem and watershed protection and restoration, respond to climate change, water security and drought preparedness, water recycling, groundwater sustainability, flood management and statewide water system operational improvements. Funds provided by this measure are not to be expended to pay the costs of the design, construction, operation, mitigation, or maintenance of Delta conveyance facilities. In June 2018, voters approved Proposition 68 (the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018). Proposition 68 allocated approximately \$870 million to the Department for multi-benefit projects that achieve public safety improvements and fish and wildlife enhancement, the Salton Sea, urban streams, groundwater support, groundwater grants, the Delta, and floodplain management.

*Programmatic Considerations.* To achieve additional capability of supplying water to the Contractors on a dependable basis at levels of acceptable water quality, the Department is considering additional water facilities and additional programs for reservoir, groundwater storage, and conservation. Alternatives under consideration include (1) new reservoir storage north and south of the Sacramento-San Joaquin Delta, (2) Delta conveyance (i.e. the California WaterFix), (3) conjunctive use of surface water with groundwater in State Water Project service areas, (4) purchase of water from federal or local sources, and (5) construction of local water supply developments within State Water Project service areas. (See “STATE WATER PROJECT WATER SUPPLY – Long-Term Planning Efforts for the Delta – Bay Delta Conservation Plan/California WaterFix.”)

*Future Mandates Relating to the Delta.* Water rights issues and environmental regulation with respect to the Delta have been an active area in recent decades. (See “STATE WATER PROJECT WATER SUPPLY – State and Federal Regulations Affecting the State Water Project” and “– Long Term Planning Efforts for the Delta.”)

*Invasive Species.* Zebra and quagga mussels are established in many regions of the United States. In 2007, quagga mussels were discovered in the lower Colorado River and rapidly spread through the Colorado River Aqueduct into water distribution systems and reservoirs in Southern California. In 2016, quagga mussels were discovered in the West Branch of the State Water Project (Pyramid Lake and Angeles Tunnel). An isolated population of zebra mussels is established in San Justo Reservoir in Central California. The mussels can clog

water intakes, trash racks and other protective screens. Once established, the mussels cannot be easily eradicated using current technologies. Mussel management will result in a significant increase in the cost of operation and maintenance of water delivery systems. In addition, there can also be adverse ecological impacts. To prevent the spread of the mussels into the State Water Project, the Delta and other bodies of water and water systems, the Department has joined with DFW, as the lead agency, and other state and federal agencies on a number of activities. These include boat inspections, monitoring of water bodies and water systems and education of the public, especially boat owners and operators. In addition, the Department has developed a Rapid Response Plan, Vector Management Plan, and Long-term Mussel Management and Control Plan, as mandated by the California Fish and Game Code. In 2016, the Department implemented containment measures in the West Branch of the State Water Project in an effort to prevent spread to uninfested waterbodies.

In March 2017, nutria were discovered in California. By March 2019, over 400 individual nutria had been captured in California, 64 of which were captured in the southern Sacramento-San Joaquin Delta. Nutria are large semi-aquatic rodents native to South America. Nutria create burrows in river banks and feed on wetland vegetation, activities that have the potential to damage levees, create risks to the water supply and compromise flood control measures. The Department is part of a multi-agency nutria eradication project being led by DFW. As part of its effort to assess and manage risk, the Department has prepared an infrastructure protection plan to identify and protect potentially at-risk infrastructure that could be affected by nutria.

*Land Subsidence.* The loss of surface elevation due to removal of subsurface support can occur across California. Subsidence is one of the most diverse forms of ground failure, ranging from small or local collapses to broad regional loss of surface elevation. The causes of subsidence are mostly due to human activities. According to the U.S. Geological Survey, the compaction of susceptible aquifer systems caused by excessive groundwater pumping is the single largest cause of subsidence in California. Land subsidence caused by groundwater pumping or other causes can have negative effects on the infrastructure of the State Water Project or otherwise impact water supply. Any land subsidence that significantly impacts the State Water Project could require currently unidentified material capital expenditures to address.

## **POWER OPERATIONS OF THE STATE WATER PROJECT**

The State Water Project is one of the largest consumers and suppliers of electric power in the western United States. This section describes the State Water Project's power-related activities. Revenues from the State Water Project's power related activities are not pledged to the payment of the Bonds.

### **Historic Involvement of State Water Project in Power Markets**

Since the commencement of the major facilities of the State Water Project in the 1960's, the Department has been an active participant in the power markets of California and the western United States. The Department currently owns and operates seven power facilities with a total generating capacity of approximately 1,600 megawatts ("MW") and with total annual energy generation in recent years ranging between approximately 3,000 and 6,000 gigawatt-hours ("GWh"). (See "POWER OPERATIONS OF THE STATE WATER PROJECT – Power Generation.") The Department also owns and operates 20 pumping plants and three pumping-generating plants with a total load, if all were operational simultaneously, of approximately 2,000 MW and total annual energy consumption in recent years ranging between 3,000 and 10,000 GWh. By way of comparison, the total 2017 consumption for all electricity users in California was approximately 288,600 GWh, according to the California Energy Commission.

The pumping plants, which are the State Water Project's major power-consuming components, can be operated principally during the time of day when electricity prices are lowest due to their large pumping capacity. Similarly, the designed capacity of most of the Department's hydroelectric generation facilities permits those facilities to be operated principally during the time of day when electricity prices are highest. This flexibility in the scheduling of the Department's generation and load enables the Department to sell energy from its generation at a higher price than the price of energy the Department must purchase for its pump load.

In addition to the seven power facilities it owns, the Department also has long-term contracts for the purchase of power from Pine Flat Powerplant, which is owned and operated by Kings River Conservation District, Lodi Energy Center, which is owned and operated by the Northern California Power Agency, five small hydroelectric power plants, which are owned and operated by Metropolitan, the 45 MW Camelot solar facility, which is owned and operated by Dominion Solar Holdings, Inc., the 9.5 MW Pearblossom Solar facility, which is owned and operated by Solar Star California XLIV, LLC, the 85 MW Solverde 1 Solar facility, which is owned and operated by S-Power (Sustainable Power Group), and a 3 MW share of the Boulder Canyon Project, owned and operated by the Bureau and marketed through the U.S. Western Area Power Administration.

### Power Generation

The Department has provided for the financing, construction and operation of a variety of power projects including hydroelectric, geothermal and coal-fired electric generating facilities and facilities to transmit electric energy. The table below summarizes current, megawatt hour (“MWh”) generation, construction costs and completion date for the Department’s power projects.

	<b>Capacity (MW)</b>	<b>Expected Annual Generation (MWh)</b>	<b>Construction Cost in Millions</b>	<b>Completion Date</b>
Alamo Project Powerplant .....	17	114,000	\$ 49.4	1986
Castaic Powerplant.....	214	719,000 <sup>(a)</sup>	82.0	1978
Devil Canyon Powerplant .....	280	1,770,000	198.4	1993
Mojave Siphon Powerplant .....	29	96,000	65.6	1996
Hyatt-Thermalito Complex (Oroville) .....	762	2,202,000	282.0	1987
William E. Warne Powerplant (Pyramid) .....	74	472,000	80.0	1983
Gianelli (San Luis) Pumping-Generating Plant...	222	188,000 <sup>(a)</sup>	47.2	1967

<sup>(a)</sup> State Water Project share.

See the fold out entitled “State Water Project Facilities” at the end of this Official Statement.

### Power Sales and Purchases

Periodically, the Department enters into long-term and mid-term energy sales agreements and energy exchange agreements with municipal utilities, private utilities, and other entities that buy or sell energy in California and neighboring states. The Department also transacts with the California Independent System Operator (“CAISO”) in its markets for day-ahead and real-time energy purchases and sales. In addition, the Department sells ancillary services from its generating facilities to the CAISO and buys ancillary services from the CAISO to meet the requirements for its State Water Project pumping plants. These agreements and arrangements with utilities, entities that buy or sell energy, and the CAISO allow the State Water Project to manage its power operations. The table below provides the Department’s historical revenues from power sales and costs of power purchases on an annual basis over the past five calendar years.

<b>Year</b>	<b>Costs of Power Purchases (in millions)</b>	<b>Revenues from Power Sales (in millions)</b>
2014	\$171	\$88
2015	197	78
2016	277	67
2017	368	67
2018	257	74

The power costs in 2017 were higher than in previous years primarily because of the significantly higher volume of water delivered than in previous years. (See “STATE WATER PROJECT WATER SUPPLY – Annual Water Deliveries.”)

Because the Department procures significant amounts of electric power for State Water Project operations in the short-term markets for power, it has exposure to volatility in the electric power market. This exposure is mitigated by the fact that the bulk of the State Water Project’s power needs can be met through Department-owned generation, long term and mid-term power purchase contracts and energy exchange arrangements. (See “POWER OPERATIONS OF THE STATE WATER PROJECT – Historical Sources of Power for State Water Project Operations.”) It is further mitigated by the fact that the majority of the State Water Project’s power needs are during periods on the daily energy consumption cycle, when the demand for and the cost of energy is generally lower. (See “POWER OPERATIONS OF THE STATE WATER PROJECT – Historic Involvement of State Water Project in Power Markets.”)

The cost of power for State Water Project operations is paid out of the California Water Resources Development Bond Fund. (See “FINANCIAL OPERATIONS – Allocation of State Water Project Revenues.”) Power costs for State Water Project operations allocable to water supply to the Contractors are passed on to Contractors under the Water Supply Contracts through the variable operation cost component of the Transportation Charge. (See “THE WATER SUPPLY CONTRACTS – Basic Contract – *Water Charges*.”) The Department’s exposure to any volatility in short-term power costs is aggravated by the fact that the variable operation cost component of the Transportation Charge is paid on an estimated basis subject to “true up” approximately two years later. If the Department underestimates power costs in assessing the variable operation cost component, it will typically not recover the difference between actual and estimated costs for approximately two years. (See “THE WATER SUPPLY CONTRACTS – Basic Contract – *Payment of Water Charges*.”) Under the Water Supply Contracts, however, the Department has the option under certain circumstances to revise bills sent to Contractors, and it has exercised that option in the past.

The Department regularly solicits energy purchase, sale and exchange proposals from electric utilities and energy supply companies to address the need for a reliable supply of its Water System Project energy requirements. In addition, the Department has entered into a Power Sales Agreement with Northern California Power Agency and other project participants, reflecting the Department’s participation in the Lodi Energy Center to assist it in meeting its power needs. The Department completed an integrated resource plan in 2009 that identified additional strategies to meet its future power needs. (See “POWER OPERATIONS OF THE STATE WATER PROJECT – Lodi Energy Center.”)

On balance, the Department does not expect the cost of power to have a material adverse effect on its ability to continue to operate and maintain the State Water Project or on the security for, or the Department’s ability to repay, the Bonds. However, no assurance can be given that the Department will not experience disruptions in State Water Project operations due to future deterioration or unpredictability in the California energy markets.

## Historical Sources of Power for State Water Project Operations

The historical sources of power for operating the State Water Project on a calendar year basis for the calendar years 2014 through 2018 are set forth in the table below. The Department has satisfied its power load through its own resources, long-term purchase and exchange contracts and short-term and spot market purchases, as needed.

	<b>Electrical Energy</b> (millions of kilowatt hours)				
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
State Water Project Hydroelectric Plants					
Gianelli (San Luis) .....	49	158	87	170	124
Castaic .....	293	424	460	494	382
Devil Canyon .....	216	267	874	1,494	787
William E. Warne (Pyramid).....	175	264	283	294	230
Hyatt-Thermalito Complex (Oroville)	644	569	1,691	2,362	1,315
Alamo .....	19	24	66	103	52
Thermalito Diversion Dam.....	19	20	20	11	16
Mojave Siphon .....	10	15	53	98	43
Subtotal SWP Sources .....	<u>1,426</u>	<u>1,742</u>	<u>3,535</u>	<u>5,026</u>	<u>2,950</u>
Power Purchases .....	1,842	2,589	2,359	2,783	2,116
Energy via Exchanges .....	0	0	0	0	0
Total Sources.....	<u>3,268</u>	<u>4,331</u>	<u>5,894</u>	<u>7,809</u>	<u>5,066</u>
Less Power Sales (Excess Sources)	473	567	705	1,883	1,771
Plus Net Transactions through CAISO	-11	-281	-1,407	-3,729	-2,436
SWP Load .....	<u>2,784</u>	<u>3,483</u>	<u>6,597</u>	<u>9,655</u>	<u>5,731</u>

## Power Transmission

State Water Project power transmission needs are presently served through transmission service contracts and transmission ownership.

*Transmission Service Contracts.* The Department obtains 100 percent of the High Voltage transmission service used by the State Water Project from the CAISO under a Scheduling Coordinator Agreement with the CAISO. Included in this transmission service is access to CAISO trading hubs. The Department also has several transmission agreements with Southern California Edison and Pacific Gas and Electric Company (“PG&E”) that provide for the connection of State Water Project facilities in each company’s service area to the transmission grid.

*Transmission Ownership.* The Department also either solely or partially owns several transmission lines that interconnect State Water Project facilities with PG&E’s transmission system. The following is a summary of the transmission lines owned by the Department:

The 11 mile Oroville Complex-Table Mountain 230 kilovolt line is solely owned by the Department. The triple-circuit line connects the Hyatt and Thermalito power plants to PG&E’s Table Mountain substation.

The Castle Rock-Lakeville 38-mile 230 kilovolt double-circuit line is co-owned with PG&E and others. The Department owns a 165 MW entitlement in this line, but has leased 55 MW to other public utilities. The remaining 110 MW entitlement has been retained by the Department. However, the Department has sent a notice



of termination letter indicating plans to terminate its entitlement in this line by August 1, 2019 because the Department no longer has an operational use for the line.

The one mile Pine Flat 230 kilovolt transmission line is solely owned by the Department. This transmission line emanates from the Pine Flat Powerplant and interconnects with PG&E's system.

The Department owns 75 percent of the 230 kilovolt double-circuit transmission line between PG&E's Midway and Wheeler Ridge substations; the other 25 percent is owned by PG&E. The transmission line connects to the Department's Buena Vista, Wheeler Ridge and Wind Gap pumping plants. Each pumping plant's tie line is solely owned by the Department.

### **Federal Energy Regulatory Commission Proceedings**

A number of proceedings are pending before the Federal Energy Regulatory Commission ("FERC") relating to the Department as operator of the State Water Project. Some of these proceedings address requests from the CAISO, investor-owned utilities and others to increase or adjust rates or allocate responsibility for costs for transmission and other services provided to the Department and other entities in California. The Department is participating in these proceedings because the outcome of these proceedings has the potential to increase the Department's annual power costs. However, the Department does not believe that any increased charges arising from these proceedings will materially impact the Department's operations or ability to pay debt service on the Bonds. Any increased charges will be passed through to the Contractors under the Water Supply Contracts in the form of higher operating charges.

### **Reid Gardner Termination, Groundwater Contamination Cleanup and Environmental Lawsuit**

The Reid Gardner Project consisted of the Department's interest in a 260 MW coal-fired steam electric generating unit ("Unit 4") in Nevada constructed by NV Energy ("NVE"). The Department's ownership interest in the Reid Gardner Project terminated in 2013. (See APPENDIX H – "WATER SYSTEM PROJECTS – Project Descriptions – *Reid Gardner Project*.")

In February 2008, NVE entered into an Administrative Order on Consent with the Nevada Division of Environmental Protection, pursuant to which NVE agreed to undertake investigatory activities and remediate any soil and groundwater contamination attributable to the Reid Gardner Generating Station. NVE operates the Reid Gardner Generating Station, which housed four coal-fired generating units. Prior to termination of the Department's ownership interest in the Reid Gardner Project in 2013, the Department owned 67.8 percent and NVE owned 32.2 percent of Unit 4 as tenants in common. The Department also had a 29.2 percent share of the common facilities at the site. As a former co-owner of Unit 4, the Department has agreed to share the cost of NVE's investigatory and soil and groundwater remediation activities that are related to Unit 4's construction and operations from July 1979 through July 2013. These activities are projected to continue through at least 2023. However, the Department believes that its participation in these remediation activities will not have a material adverse impact on State Water Project finances or operations.

### **Oroville Facilities Relicensing Program**

In January 2005, the Department filed its application with FERC for a new license for its Hyatt-Thermalito hydroelectric generation facilities, which are referred to by FERC as the Oroville Facilities (Project No. 2100) ("Oroville Facilities"). The existing FERC license, granted in 1957, expired on January 31, 2007. The Department's application requested a new 50-year license and was filed with a comprehensive settlement agreement for the relicensing of the Oroville Facilities (the "Settlement Agreement") with 51 stakeholders including federal, state and local agencies, and individuals. FERC issued an annual license effective February 1, 2007, with provisions for automatic annual renewals until a new long-term license is issued. The

Department has used a collaborative approach to relicensing (referred to as “Alternative Licensing Procedures”) that involves working cooperatively with federal and State resource agencies, Indian tribes, local public agencies, non-governmental organizations, and other interested parties to achieve consensus on the FERC license application and environmental documentation.

In March 2006, the Department and 51 settling parties signed the Settlement Agreement. The Settlement Agreement covers the protection, mitigation, and enhancement measures that will be implemented over the term of a new license to balance the Oroville Facilities operations with the environment and other project resources such as recreation, cultural, land use, and aesthetics. The Settlement Agreement has been submitted to FERC with the settling parties requesting FERC to adopt only the agreed-upon provisions as the terms and conditions of the new FERC license, so as not to jeopardize settlement. Other parties, that were not parties to the Settlement Agreement, have also intervened in the relicensing proceeding with various requests for additional conditions to be included in the new license. These parties include Butte and Plumas Counties, several Indian tribes, and other interest groups and individuals. The Department has responded in opposition to the inclusion of the proposed additional conditions.

FERC published its Final Environmental Impact Statement (“FEIS”) in May 2007, which completed the federal environmental documentation process. The FEIS included the majority of the Settlement Agreement terms that come under FERC jurisdiction. The Department issued the final EIR in July 2008. Butte and Plumas Counties filed lawsuits challenging the adequacy of the final EIR. After holding a hearing on the merits, the court issued its decision in favor of the Department in 2012. The county plaintiffs have appealed the court’s decision. On December 20, 2018 the appellate court issued its ruling in the case, which held that the plaintiffs could not bring an action under CEQA because the Federal Power Act preempts state law with regard to the FERC relicensing process. The plaintiffs have filed a petition for review by the California Supreme Court. Notwithstanding the lawsuits, in January 2010 the SWRCB, using the Final EIR, issued the required Clean Water Act Section 401 Water Quality Certification for the Oroville Facilities. A final biological opinion for the project was issued by NOAAF in December 2016. The next step would be for FERC to issue a new license, which the Department expects would be for a term of 30 to 50 years. The new license has not yet been issued. In the meantime, FERC is expected to continue issuing annual licenses for the Oroville Facilities.

### **Lodi Energy Center**

The Department and other participants entered into a Power Sales Agreement with the Northern California Power Agency (“NCPA”) in May 2010 to purchase a portion of the output of the Lodi Energy Center (“LEC”), which is a 280 MW natural gas-fired combined cycle power plant located in Lodi, California and which is owned, operated, and maintained by NCPA. The LEC began operation in November 2012. Under the Power Sales Agreement, the Department receives 33.5 percent of the output of the LEC and pays NCPA for a proportionate share of the construction, operation, and maintenance costs of the LEC. The Department uses its share of the LEC to meet State Water Project energy requirements, including replacing a portion of the energy previously provided by the Reid Gardner Project. (See APPENDIX H – “WATER SYSTEM PROJECTS – Project Descriptions – *Reid Gardner Project.*”)

### **Renewable Energy**

The Department has a long-term contract for renewable energy and renewable energy credits (“RECs”) from the RE Camelot Solar Photovoltaic Project, which is owned and operated by Dominion Solar Holdings, Inc. and is located near Mojave, CA in southeastern Kern County. RE Camelot went into full commercial operation and began delivering power to the CAISO grid to meet State Water Project pump loads in December 2014. Under a 20-year contract through 2034, the 45 MW plant is expected to deliver 125,000 MWh of annual generation.

The Department entered into a long-term Power Purchase Agreement for a 20 year delivery period with an option for an additional 10 year extension with Solar Star California XLIV, LLC. The plant has a capacity of 9.5 MW (ac) of solar photovoltaic energy generation and is located adjacent to the Department's Pearblossom Pumping Plant facility. The plant started contract delivery on December 29, 2016 and will deliver annually an estimated 27,400 MWh of generation.

The Department executed a 20-year Power Purchase Agreement for procurement of renewable solar energy and RECs with Solverde 1, LLC. The 85 MW (ac) single axis tracking solar photovoltaic facility is a part of the Lancaster Energy Center, located 10 miles west of Lancaster, California and is near a portion of the East Branch of the California Aqueduct. The facility began commercial operations on December 20, 2016 and will deliver approximately 230,000 MWh of solar energy annually to the Department.

On December 16, 2015, the Department executed an agreement for the purchase of 51.4 MW of renewable hydroelectric energy bundled with RECs with Metropolitan. Delivery is from January 1, 2016 through December 31, 2020 with an estimated annual delivery output of 54,000 MWh.

The Department also contracts for the energy output of five small hydroelectric plants totaling 30 MW owned and operated by Metropolitan. Effective November 1, 2017 through the contract termination date of September 30, 2019, the Department receives RECs bundled with energy from four of the five hydroelectric plants.

According to the Office of Senate Floor Analyses, Senate Bill 100, signed by Governor Edmund G. Brown on September 10, 2018, has the potential fiscal effect of increasing Department costs for compliance by up to \$15 million per year until 2045 to meet the 100 percent renewable or zero-carbon standard.

### **Thermalito Powerplant Fire**

On November 22, 2012, a major fire occurred at the Thermalito Powerplant, which is part of the Hyatt-Thermalito hydroelectric generation facilities located on the Feather River near Oroville. The fire caused substantial damage to the plant rendering the plant inoperable. Until the plant is repaired and placed back in service, the electrical generation from the Hyatt-Thermalito facilities will be reduced. The cleaning, decontamination and structural repairs of the Thermalito Powerplant facility have been completed. The mechanical and electrical refurbishment and reassembly of the generating units has been completed. Final construction verification and equipment commissioning has commenced. The Department expects the Thermalito Powerplant to return to full service by August 1, 2019 and is within the budget established in the related Value Engineering Study. This event has not had, and will not have, a material adverse impact on the Department's ability to operate and maintain the State Water Project. The costs for rebuilding the Thermalito Powerplant will be financed with Bonds. (See APPENDIX H – "WATER SYSTEM PROJECTS – Project Descriptions – Thermalito Powerplant Cleanup and Reconstruction").

### **No Relationship to Power Supply Revenue Bonds**

In response to the California energy crisis of 2000-01, the Department created the separate California Energy Resources Scheduling Division to perform its function as supplier of energy to retail customers under its Power Supply Program, and to distinguish and keep that program separate and distinct from its power activities in connection with the State Water Project. The Department has issued Power Supply Revenue Bonds to finance and refinance a portion of the costs of the Power Supply Program. \$3.212 billion of Power Supply Revenue Bonds are currently outstanding.

**The State Water Project and the Power Supply Program are separate and distinct enterprises, and have separate and distinct sources and uses of funds. None of the power generated by the State Water Project is being or will be sold to the Power Supply Program. Revenues pledged to secure payment of the Bonds may not be used to pay the Power Supply Revenue Bonds or any other expenses of the Power Supply Program, and resources pledged to secure the payment of the Power Supply Revenue Bonds may not be used to pay the Bonds or any other expenses of the State Water Project.**

## **FINANCIAL OPERATIONS**

### **Financing of the State Water Project**

In addition to the revenue bond obligations described under “FINANCIAL OPERATIONS- Outstanding Revenue Obligations of the Department for the State Water Project” below, a large portion of the State Water Project has been financed by the sale of general obligation bonds of the State pursuant to the provisions of the Burns-Porter Act, which authorized the issuance of \$1,750,000,000 in aggregate principal amount of such bonds for the construction of the State Water Project. The Burns-Porter Act was adopted by the voters at the State’s general election of November 8, 1960. Of that authorization, \$1,582,400,000 in aggregate principal amount (including the entire amount available for construction of the initial components of the State Water Project) has been issued, of which \$36,890,000 in aggregate principal amount are outstanding as of March 1, 2019. The unissued \$167,600,000 of the authorization is available only to provide funds for the construction of certain additional water conservation facilities. (See “FINANCIAL OPERATIONS – Allocation of State Water Project Revenues.”)

Certain other moneys have been made available to the Department to pay the cost of construction of the State Water Project, including the proceeds of the sale of revenue bonds pursuant to the CVP Act (see “FINANCIAL OPERATIONS – Outstanding Revenue Obligations of the Department for the State Water Project”), a portion of the moneys from State offshore oil royalties, other State appropriations, and federal reimbursements for project costs allocated to flood control.

As of the date hereof, the Department anticipates issuing approximately \$2.991 billion of additional Bonds to finance completion of existing Water System Projects. (See APPENDIX H – “WATER SYSTEM PROJECT – Capital Expenditures for Water System Projects.”) In addition, the Department could issue additional Bonds to finance all or a portion of the settlement agreement costs associated with FERC relicensing of its power, water storage and associated facilities at Oroville. The FERC relicensing costs, including the costs related to the settlement agreement, could total \$90 million or more. The Department may also undertake additional capital projects in the future, which could result in the issuance of additional Bonds or other obligations in substantial amounts. (See “SECURITY FOR THE BONDS – Outstanding Bonds; Additional Bonds” for a description of certain limitations on the issuance of additional Bonds and “STATE WATER PROJECT WATER SUPPLY – Long-Term Planning Efforts for the Delta – *Bay Delta Conservation Plan/California WaterFix*.”).

### **Fish and Wildlife Enhancement and Recreation Costs**

The Department is required under the Davis-Dolwig Act, enacted by the Legislature in 1961, to incorporate recreation and fish and wildlife enhancement features in the planning and construction of the State Water Project. The Davis-Dolwig Act provides, in California Water Code section 11913, that it is the intent of the Legislature that there shall be included in the budget for the Department for each fiscal year, and in the State’s budget act for each fiscal year, an appropriation from the General Fund of the funds necessary for enhancement of fish and wildlife and for recreation in connection with state water projects (including the State Water Project). Between 1998 and 2011, no appropriation from the General Fund was made to the Department for these purposes. However, effective with the 2012-2013 fiscal year, legislation was enacted that provides for a continuous annual appropriation of \$10 million from the General Fund portion of the Harbors and Watercraft Revolving Fund to the Department for Davis-Dolwig Act purposes. Seven and one half million dollars of this amount is continuously

appropriated each fiscal year for current fish and wildlife enhancement and recreation costs and the other \$2.5 million of this amount is continuously appropriated each fiscal year to reimburse the Department for fish and wildlife enhancement and recreation costs incurred prior to 2012. If additional funding is required for these purposes, the Department will be required to seek additional appropriations.

In 2006, California voters approved Proposition 84 (the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006), which, among other things, authorized the sale of \$54 million in State general obligation bonds for State Water Project recreation and fish and wildlife enhancement purposes. To the extent that sufficient moneys for the enhancement of fish and wildlife and for recreation in connection with state water projects are not made available to the Department through appropriations or the sale of general obligation bonds, costs allocated by the Department to the development of public recreation or fish and wildlife enhancement are expected to be paid by the Department on an on-going basis with State Water Resources Development System revenues available after the payment of operation and maintenance costs and Bond debt service. (See “THE WATER SUPPLY CONTRACTS – Monterey Amendment” and “WATER SUPPLY CONTRACT RELATED LITIGATION – Claims Relating to the Use of Bond Proceeds to Pay Capital Costs Allocable to Recreation and Fish and Wildlife Enhancement.”)

### **Allocation of State Water Project Revenues**

Under the California Water Code, State Water Project revenues are allocated between two funds, depending on the source of the revenues.

State Water Project revenues from Water System Projects financed by Bonds are, to the extent allocated to the Bonds, deposited in the Central Valley Project Revenue Fund and pledged to the repayment of Bonds.

State Water Project revenues from the Devil Canyon Castaic Facility are deposited in the Central Valley Project Revenue Fund and pledged to the payment of the Devil Canyon Castaic Bonds. State Water Project revenues from the Water System Projects financed by Notes are, to the extent allocated to the Notes, deposited in the Central Valley Project Revenue Fund and pledged to the payment of the Notes.

All other State Water Project revenues are deposited in the California Water Resources Development Bond Fund and used first to pay the reasonable operating and maintenance costs of the State Water Resources Development System (which includes the State Water Project); second, to reimburse the General Fund of the State for the payment of the general obligation bonds issued to finance a portion of the capital costs of the State Water Project; and thereafter to the payment of the costs of the acquisition and construction of the State Water Resources Development System.

### **Outstanding Revenue Obligations of the Department for the State Water Project**

The Department has previously issued fifty-two series of Bonds totaling \$10,132,815,000 in aggregate principal amount, of which \$2,452,630,000 in aggregate principal amount are outstanding under the Resolution. A portion of the outstanding Bonds in the aggregate principal amount of \$258,520,000 are variable rate bonds with the remaining being fixed rate bonds, all of the Bonds are secured equally and ratably with the Series BA Bonds.

The Department has also issued \$1,526,155,000 in aggregate principal amount of revenue bonds secured by three separate bond resolutions to finance certain power facilities of which \$32,045,000 in aggregate principal amount are outstanding as of March 1, 2019. All bonds issued under two of these resolutions have been fully retired. The outstanding revenue bonds issued under the third resolution are referred to as Devil Canyon-Castaic Bonds. Funds to be available to pay interest on and principal of the Devil Canyon-Castaic Bonds will not constitute Revenues under the Resolution and will not be available to pay interest on or principal of the Bonds. At no time will Revenues be available to pay interest on or principal of the Devil Canyon-Castaic Bonds.

The table below summarizes certain information for the Department’s outstanding long-term revenue bond programs.

	<b>When Issued</b>	<b>Final Maturity</b>	<b>No. of Series</b>	<b>Original Principal Amount in Millions</b>	<b>Outstanding Principal Amount in Millions</b>
Devil Canyon-Castaic Bonds <sup>(1)</sup>	1972	2022	1	\$ 139	\$ 32
Water System Revenue Bonds	1986-2018	2035	52	10,133	2,453
Total <sup>(2)</sup>				\$10,272	\$2,485

<sup>(1)</sup> Not secured by the Revenues securing the Bonds.

<sup>(2)</sup> Totals may not sum due to rounding.

The Department has authorized the issuance of its Series 1 Notes in a principal amount outstanding at any one time not to exceed the lesser of \$600,000,000 or the principal amount of Series 1 Notes supported by the credit agreement then in effect (currently \$600,000,000). The Department has also authorized the issuance of its Series 2 Notes in a principal amount outstanding at any one time not to exceed the lesser of \$800,000,000 or the principal amount of Series 2 Notes supported by the credit agreement then in effect (currently \$800,000,000). Absent unusual circumstances, such as the Oroville spillways emergency, the Note program is designed to be an ongoing source of interim financing for Water System Projects prior to long-term financing from the sale of Bonds. The Department’s obligation to make debt service payments on the Notes is subordinate to its payment obligations with respect to the Bonds. Proceeds from the Series 1 Notes are expected to be used to provide funds for costs related to the Oroville Dam Spillways Response, Recovery and Restoration Project as well as costs related to other Water System Projects. Proceeds from the Series 2 Notes are also expected to be used to provide funds for costs related to the Oroville Dam Spillways Response, Recovery and Restoration Project. (See APPENDIX H – “WATER SYSTEM PROJECTS.”) The Department has approximately \$189.9 million in aggregate principal amount of Series 1 Notes currently outstanding. The Department has approximately \$789.1 million in aggregate principal amount of Series 2 Notes outstanding, and expects a portion of those Series 2 Notes to be paid with proceeds of federal reimbursement for costs of the Oroville Dam Spillways Response, Recovery and Restoration Project and other sources of emergency funds to extent available and the remainder with one or more issues of Bonds. To date, approximately \$67 million of the Series 2 Notes have been paid from federal reimbursements. Approximately \$346 million of the Notes are expected to be paid with proceeds of the Series BA Bonds, with the final allocation between the Series 1 Notes and the Series 2 Notes to be determined by the Department following the pricing of the Series BA Bonds. Pursuant to a Revolving Credit Agreement that is scheduled to expire on October 15, 2021 (the “Series 1 Notes Credit Agreement”), Bank of America, N.A. has agreed to make advances to the Department, if necessary and subject to certain conditions, to provide moneys for the payment of the Series 1 Notes when due. Pursuant to a Revolving Credit Agreement that is scheduled to expire on February 25, 2021, Wells Fargo Bank, National Association has agreed to make advances to the Department, if necessary and subject to certain conditions, to provide moneys for the payment of the Series 2 Notes when due.

The Department may replace either of the existing revolving credit agreements under the conditions provided by the resolution authorizing the applicable series of Notes and the related revolving credit agreement. The Notes are payable from the Central Valley Project Revenue Fund, from payments under the Water Supply Contracts and other available funds, including federal reimbursement. In the event that amounts received by the Department under the Water Supply Contracts, after accounting for any other available funds (e.g. federal reimbursement), are insufficient to pay all amounts due under the Notes, the Bonds and the State’s general obligation bonds issued for the State Water Project, such moneys are to be allocated first to the payment of amounts due under the Bonds and such general obligation bonds.

The Department currently has no interest rate swaps, caps or hedges or other contingent payment obligations payable from Revenues.

**Estimated Annual Debt Service**

The following table sets forth the estimated annual debt service for all Bonds that will remain outstanding after giving effect to the issuance of the Series BA Bonds and the application of the proceeds thereof as described in this Official Statement. (See “SECURITY FOR THE BONDS – Outstanding Bonds; Additional Bonds.”)

Year Ending (December 1)	Outstanding Bonds Total Debt Service <sup>(1)</sup>	Series BA Bonds			Grand Total <sup>(2)</sup>
		Principal	Interest	Debt Service	
2019	\$ 253,765,147	--	\$ 9,029,310	\$ 9,029,310	\$ 262,794,457
2020	254,396,461	\$ 12,660,000	14,979,500	27,639,500	282,035,961
2021	250,392,540	13,300,000	14,346,500	27,646,500	278,039,040
2022	249,470,393	13,970,000	13,681,500	27,651,500	277,121,893
2023	237,916,207	14,660,000	12,983,000	27,643,000	265,559,207
2024	235,051,779	15,395,000	12,250,000	27,645,000	262,696,779
2025	228,502,055	16,160,000	11,480,250	27,640,250	256,142,305
2026	206,738,005	16,965,000	10,672,250	27,637,250	234,375,255
2027	218,901,806	17,815,000	9,824,000	27,639,000	246,540,806
2028	201,737,137	18,705,000	8,933,250	27,638,250	229,375,387
2029	207,361,730	19,645,000	7,998,000	27,643,000	235,004,730
2030	145,049,038	20,635,000	7,015,750	27,650,750	172,699,788
2031	144,482,030	21,655,000	5,984,000	27,639,000	172,121,030
2032	145,253,310	22,745,000	4,901,250	27,646,250	172,899,560
2033	142,760,335	23,880,000	3,764,000	27,644,000	170,404,335
2034	144,008,458	25,070,000	2,570,000	27,640,000	171,648,458
2035	143,837,508	26,330,000	1,316,500	27,646,500	171,484,008
<b>Total<sup>(2)</sup></b>	<b>\$ 3,409,623,938</b>	<b>\$ 299,590,000</b>	<b>\$ 151,729,060</b>	<b>\$ 451,319,060</b>	<b>\$ 3,860,942,998</b>

(1) Reflects the actual accrued interest on the Bonds of Series AT and Series AU through April 1, 2019. Thereafter, the interest accrued on the variable rate Bonds of Series AT and Series AU has been assumed at 3.00 percent per annum and 2.85 percent per annum, respectively. Includes capitalized interest on the Bonds of Series AZ in the aggregate amount of \$6,604,722 through December 1, 2019.

(2) Totals may not sum due to rounding. Includes capitalized interest on the Series BA Bonds in the amount of \$9,029,310 through December 1, 2019. After the issuance of the Series BA Bonds, the Department will have \$2,752,220,000 in aggregate principal amount of Bonds outstanding.

**Article XIII B of the Constitution**

Article XIII B of the California Constitution (“Article XIII B”) establishes limits on certain annual appropriations of state and local entities. (See “CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES – Article XIII B of the Constitution.”) The Department’s experience is that Article XIII B has not significantly impaired the State’s ability to appropriate funds for the State Water Project.

Article XIII B was adopted pursuant to California’s constitutional initiative process. From time to time other initiatives could be adopted by California voters, placing additional limitations upon the State or the Department.

## THE WATER SUPPLY CONTRACTS

The Water Supply Contracts between the State, acting by and through the Department (references to the Department in this Section are to the Department acting in such capacity), and the 29 Contractors are substantially uniform with respect to basic terms except with respect to certain payments by Contractors for agricultural water as noted below. Copies of the Water Supply Contracts between the State and the 29 Contractors are on file at the offices of the Department and of the Treasurer in Sacramento, and reference is made thereto for information with respect to all of the terms and conditions thereof. The following discussion, except as noted, is applicable to each of the 29 Water Supply Contracts, and assumes the effectiveness of the amendments described below under the heading “Monterey Amendment.” All but two of the Contractors (Plumas County Flood Control and Water Conservation District and Empire West Side Irrigation District) have signed the Monterey Amendment. Contractors that have accepted the Monterey Amendment as of the date of this Official Statement have over 99 percent of the maximum Table A amounts of all Contractors.

### Basic Contract

*Term.* The Water Supply Contracts are to remain in effect for the longest of 75 years, December 31, 2035 or until all bonds issued to finance construction costs of State Water Project facilities have been repaid, whichever period is longest, subject to an election on the part of each Contractor to receive continued service after such longest period on certain specified continued terms and conditions and other reasonable and equitable terms mutually agreed upon by the Department and the Contractor. (See “THE WATER SUPPLY CONTRACTS – Contract Extension Negotiations.”) The final maturity of Bonds outstanding on the date of issuance of the Series BA Bonds will be in 2035. (See “SECURITY FOR THE BONDS – Outstanding Bonds; Additional Bonds.”)

*Annual Table A Amounts.* The year of initial water delivery is estimated in each Water Supply Contract and a table (titled “Table A”) in each of the Water Supply Contracts sets forth the maximum annual amounts of water the Contractor may request to be delivered (“Annual Table A Amount”) commencing in the initial year. These scheduled amounts increased yearly and reached the maximum Annual Table A Amount in a specified year, all Contractors have reached their respective maximum Annual Table A Amounts. The Annual Table A Amounts schedule may be changed upon request by the Contractor and approval by the Department, but no such change may be made if it would impair the financial feasibility of the State Water Project.

The Annual Table A Amounts of all 29 Contractors totals 4,172,786 acre-feet of water. (See “STATE WATER PROJECT WATER SUPPLY.”) Water delivered to a Contractor may not be disposed of by the Contractor for use outside the Contractor’s territory, subject to certain limited exceptions, without the Department’s consent. Restrictions are imposed on changes in the corporate organization of the Contractor.

*Water Supply.* Subject to the availability of funds, the Department is required to make all reasonable efforts consistent with sound fiscal policies, reasonable construction schedules, and proper operating procedures to complete the facilities necessary for water deliveries at the time and in the amounts specified.

The Department must make all reasonable efforts to perfect and protect necessary water rights and must report at least every five years on its ability to meet future water demands.

If the Department cannot complete construction of the aqueducts necessary to deliver water to the Contractor, the Contractor may, under specified circumstances, provide money to the Department necessary to enable the Department to complete construction. In such case, the Department will own and operate the aqueducts, and the amount provided by the Contractor will be credited by the Department against the Contractor’s payment obligation under the Water Supply Contracts. Alternatively, the Contractor may connect, at its own expense, to the portion of the aqueduct completed by the Department to receive water to which it is entitled under the Water Supply Contract.



The Department is required to take all reasonable measures to make available water that meets the water quality objectives set forth in the Water Supply Contract.

*Allocation of Water Surpluses and Deficiencies.* If there is a supply of water in excess of (i) the scheduled deliveries under Table A for all Contractors and (ii) the operational requirements of the State Water Project, Contractors may purchase such surplus water on an interruptible basis. The price of this interruptible water is the incremental cost of delivery.

The Water Supply Contracts also contain provisions for the allocation of water in the event of shortages in water supply. For Contractors that have accepted the Monterey Amendment, the available supply is to be allocated in proportion to Annual Table A Amounts, with reductions for agricultural Contractors and urban Contractors being made on the same basis. (See “WATER SUPPLY CONTRACT RELATED LITIGATION – Monterey Amendment Litigation.”)

For Contractors that have not accepted the Monterey Amendment, there will be a reduction first in the delivery of water for agricultural purposes by an amount not to exceed 50 percent in any one year or a total of 100 percent of the Annual Table A Amount for agricultural water that may be requested in any seven consecutive years. Any additional reductions required will be apportioned among all Contractors irrespective of use. In the event of a permanent shortage there will be a proportionate reduction of the Contractors’ Annual Table A Amount.

Contractors may use aqueduct capacity not used for water delivered under the Water Supply Contracts to transport other water procured by them. The Department is not liable for damage arising from shortages due to causes beyond its control. The total amount of Revenues required to be paid under the provisions of the Water Supply Contracts for the payment of debt service on the Bonds is not dependent on the amount of water available to be delivered.

*Water Charges.* The Water Supply Contracts in their original form provide for two charges to the Contractor: (a) a Delta Water Charge and (b) a Transportation Charge. The Off-Aqueduct Power Facilities Amendment, East Branch Enlargement Amendment, Water System Revenue Bond Amendment, Coastal Branch Extension Amendment, East Branch Extension Amendment and South Bay Aqueduct Amendment described below (collectively, the “Revenue Bond Amendments”) modify the manner of calculating the charges with respect to certain facilities, including certain of the Water System Projects. (See “THE WATER SUPPLY CONTRACTS – Amendments Providing Certain Revenues to Pay Water System Revenue Bonds.”)

The original Delta Water Charge and Transportation Charge each consist of three components: (a) a capital cost component; (b) a minimum operation cost component (operation costs that do not vary with water deliveries); and (c) a variable operation cost component (operation costs that vary with water deliveries). Project Planning Costs are charged under the component to which the costs of the potential project being studied would be charged if such project were constructed or acquired.

The original Delta Water Charge is a charge for each acre-foot of maximum Annual Table A Amount. It is computed so as to return to the Department generally during the term of the Water Supply Contract all “reimbursable” costs of the “project conservation facilities,” together with interest thereon. The “project conservation facilities” are defined as certain categories of facilities that conserve water. Such facilities now include the Oroville facilities, the Delta facilities, the San Luis facilities and a portion of the aqueduct leading to the San Luis facilities from the Delta. “Reimbursable” costs are those costs determined by the Department to be allocable to the purposes of water conservation (or, in the case of the Transportation Charge, to water transportation). The costs and revenues of power plants that are part of the “project conservation facilities” (including the Oroville Facilities) are included in the determination of the Delta Water Charge.

The original Transportation Charge is computed so as to return to the Department during the term of the contract the “reimbursable” costs of the facilities necessary to deliver water to a Contractor, together with interest thereon. Such facilities include aqueducts, pumping plants and on-aqueduct power facilities, but do not include any of the facilities designated by the Resolution as Water System Projects, except for the Alamo Project, Small Hydro Project and Pyramid Hydroelectric Project (which are on-aqueduct power facilities) and except as the Transportation Charge is incorporated by reference in the Water System Revenue Bond Amendment. The costs of the facilities relating to each reach of aqueduct are allocated among all Contractors receiving water through that reach. Each year’s capital expenditures are allocated among the Contractors and the allocated amount is required to be paid by each Contractor, together with interest, in not more than 50 equal annual installments within the capital cost component of the Transportation Charge. (In contracts with agricultural water Contractors, these capital costs are repaid by a uniform charge per acre-foot of the Annual Table A Amount of agricultural water that may be requested, which charge is computed so as to return to the Department generally during the Water Supply Contract term such costs with interest).

The capital cost component of the Transportation Charge and all components of the Delta Water Charge are to be repaid with interest at the weighted average of the rates paid on securities issued to finance the State Water Project (except the Department’s commercial paper and the Water System Revenue Bonds) and certain other moneys used to finance the State Water Project. The minimum and variable operation, maintenance, power and replacement cost components (the “operation cost components”) of the Transportation Charge are paid currently.

The annual net value of power produced by any power plant located on a State Water Project aqueduct is credited to all Contractors receiving water flowing through that power plant in proportion to each Contractor’s portion of the total water flowing through the plant during the year. The credit is given in the form of a reduction in the variable operation cost component of each such Contractor’s Transportation Charge.

*Payment of Water Charges.* On or before July 1 of each year, the Department furnishes each Contractor with a statement of estimated charges for the capital cost components (including charges under the Revenue Bond Amendments) and the operation cost components of the Delta Water Charge and the Transportation Charge for the following calendar year. The capital cost component payments of the Delta Water Charge and Transportation Charge, the revenue bond charges of the East Branch Enlargement Amendment, Coastal Branch Extension Amendment, East Branch Extension Amendment and South Bay Aqueduct Enlargement Amendment, and the revenue bond surcharge of the Water System Revenue Bond Amendment are due semiannually, on January 1 and July 1 of the year following receipt of the statement of charges. The operation cost component payments of the Delta Water Charge, Transportation Charge, East Branch Enlargement Amendment and East Branch Extension Amendment and all payment components of the Off-Aqueduct Power Facilities Amendment are due in twelve monthly installments commencing on January 1 of the year following receipt of the statement of charges.

On or about July 1 of each year, the Department determines the rate (per acre-foot) to be charged each Contractor in the following calendar year for the variable operation cost components of the Delta Water Charge and the Transportation Charge. The variable operation cost components in such calendar year are calculated and billed monthly based on metered water deliveries for the preceding month and an updated rate determined at the beginning of such calendar year. Payment of the variable operation cost components is due on the fifteenth day of the month following receipt of the monthly statement of charges and the Department grants a 30-day grace period, which results in an approximately three-month delay between delivery of water and payment of the variable operation cost components.

On July 1 of each year, the Department furnishes each Contractor with a statement showing the difference between the estimated water charges paid and the actual costs incurred in the prior calendar year. The difference is paid by or credited to each Contractor, as applicable, in equal monthly installments commencing on January 1

of the year following the “true-up” calculation. This process results in an approximately two-year delay in the reconciliation of estimated charges paid and actual costs reimbursed to the Department.

Interest from the due date at the interest rate earned by the State’s Pooled Money Investment Account must be paid on any payment received more than 30 days after the due date. A Contractor’s failure or refusal to accept delivery of water does not relieve the Contractor of its payment obligations. A Contractor is obligated to make payments to the Department notwithstanding any individual default by its constituents, assignees or others in the payment to the Contractor of charges levied by the Contractor. In accordance with a statutory requirement, each Water Supply Contract requires that whenever the Contractor fails or is unable to raise sufficient funds by other means the Contractor must levy upon all taxable property in the Contractor’s service area a tax or assessment sufficient (with other available moneys) to provide for all payments under the Water Supply Contract. (See “CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES.”)

If the Contractor defaults in payment, the Department may, and under certain conditions is required to, upon six months’ notice, suspend water deliveries during the period of default. During such period the Contractor remains obligated to make all payments required by the Water Supply Contract and the Department is not deprived of any other remedy under the Water Supply Contract or law.

### **Revenues from Bond Financed Facilities**

Revenues received under the Water Supply Contracts from facilities financed with the Bonds are available to be pledged to the payment of the Bonds. (See “SECURITY FOR THE BONDS.”) Other income and revenues derived from the Water Supply Contracts are pledged to the purposes and priorities set forth in the Burns-Porter Act, including the payment of certain operation, maintenance and replacement costs of the State Water Project, the payment of debt service on the State general obligation bonds issued under the Burns-Porter Act, the repayment of certain State moneys used for construction, and the payment of costs of acquisition and construction of the State Water Resources Development System (which includes the State Water Project).

The components of the State Water Project financed with Bonds are described in APPENDIX H – “WATER SYSTEM PROJECTS.”

### **Amendments Providing Certain Revenues to Pay Water System Revenue Bonds**

The costs of certain Water System Projects, as that term is defined by the Resolution, are recovered under one of the Water Supply Contract amendments described below.

*Off-Aqueduct Power Facilities Amendment.* In 1982, the Department and the 29 Contractors entered into a Water Supply Contract amendment, which (a) established a separate subcategory of Transportation Charge for Off-Aqueduct Power Facilities, such as the Bottle Rock Project, the South Geysers Project and the Reid Gardner Project, and changes the method of allocation and payment of costs of such power facilities; (b) authorizes the Department, subject to certain conditions, to include “local water projects” such as groundwater storage projects, surface storage projects, wastewater reclamation projects and conservation programs, as projects of the State Water Project with the costs of such projects to be allocated under the Delta Water Charge; (c) changes the interest rate for the penalty for late payments from 6 percent to the interest rate earned by the State’s Pooled Money Investment Account; and (d) specifies that the Department may, subject to certain conditions, charge the Contractors under the Delta Water Charge for water purchased by the Department for delivery through the State Water Project.

Under the Off-Aqueduct Power Facilities portion of the amendment, the annual costs for such facilities financed by Bonds are allocated among the Contractors based upon power consumed in such year in delivering water under the Water Supply Contracts to each Contractor. Such costs include, but are not limited to, debt

service, including coverage requirements (such as the requirement of the Resolution that Revenues receivable under the Water Supply Contracts after deduction of the costs of operation and maintenance be at least 1.25 times debt service on the Bonds), deposits to reserves (including the Debt Service Reserve Account) and operation and maintenance expenses, less any credits, interest earnings or other moneys received by the Department in connection with the facility. If the Department determines that the amount received from the Contractors in any year is less than the amount required for such Off-Aqueduct Power Facilities costs, the Department may allocate the deficiency among the Contractors in the same manner as costs are allocated using the original capital cost component of the Transportation Charge.

In connection with the termination of the Department's ownership interest in the Reid Gardner Project the Department received a payment from NVE of approximately \$47.6 million. (See APPENDIX H – "WATER SYSTEM PROJECTS – Project Descriptions – *Reid Gardner Project*.") In June 2016, the Department applied a portion of this payment amount to defease all of the Bonds outstanding under the Resolution that are allocable to the financing of Off-Aqueduct Power Facilities and payable pursuant to the terms of the Off-Aqueduct Power Facilities Amendment.

*East Branch Enlargement Amendment.* In 1986, the Department entered into a Water Supply Contract amendment with Metropolitan, Antelope Valley-East Kern Water Agency, Coachella Valley Water District, Desert Water Agency, Mojave Water Agency, Palmdale Water District and San Bernardino Valley Municipal Water District (the "Participating Contractors"), for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. The amendment establishes a separate subcategory of Transportation Charge for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement.

Under the East Branch Enlargement Amendment, the annual financing costs for such facilities financed by Bonds are allocated among the Participating Contractors based upon delivery capacity increase allocable to each Participating Contractor. Such costs include, but are not limited to, debt service, including coverage requirements (such as the requirement of the Resolution that Revenues receivable under the Water Supply Contracts after deduction of the costs of operation and maintenance be at least 1.25 times debt service on the Bonds), deposits to reserves (including the Debt Service Reserve Account) and operation and maintenance expenses, less any credits, interest earnings or other moneys received by the Department in connection with the facility. If any Participating Contractor defaults on payment of its allocable charges under the East Branch Enlargement amendment, among other remedies available to the Department, the non-defaulting Participating Contractors may assume responsibility for such charges and receive delivery capacity that would otherwise be available to the defaulting Participating Contractor in proportion to the non-defaulting Participating Contractor's participation in the East Branch Enlargement. If Participating Contractors fail to cure the default, Metropolitan shall, in exchange for the delivery capacity that would otherwise be available to the defaulting Participating Contractor, assume responsibility for the capital charges of the defaulting Participating Contractor.

Each Participating Contractor may elect to pay a portion or all of its share of capital costs by advance payment in lieu of participating in revenue bond financing. In an agreement dated June 1, 1987, the San Bernardino Valley Municipal Water District elected to pay a portion of its allocated costs in advance rather than participate in the Bonds issued to finance the East Branch Enlargement-First Stage. No other Participating Contractor has elected to use this advance payment option.

*Water System Revenue Bond Amendment.* As of 1987, the Department and the 29 Contractors entered into a Water Supply Contract amendment for the purpose of financing facilities, including presently all Water System Projects (as that term is defined under the Resolution) other than Off-Aqueduct Power Facilities, the Alamo Project, the Small Hydro Project, the Pyramid Hydroelectric Project, the East Branch Enlargement – First Stage, the Coastal Branch Extension – Phase II, the East Branch Extension – Phase I and the South Bay Aqueduct Enlargement. The amendment establishes a separate subcategory of Delta Water Charge and Transportation

Charge for projects financed with Bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the Bonds, and consists of two elements. The first element is an annual charge to each Contractor for repayment of capital costs of such projects under the original Water Supply Contract provisions for the Delta Water Charge and the Transportation Charge. The second element is a Bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of the Bonds issued for such projects.

If any Contractor defaults on payment of its allocable charges under this Amendment, the Department must allocate a portion of the default to each of the non-defaulting Contractors, subject to certain limitations, including a provision that non-defaulting Contractors may not be charged more than 125 percent of the amount of its annual payment. Under certain circumstances the non-defaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

*Coastal Branch Extension Amendment.* In 1994, the Department entered into a Water Supply Contract amendment with Santa Barbara County Flood Control and Water Conservation District (“Santa Barbara County FCWCD”), for the purposes, among others, of financing the construction of an extension of the Coastal Branch Aqueduct from the Santa Maria River to the current terminus at Tank 5 near the town of Casmalia. The amendment establishes a separate subcategory of Transportation Charge for the Coastal Branch Extension and provides for the payment of costs associated with financing the Coastal Branch Extension.

Under the Coastal Branch Extension Amendment, the annual financing costs for such facilities are charged to Santa Barbara County FCWCD. Such costs include, but are not limited to, debt service, including coverage requirements (such as the requirement of the Resolution that Revenues receivable under the Water Supply Contracts after deduction of the costs of operation and maintenance be at least 1.25 times debt service on the Bonds) and deposits to reserves (including the Debt Service Reserve Account), less any credits, interest earnings or other moneys received by the Department in connection with the facility.

Santa Barbara County FCWCD had the option to elect to pay a portion of or all of the capital costs of the Coastal Branch Extension by advance payment in lieu of participating in revenue bond financing. Santa Barbara County FCWCD did not use this advance payment option.

Operation and maintenance expenses incurred in connection with the Coastal Branch Extension are included in the minimum operation cost component of the original Transportation Charge. There is no separate minimum operation cost component of the Coastal Branch Extension Transportation Charge.

The Department entered into a joint powers agreement, dated October 1, 1996, with the Central Coast Water Authority to allow the Central Coast Water Authority (“Authority”) to perform both operations and maintenance work on the Coastal Branch – Phase II, from the Polonio Pass Water Treatment Plant to the pipeline terminus. The Authority represents a consortium of thirteen local agencies in Santa Barbara County participating in the Coastal Branch. In 1991, the Authority entered into an agreement with Santa Barbara County FCWCD, which specifies the Authority’s responsibility for implementing the State Water Project in Santa Barbara County.

*East Branch Extension Amendment.* In March 1997, the Department entered into a Water Supply Contract amendment with San Bernardino Valley Municipal Water District and San Geronio Pass Water Agency, for the purposes, among others, of financing the extension of the East Branch of the California Aqueduct. The amendment establishes a separate subcategory of Transportation Charge for the East Branch Extension and provides for the payment of costs associated with financing the East Branch Extension.

Under the East Branch Extension Amendment, the annual financing costs for such facilities financed by bonds will be allocated between San Bernardino Valley Municipal Water District and San Geronio Pass Water Agency based upon the delivery capacity allocable to each. Such costs include, but are not limited to, debt service,

including coverage requirements (such as the requirement of the Resolution that Revenues receivable under the Water Supply Contracts after deduction of the costs of operation and maintenance be at least 1.25 times Bond Debt Service) and deposits to reserves (including the Debt Service Reserve Account), less any credits, interest earnings or other moneys received by the Department in connection with the facility.

Under the East Branch Extension Amendment, each participating Contractor has the option to elect to pay a portion of or all of the capital costs of the East Branch Extension by advance payment in lieu of participating in revenue bond financing. Neither participating Contractor has elected to use this advance payment option.

Operation and maintenance expenses incurred in connection with the East Branch Extension will be included in the operation cost component of the original Transportation Charge. There will be no separate operation cost component of the East Branch Extension Transportation Charge.

In July 2005, the Department and the participating Contractors entered into a Joint Powers Agreement for the coordinated operation and maintenance of the Phase I facilities of the East Branch Extension. That agreement allows the participating Contractors to operate the East Branch Extension and perform some of the required maintenance work.

*South Bay Aqueduct Enlargement Amendment.* On November 7, 2003, the Department and Alameda County Flood Control and Water Conservation District, Zone 7 (“Zone 7”) entered into a South Bay Aqueduct Enlargement Amendment to their Water Supply Contract for the purpose of financing the enlargement of the South Bay Aqueduct. This amendment established a separate subcategory of Transportation Charge for the South Bay Aqueduct Enlargement and provides for the payment of costs associated with financing and operating the South Bay Aqueduct Enlargement facilities. The annual costs for such facilities are borne exclusively by Zone 7 including debt service, deposits to reserves and operation and maintenance expenses, less any credits, interest earnings or other moneys received by the Department in connection with such facilities. Under the South Bay Aqueduct Enlargement Amendment, Zone 7 may elect to pay a portion of its entire share of capital costs by advance payment in lieu of participating in revenue bond financing. Operation and maintenance expenses incurred in connection with the South Bay Aqueduct Enlargement will be included in the minimum component of the South Bay Aqueduct Enlargement Transportation Charge.

## **Monterey Amendment**

In December 1994, the Department and representatives of certain of the Contractors reached an agreement on comprehensive principles that served as the basis for negotiating amendments to the Water Supply Contracts. These amendments are collectively known as the “Monterey Amendment.” The Monterey Amendment was negotiated subject to the provision of the Resolution that the Department shall not agree to any amendment to the Water Supply Contracts that would materially adversely affect the security of the Bonds.

Water Supply Contract provisions that have been amended or added by the Monterey Amendment include provisions relating to the allocation of water (both in the event of a shortage and in the event of surplus), the transfer of the land and related assets of the Kern Fan Element of the Kern Water Bank to Kern County Water Agency (“KCWA”), the operation of certain State Water Project reservoirs, transfers of State Water Project Annual Table A Amounts (including certain transfers from agricultural Contractors to urban Contractors), other water transfers, the creation of and limitations on a Department reserve for operation, maintenance and replacement costs, and the description of facilities that may be financed with revenue bonds (adding a corporation yard and an operations center).

In addition, the Monterey Amendment provides for the reduction of annual Water Supply Contract charges in a manner such that Water Supply Contract revenues (taking into account other revenues and credits) are at levels calculated to meet (but not exceed) the following “revenue needs”: (1) annual financing requirements

(including debt service and coverage) for revenue bonds, including the Bonds, issued for State Water Project facilities, (2) operation and maintenance expenses of the State Water Resources Development System (which includes the State Water Project, the Davis-Grunsky Act Program and the San Joaquin Drainage Program), (3) debt service on general obligation bonds issued under the Burns-Porter Act, (4) \$4.5 million per year for capital costs of the State Water Project and the San Joaquin Drainage Program for which neither general obligation bond nor revenue bond proceeds are available, and (5) after the provision of at least \$40.5 million per year of reductions in charges to the Contractors, the amounts available and needed for certain “additional State Water Resources Development System purposes.”

By August 1999, the Department had executed the Monterey Amendment with 27 of the Contractors. The Contractors that have signed the Monterey Amendment have approximately 99 percent of the maximum Table A amounts and make approximately 99 percent of the annual Water Supply Contract payments (including payments that constitute Revenues under the Resolution). The Department believes that it can administer the State Water Project in a manner such that both the Contractors that have not signed the Monterey Amendment and the Contractors that have signed the Monterey Amendment will receive the benefits and have the obligations provided in their respective Water Supply Contracts, amended or not as the case may be.

Pending litigation relating to the Monterey Amendment is described under “WATER SUPPLY CONTRACT RELATED LITIGATION – Monterey Amendment Litigation.”

### **Contract Extension Amendment**

In May 2013, the Department and the Contractors began negotiations in a public forum to develop contract amendments to extend the term and change certain financial provisions of the Water Supply Contracts. In June 2014, the negotiators for the Department and the Contractors reached a general agreement on principles for such an amendment (the “Agreement in Principle”). The Department and 25 of the Contractors have signed the Agreement in Principle. The County of Butte, the Plumas County Flood Control and Water Conservation District, the San Luis Obispo Flood Control and Water Conservation District and the Santa Barbara Flood Control and Water Conservation District have not signed the Agreement in Principle.

Currently, the Water Supply Contracts are to remain in effect for the longest of 75 years, December 31, 2035 or until all bonds issued to finance construction costs of State Water Project facilities have been repaid, whichever period is longest, subject to an election on the part of each Contractor to receive continued service after such longest period on certain specified continued terms and conditions and other reasonable and equitable terms mutually agreed upon by the Department and the Contractor. No Bonds have been sold with a maturity date later than December 1, 2035. The 75-year term provision currently results in the Water Supply Contracts having varying termination dates that range between December 31, 2035 and 2042, subject to the aforementioned election.

A proposed contract extension amendment was prepared based on the Agreement in Principle. Under the proposed amendment, the term of the Water Supply Contract for each Contractor that signs an amendment would be extended until December 31, 2085. Also under the proposed amendment, certain provisions that provide for charges to the Contractors for capital costs and certain other costs to be made on an amortized basis would be amended to provide for charges to the Contractors on an annual “pay as you go” basis to provide the revenues needed by the Department to pay operating and maintenance expenses and debt service in each year as well as to comply with the rate covenant contained in the Resolution and the Reserve Account Requirement. (See “SECURITY FOR THE BONDS – Rate Covenant” and “– Debt Service Reserve Account.”)

Other provisions in the proposed amendment would provide for, among other things, an increase in the Department’s operating reserves, a mechanism for financing capital projects with State Water Project funds and recovering those costs with interest from the Contractors, establishment of an account to pay for certain State

Water Resources Development System expenses not chargeable to the Contractors and the establishment of a Finance Committee consisting of Department and Contractor representatives to serve as a forum for discussions and to provide a channel for recommendations to the Director of Water Resources concerning financial policies of the State Water Project.

In August 2016, pursuant to CEQA, the Department released for public comment a draft EIR for the proposed amendment. The public comment period on the draft EIR closed in October 2016. As required by statute, on September 11, 2018 the Department presented the terms of the proposed amendment in an informational hearing to the Legislature's Joint Legislative Budget Committee. Thereafter, on November 13, 2018, the Director of Water Resources certified and released the final EIR.

On December 11, 2018, the Director of Water Resources approved the contract extension amendment project under CEQA and executed the amendment with Metropolitan. As of March 19, 2019, ten Contractors have executed their extension amendment with the Department. Under the terms of the extension amendment, the amendment will only take effect as to all signing Contractors when (1) 24 Contractors, with an aggregate maximum Table A amount exceeding 3,950,000-acre feet, have executed the amendment and (2) all pending litigation addressing the amendment has been resolved, unless either of these conditions is waived by the Department and the Contractors that have signed the amendment.

On December 11, 2018, the Department filed an action in Sacramento County Superior Court seeking to validate the contract extension amendment. In February 2019, four groups filed answers in the validation action in opposition to the Department's request to validate the amendment. One answer was filed by several environmental organizations; the second answer was filed by several other environmental organizations and an Indian Tribe; the third answer was filed by a number of counties and public water agencies, including the County of Butte and the Plumas County Flood Control and Water Conservation District, both of which are Contractors; and the fourth answer was filed by the South Delta Water Agency. Six Contractors have filed answers in support of the extension amendment. In addition, the court approved a stipulation among the Department, the KCWA and several other public water agencies extending the deadline to file an answer until May 31, 2019.

In January 2019, four environmental organizations in one case and four environmental organizations and an Indian Tribe in another case filed separate actions against the Department claiming that the contract extension amendment is invalid for failure to comply with CEQA and certain other environmental statutes. These same groups also filed opposition answers in the validation action described in the above paragraph.

The amendment that ultimately takes effect will comply with the Department's covenant in the Resolution not to agree to any amendment to the Water Supply Contracts which would materially adversely affect the security for the Bonds.

### **Obligation to Levy Taxes or Assessments**

The Water Supply Contracts, in accordance with a statutory requirement, provide that whenever a Contractor fails or is unable to raise sufficient funds by other means, the Contractor must levy on all property in the Contractor's territory not exempt from taxation a tax or assessment sufficient to provide for all payments under the Water Supply Contract.

Although Article XIII A of the California Constitution, which was added to the California Constitution in 1978, limits the imposition of *ad valorem* property taxes (see "CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES"), the California Court of Appeal concluded that taxes levied by the Contractors to make payments under the Water Supply Contracts come within the Section 1(b) exception [in Article XIII A for] "*ad valorem* taxes or special assessments to pay the interest and redemption charges on . . . any indebtedness approved by the voters prior to July 1, 1978" to the general taxing limitation imposed by Article XIII A. (*Goodman v.*



*County of Riverside*, 140 Cal. App. 3d 900 (1983)). As a result of this finding, the Court determined there was no need to address the issue of whether the application of Article XIII A to limit the levying of taxes to make payments under the Water Supply contracts would constitute an unconstitutional impairment of contract. The Court stated:

“...[W]e conclude, when the state’s voters approved the Act, that they approved an indebtedness in the amount necessary for building, operating, maintaining, and replacing the Project, and that they intended that the costs were to be met by payments from local agencies with water contracts. Further, we conclude that the voters necessarily approved the use of local property taxes whenever the boards of directors of the agencies determined such use to be necessary to fund their water contract obligations, and that the *ad valorem* taxes levied by [Desert Water Agency] fall within the exception of section 1, subdivision (b) [of Article XIII A].

Our conclusion here does away with the necessity to address the issue of impairment of contractual obligations.”

The California Supreme Court denied a petition for hearing on July 14, 1983.

### **WATER SUPPLY CONTRACT RELATED LITIGATION**

The Department is a party to several lawsuits respecting the Water Supply Contracts as described below.

#### **Monterey Amendment Litigation**

In May 2003, the trial court approved a settlement agreement among the Department and the other parties in *Planning and Conservation League, et al. vs. Department of Water Resources and Central Coast Water Authority*, a lawsuit that challenged the Monterey Amendment. Under the settlement agreement, the Department agreed, among other things, to act as lead agency in the preparation of a new EIR for the Monterey Amendment. During the preparation and processing of the new EIR, the Department was permitted under the settlement agreement to continue to operate the State Water Project in accordance with the provisions of the Monterey Amendment, including the provisions pertaining to the transfer of land and related assets of the Kern Fan Element of the Kern Water Bank to KCWA. The Department also agreed to pay for certain watershed improvements in Plumas County and to pay the plaintiffs certain amounts for use in implementing the settlement agreement. The plaintiffs agreed to limit the grounds upon which they could challenge the new EIR after it is completed.

The parties to the lawsuit had engaged in settlement discussions after the Court of Appeal, in September 2000, reversed an earlier trial court ruling on the Monterey Amendment EIR. The trial court had found that the designation of the Central Coast Water Authority, rather than the Department, as the lead agency for the Monterey Amendment EIR, violated the California Environmental Quality Act, but that the Monterey Amendment EIR was adequate, and the error as to the lead agency was harmless. As a result of the trial court’s ruling, the Department had proceeded to implement the Monterey Amendment, including transferring the Kern Fan Element property to KCWA. The Court of Appeal, however, found that the Monterey Amendment EIR was inadequate in certain respects and remanded the case to the trial court to oversee the Department’s preparation of a new EIR and to consider whether the Monterey Amendment may continue to be implemented while the new EIR was being prepared. The May 2003 settlement agreement described in the immediately preceding paragraph addressed these issues.

In accordance with the Court of Appeal’s determination, the Department prepared a new EIR and filed its Notice of Determination in May 2010. In June 2010, two Delta water agencies and several environmental organizations and individuals filed a lawsuit in Sacramento County Superior Court challenging the Department’s CEQA compliance and the validity of the Monterey Amendment, including the Department’s transfer of the Kern Fan Element to the KCWA. In July 2010, the same plaintiffs in the Sacramento County Superior Court case filed

a lawsuit in Kern County Superior Court challenging the transfer of the Kern Fan Element from KCWA to the Kern Water Bank Authority, a local joint powers agency which now has responsibility for the management of the Kern Fan Element and the Kern Water Bank. In addition, in June 2010, two water districts in Kern County filed a separate lawsuit in Kern County Superior Court, challenging primarily the Department's CEQA compliance with respect to the Kern Fan Element transfer from the Department to KCWA. The two lawsuits filed in Kern County Superior Court were transferred to the Sacramento County Superior Court. In December 2012, the Department prevailed on its challenge to the plaintiffs' validation causes of action (including the validity of Kern Fan Element transfer) on the grounds that they were not timely filed. This left only the plaintiffs' CEQA compliance challenges. After holding a hearing on the CEQA challenges in the remaining two cases, the trial court ruled that most of the EIR was adequate under CEQA, but that the EIR's discussion of the impacts on continued use and operation of the Kern Water Bank was deficient. In October 2014, the trial court ordered the Department, as the remedy for the deficiency, to provide additional environmental analysis on the impacts of the continued use and operation of the Kern Water Bank and upon completion of the EIR process, to determine whether to continue the use and operation of the Kern Water Bank by the Kern Water Bank Authority. The court limited its decision to the Kern Water Bank by ruling that only those portions of the revised Monterey Plus EIR that are new or changed shall be subject to challenge under CEQA by petitioners or other interested parties and that no other challenges that were raised or could have been raised with respect to the Monterey Plus EIR may be raised in any challenge to the revised Monterey Plus EIR. The trial court's decision, therefore, leaves all matters related to the State Water Project and the Monterey Amendment untouched. In December 2014, one set of plaintiffs filed a notice of appeal with the Court of Appeal. These plaintiffs are appealing the trial court's final CEQA and validation decisions. In September 2016, the Department issued the revised EIR in compliance with the trial court's decision. Shortly thereafter, one set of plaintiffs, as well as a new party, filed a new action challenging the revised EIR. The new action challenged the Department's certification of the revised Monterey Plus EIR and approval of the "Kern Water Bank Development and Continued Use and Operation" project. In October 2017, the trial court ruled in favor of the Department, and in December 2017, the plaintiffs appealed that ruling. The Department, however, does not expect that there would be any material adverse impact on the ability of the Department to meet its payment obligations, including those with respect to the Bonds, even if the appeals of the trial court's decisions are successful.

## **Contractor Claims**

The State Water Project has multiple purposes, including water conservation, water transportation, power generation, flood control, public recreation, and fish and wildlife enhancement. California Water Code section 11912 provides that costs incurred for the enhancement of fish and wildlife or for the development of public recreation may not be included in the Department's prices, rates and charges for water and power. Under the terms of the Water Supply Contracts, the Department may only charge amounts that recover costs allocable to water conservation and water transportation (including the costs of mitigation of the fish and wildlife impacts arising from water conservation and transportation activities).

In December 2005, Metropolitan filed a "Notice of Contest" with the Department, challenging various charges in the Department's billings. Based on its Notice of Contest, Metropolitan also filed a claim with the Victim Compensation and Government Claims Board, which claim was denied by the Board in March 2006. The Department and Metropolitan entered into a tolling agreement extending Metropolitan's time to file a lawsuit on the denied claim until March 31, 2007. The tolling of Metropolitan's time to file a lawsuit has been extended to December 31, 2019 in connection with the broader Tolling and Waiver Agreement described below.

One of the claims made by Metropolitan was that (1) Bond proceeds had been spent on the capital costs of certain recreation and fish and wildlife enhancement facilities that are a part of or are related to certain water system projects, (2) the Contractors had been charged under the Water Supply Contracts for costs relating to such recreation and fish and wildlife enhancement facilities (the "Recreation Costs"), and (3) such charges are not authorized by State law.

In the course of its investigation of Metropolitan's claims, the Department determined that it had spent approximately \$26.3 million of Bond proceeds and \$2.7 million of commercial paper proceeds on capital costs allocated by the Department to the purposes of recreation and fish and wildlife enhancement, had charged the Contractors approximately \$9.5 million for Bond debt service allocated to recreation and fish and wildlife enhancement and had paid approximately \$15.1 million of such financing costs with other revenues. The Department has issued restated bills to the Contractors for the years 1988 through 2007. This restatement has, among other things, credited back the \$9.5 million, plus interest, and restated the amount of "reductions in charges" made and to be made available to the Contractors under the Monterey Amendment to reflect the use of other revenues that are permitted to be used to pay financing costs of the Bonds allocable to recreation and fish and wildlife enhancement. (See "THE WATER SUPPLY CONTRACTS – Monterey Amendment.") One of the effects of such credits and restatements was to reallocate aggregate Water Supply Contract charges for the years 1997 through 2006 in the amount of approximately \$5 million among the Contractors, with some Contractors' aggregate Water Supply Contract charges being increased and other Contractors' aggregate Water Supply Contract charges being decreased. The Department also filed with the State Treasurer, as trustee under the Resolution, a supplemental resolution (and an amendment to such supplemental resolution) determining and designating that the other Department revenues used to pay Bond debt service were Revenues under the Resolution.

### **Tolling and Waiver Agreement with Contractors**

In 2007 and 2008, the Department entered into a Tolling and Waiver Agreement with 28 of the 29 Contractors. The Contractors that have signed the Tolling and Waiver Agreement have more than 99 percent of the maximum Table A amounts and make more than 99 percent of the annual Water Supply Contract payments (including payments that constitute Revenues under the Resolution). The Tolling and Waiver Agreement, as amended, expires on December 31, 2019.

Under the Tolling and Waiver Agreement (as amended), each signing Contractor agreed, without establishing any precedent for interpretation of the Water Supply Contracts or the Davis-Dolwig Act, (California Water Code sections 11900-11925), to waive and release certain claims, including any claim that the Department was not in compliance with its Resolution covenants or that the Contractor had any right to recover anything of value from Bondholders arising out of certain specified issues relating to the past use of commercial paper and Bond proceeds for the development of public recreation and the enhancement of fish and wildlife.

The Department no longer allocates proceeds of Notes or Bonds to the development of public recreation or fish and wildlife enhancement and, accordingly, neither the Bonds remaining outstanding nor any additional Bonds will be treated by the Department as Bonds, the proceeds of which were used to pay, directly or indirectly, costs allocable to the development of public recreation or fish and wildlife enhancement.

In addition to the waiver and release provisions in the Tolling and Waiver Agreement, the Agreement, as amended, also tolls (i.e., suspends) until December 31, 2019, the running of the time period and statute of limitations for filing by the Contractors of (1) protests regarding the Department's bills to the Contractors for 2007 through 2020, (2) claims arising from the Department's revisions to prior year invoices that were made to adjust for improper charges to the Contractors for recreation and fish and wildlife enhancement costs, and (3) certain other specified claims.

No assurance can be given that Contractors will not file additional Notices of Contest, claims and/or lawsuits with respect to such restatements of the amount of reductions in charges under the Monterey Amendment. If successful, such claims may reduce the amount of Revenues available under the Resolution. However, the Department believes that even if successful, any such contests or claims would not materially affect the total amount of Revenues received under the Resolution.

## THE CONTRACTORS

The 29 Contractors are principally located in the San Francisco Bay area, the Central Coast, the Central Valley and Southern California and their service areas encompass approximately 39,200 square miles, approximately 25 percent of the State's land area, with a population of approximately 27 million as of December 31, 2017, or about 69 percent of the State's population and approximately 8 percent of the United States' entire population, including Puerto Rico, each as of the same date.

With three exceptions, the Contractors are established as districts under various State statutes providing for the formation of districts for water-related purposes. One Contractor is a city and two are counties. Of the 29 Contractors, 24 provide water primarily for municipal and industrial purposes and five provide water primarily for agricultural purposes.

The State Water Project was designed to be a supplemental source of water for Contractors, not an exclusive source, and Contractors have various other sources of water supply.

Certain of the Contractors also provide other services, including flood control, groundwater replenishment, sewage collection and disposal, solid waste and trash collection and disposal, hydroelectric power generation and first aid, ambulance and paramedical services.

A new State law (SB 634), effective January 1, 2018, reorganizes the Castaic Lake Water Agency (one of the Contractors) and the Newhall County Water District into a new agency to be named the Santa Clarita Valley Water Agency (the "SCVWA"). The SCVWA's initial service area shall be the same as the Castaic Lake Water Agency's service area. The SCVWA shall be the successor in interest to the Castaic Lake Water Agency's Water Supply Contract, including all of the rights, responsibilities and obligations contained therein, and the agency shall succeed to the legal authority held by the Castaic Lake Water Agency for the performance and enforcement of that contract. This reorganization was approved by the Local Agency Formation Commission for the County of Los Angeles and, accordingly, the Department has amended the related Water Supply Contract to reflect SCVWA as the new counterparty.

### **Governing Bodies**

Eight of the Contractors are governed by county boards of supervisors, 19 by elected boards of directors, and one by its city council. Metropolitan's board of directors consists of representatives appointed by the governing bodies of its constituent public agencies. Boards of supervisors generally include five members who are elected by popular vote. Specially elected governing boards generally include between five and eleven members and are elected by registered voters except for a few districts in agricultural areas, where the vote is based upon ownership of land in the district.

### **Water Rates and Taxation**

Rates and charges of the Contractors are generally set by each Contractor's governing body and are not presently subject to any state or federal regulatory agency.

Many Contractors receive a major portion of their income from *ad valorem* taxes on property and some make all payments under their Water Supply Contracts from *ad valorem* taxes. (See APPENDIX A – "ESTIMATED DIRECT AND OVERLAPPING DEBT OF CERTAIN CONTRACTORS.") The ability of Contractors to tax for general purposes and to appropriate for general purposes from tax revenue is limited under California law. (See "CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES.")

## Selected Contractor Data

The table entitled “Selected Data on the Contractors” sets forth for each Contractor the year in which it was established, its estimated population as of December 31, 2017, and principal water-related activities.

### SELECTED DATA ON THE CONTRACTORS

<b>Contractor</b>	<b>Year Established</b>	<b>Estimated December 31, 2017 Population</b>	<b>Principal Water Related Activities</b>
Alameda County Flood Control and Water Conservation District, Zone 7	1967	238,600	Treats, distributes, and stores State water for municipal and agricultural purposes.
Alameda County Water District	1913	350,500	Treats and distributes State water for municipal purposes. Uses State water to replenish groundwater basins for municipal and agricultural purposes as well as for salt water barrier protection for groundwater basins.
Antelope Valley-East Kern Water Agency	1959	397,634	Distributes State water for agricultural purposes. Treats and distributes State water for municipal purposes.
City of Yuba City	1908	71,070	Treats and distributes State water for municipal purposes.
Coachella Valley Water District	1918	290,000	Exchanges State water for water from Metropolitan for storage in underground basins and for distribution for agricultural purposes.
County of Butte	1850	204,000	Distributes State water for municipal purposes.
County of Kings	1893	149,942	Exchanges State water for water from the Tulare Lake Basin Water Storage District for recreational purposes.
Crestline-Lake Arrowhead Water Agency	1962	29,000	Treats and distributes State water for municipal purposes.
Desert Water Agency	1961	81,569	Exchanges State water for water from Metropolitan for storage in underground basins and distribution for municipal purposes.
Dudley Ridge Water District	1963	36	Distributes State water for agricultural purposes.
Empire West Side Irrigation District	1931	12	Distributes State water for agricultural purposes. Exercises surface water rights.
Kern County Water Agency	1961	884,788	Distributes State water to 16 districts for agricultural and municipal use. Replenishes groundwater basins with State water for municipal and agricultural use. Exercises flood control functions.
Littlerock Creek Irrigation District	1892	2,900	Distributes State water for agricultural purposes.
The Metropolitan Water District of Southern California	1928	19,019,000	Transmits and distributes State water and water from the Colorado River to 27 public agencies for municipal, agricultural and groundwater replenishment purposes.
Mojave Water Agency	1960	480,941	Distributes State water for municipal purposes and uses State water to replenish groundwater basins.
Napa County Flood Control and Water Conservation District	1951	139,099	Distributes water for municipal purposes. Exercises flood control functions.
Oak Flat Water District	1964	10	Distributes State water for agricultural purposes.
Palmdale Water District	1918	114,533	Treats and distributes State water for municipal purposes.
Plumas County Flood Control and Water Conservation District	1967	21,200	Distributes State water. Exercises flood control functions.
San Bernardino Valley Municipal Water District	1954	661,546	Uses State water to replenish groundwater basins and for municipal purposes.
San Gabriel Valley Municipal Water District	1959	197,636	Uses State water to replenish groundwater basins.
San Geronio Pass Water Agency	1961	90,000	Uses State water to replenish groundwater basins and for municipal purposes.

<b>Contractor</b>	<b>Year Established</b>	<b>Estimated December 31, 2017 Population</b>	<b>Principal Water Related Activities</b>
San Luis Obispo County Flood Control and Water Conservation District	1945	279,083	Has contracted for State water. Exercises flood control functions.
Santa Barbara County Flood Control and Water Conservation District	1956	373,906	Has transferred its rights under its Water Supply Contract to the Central Coast Water Authority, which will distribute State water for municipal purposes. Exercises flood control functions.
Santa Clara Valley Water District	1951	1,945,465	Treats and distributes State water for municipal purposes. Distributes State water for agricultural purposes and for replenishment of groundwater basins. Exercises flood control functions.
Santa Clarita Valley Water Agency <sup>(a)</sup>	1962	278,885	Treats and distributes State water for municipal purposes.
Solano County Water Agency	1958	440,207	Distributes State water for municipal purposes. Exercises flood control functions.
Tulare Lake Basin Water Storage District	1926	23	Distributes State water for agricultural purposes. Exercises surface water rights.
Ventura County Watershed Protection District	1944	472,776	Purchases State water and sub-contracts the entire amount to Casitas Municipal Water District. While Casitas manages the facility, Ventura County has primary responsibility for payment for State water. Exercises flood control functions.
<b>Total</b>		<b><u>27,214,361</u></b>	

(a) See "THE CONTRACTORS."

Source: Department of Water Resources, State Water Project Analysis Office.

### **Water Deliveries and Contractor Payments**

The tables on the following pages show, for the last five calendar years, historical water deliveries from the State Water Project to each Contractor and historical payments under the Water Supply Contracts and under the Devil Canyon Castaic Contract by each Contractor.

## Historical Deliveries of Water from the State Water Project to the Contractors<sup>(1)</sup> (in acre-feet)

Contractor	Calendar Year					Maximum Table A Amount <sup>(2)</sup>
	2014	2015	2016	2017	2018	
Alameda County Flood Control and Water Conservation District, Zone 7 .....	34,122	32,444	53,484	62,109	39,523	80,619
Alameda County Water District.....	30,066	27,259	27,357	29,036	18,161	42,000
Antelope Valley-East Kern Water Agency .....	18,532	14,308	41,356	130,071	72,341	141,400
City of Yuba City.....	4,237	3,004	1,229	1,746	1,715	9,600
Coachella Valley Water District .....	12,750	37,596	69,422	83,908	139,089	138,350
County of Butte .....	1,652	2,763	2,518	2,320	3,029	27,500
County of Kings.....	1,386	1,229	3,660	6,645	3,714	9,305
Crestline-Lake Arrowhead Water Agency.....	1,260	1,253	1,084	294	1,207	5,800
Desert Water Agency.....	3,005	11,217	21,893	31,636	47,746	55,750
Dudley Ridge Water District .....	36,162	41,733	19,308	64,309	41,006	50,343
Empire West Side Irrigation District .....	516	624	1,822	1,698	1,591	3,000
Kern County Water Agency.....	518,021	520,758	638,926	1,190,228	613,612	982,730
Littlerock Creek Irrigation District .....	-	-	-	-	-	2,300
The Metropolitan Water District of Southern California .....	387,556	573,526	1,083,900	1,624,548	679,544	1,911,500
Mojave Water Agency .....	3,581	8,830	22,284	34,815	5,471	82,800
Napa County Flood Control and Water Conservation District..	14,237	11,199	8,993	8,225	11,682	29,025
Oak Flat Water District.....	1,520	1,077	1,855	2,893	2,289	5,700
Palmdale Water District.....	8,406	5,836	10,516	13,858	10,210	21,300
Plumas Co. Flood Control and Water Conservation District ....	251	730	387	363	508	2,700
San Bernardino Valley Municipal Water District .....	11,182	24,380	62,676	78,496	43,970	102,600
San Gabriel Valley Municipal Water District .....	1,200	5,760	16,088	22,056	17,055	28,800
San Geronimo Pass Water Agency .....	5,044	3,481	10,816	14,946	12,622	17,300
San Luis Obispo Co. Flood Control and Water Conserv. Dist..	3,206	3,473	4,199	2,845	2,427	25,000
Santa Barbara Co. Flood Control and Water Conserv. Dist. <sup>(3)</sup> ..	16,757	11,638	34,085	45,324	28,348	45,486
Santa Clara Valley Water District.....	66,846	82,888	107,164	127,155	119,736	100,000
Santa Clarita Valley Water Agency <sup>(4)</sup> .....	29,448	29,189	37,828	83,622	42,897	95,200
Solano County Water Agency .....	19,679	23,836	23,605	28,265	35,072	47,756
Tulare Lake Basin Water Storage District .....	8,316	17,336	42,387	61,920	51,450	88,922
Ventura County Watershed Protection District.....	93	1,000	3,000	14,251	648	20,000
<b>TOTAL.....</b>	<b>1,239,031</b>	<b>1,498,367</b>	<b>2,351,842</b>	<b>3,767,582</b>	<b>2,046,663</b>	<b>4,172,786</b>

<sup>(1)</sup> Historical deliveries reflect changes resulting from the reclassification of water to or from these water types; flexible withdrawal, Non-State Water Project local water rights, or Non-State Water Project water. Water delivered to Contractors includes, but is not limited to, Table A water; Table A water allocated to a previous year (carryover); water surplus to operational needs; water quality, and Delta requirements; transfer; purchased; and non-State Water Project water.

<sup>(2)</sup> Reflects permanent transfers of Table A amounts through December 31, 2018. For an explanation of Table A amounts see "THE WATER SUPPLY CONTRACTS— Basic Contract – Annual Table A Amounts."

<sup>(3)</sup> As of July 1, 1989, Santa Barbara County FCWCD transferred certain of its rights under its Water Supply Contract to certain local water purveyors and users within Santa Barbara County. Thereafter, on September 26, 1991, the local water purveyors and users transferred those rights to the Central Coast Water Authority in consideration for its agreement to provide for the delivery of water under the related Water Supply Contract to the local water purveyors and users. Although the Department did not object to these transfers, the Department considers Santa Barbara County FCWCD to be the party to which the Department is obligated under the Water Supply Contract, and the Department did not release Santa Barbara County FCWCD from its Water Supply Contract obligations.

<sup>(4)</sup> See "THE CONTRACTORS."

Source: Department of Water Resources, State Water Project Analysis Office.

**Historical Payments to the Department from the Contractors<sup>(1)</sup>**  
(in thousands)

Contractor	Calendar Year				
	2014	2015	2016	2017	2018
Alameda County Flood Control and Water Conservation District, Zone 7 .....	\$ 33,934	\$ 40,692	\$ 32,525	\$ 41,231	\$ 35,875
Alameda County Water District .....	7,152	9,437	9,908	8,677	6,387
Antelope Valley-East Kern Water Agency .....	34,793	39,627	39,678	38,346	36,395
City of Yuba City .....	520	628	754	781	745
Coachella Valley Water District .....	48,417	56,783	57,495	56,001	54,704
County of Butte .....	1,491	1,800	2,161	2,236	2,133
County of Kings .....	782	954	1,079	1,134	1,061
Crestline-Lake Arrowhead Water Agency .....	1,898	2,259	2,056	2,060	1,978
Desert Water Agency .....	18,335	20,989	20,687	20,056	19,518
Dudley Ridge Water District .....	4,344	4,666	5,474	5,949	5,321
Empire West Side Irrigation District <sup>(2)</sup> .....	224	276	326	350	310
Kern County Water Agency .....	101,792	116,916	132,429	139,496	128,028
Littlerock Creek Irrigation District .....	570	647	624	350	604
The Metropolitan Water District of Southern California ....	553,620	632,852	635,607	615,093	608,850
Mojave Water Agency .....	25,103	28,524	29,528	27,072	27,292
Napa County Flood Control and Water Conservation District .....	8,127	8,055	9,106	10,215	8,836
Oak Flat Water District .....	396	497	594	594	559
Palmdale Water District .....	5,190	5,274	6,710	6,560	6,604
Plumas County Flood Control and Water Conservation District <sup>(2)</sup> .....	150	192	233	240	236
San Bernardino Valley Municipal Water District .....	39,805	54,952	53,362	56,696	56,262
San Gabriel Valley Municipal Water District .....	9,026	10,280	10,363	10,111	9,810
San Geronio Pass Water Agency .....	16,367	25,110	21,355	22,617	20,497
San Luis Obispo Co. Flood Control and Water Conservation District .....	5,836	7,825	7,119	7,835	6,878
Santa Barbara Co. Flood Control and Water Conservation District <sup>(3)</sup> .....	43,588	47,193	38,864	43,514	44,733
Santa Clara Valley Water District .....	21,568	28,836	33,913	28,340	17,684
Santa Clarita Valley Water Agency <sup>(4)</sup> .....	23,746	27,881	29,876	26,087	27,656
Solano County Water Agency .....	9,891	9,073	12,167	11,881	11,280
Tulare Lake Basin Water Storage District .....	7,636	8,977	10,574	11,114	10,105
Ventura County Watershed Protection District .....	5,007	4,176	4,394	4,044	4,095
<b>TOTAL<sup>(5)</sup> .....</b>	<b>\$1,029,308</b>	<b>\$1,195,371</b>	<b>\$1,208,961</b>	<b>\$1,198,680</b>	<b>\$1,154,436</b>

<sup>(1)</sup> Contractor payments made in each year include the payment of 125 percent of annual debt service for the Bonds in that year; the amount of such payments that is not required to pay debt service on the Bonds in that year is credited back to the Contractors; the historical payments do not reflect such credits or any other subsequent adjustments.

<sup>(2)</sup> Have not signed the Monterey Amendment.

<sup>(3)</sup> As of July 1, 1989, Santa Barbara County FCWCD transferred certain of its rights under its Water Supply Contract to certain local water purveyors and users within Santa Barbara County. Thereafter, on September 26, 1991, the local water purveyors and users transferred those rights to the Central Coast Water Authority in consideration for its agreement to provide for the delivery of water under the related Water Supply Contract to the local water purveyors and users. Although the Department did not object to these transfers, the Department considers Santa Barbara County FCWCD to be the party to which the Department is obligated under the Water Supply Contract, and the Department did not release Santa Barbara County FCWCD from its Water Supply Contract obligations.

<sup>(4)</sup> See "THE CONTRACTORS."

<sup>(5)</sup> Totals may not sum due to rounding.

Source: Department of Water Resources, State Water Project Analysis Office.



## Payment History

The Department has not experienced payment delinquencies or defaults by Contractors that have had a materially adverse effect on the operation or maintenance of the State Water Project, or the ability of the Department to pay its obligations when due. Under the Water Supply Contracts, if a Contractor defaults in payment, the Department may, and under certain conditions is required to, upon six months' notice, suspend water deliveries during the period of default. In accordance with a statutory requirement, each Water Supply Contract requires that whenever the Contractor fails or is unable to raise sufficient funds by other means the Contractor must levy upon all taxable property in the Contractor's service area a tax or assessment sufficient (with other available moneys) to provide for all payments under the Water Supply Contract. (See "CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES.")

## Selected Contractor Financial Information

*Relative Contributions of Contractors.* The following table lists the Contractors whose payments are expected (accounting for projected capital expenditures on Water System Projects after the issuance of the Series BA Bonds) to contribute at least five percent (5%) of Revenues for payment of the Bonds based on projected payments to the Department through the final maturity of the Bonds and the expected percentage contribution of each to such Revenues over the term of the Bonds. These percentages may change over time.

Contractor	Projected Percentage Contribution of Revenues
The Metropolitan Water District of Southern California .....	41%
Santa Barbara County Flood Control and Water Conservation District/Central Coast Water Authority .....	11
San Bernardino Valley Municipal Water District .....	10
Kern County Water Agency .....	8
Alameda County Flood Control and Water Conservation District, Zone 7 .....	7
San Geronio Pass Water Agency .....	5
Twenty-three other Contractors .....	18
<b>Total .....</b>	<b>100%</b>

*Metropolitan.* The audited financial statements of Metropolitan for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword "Series BA" and choosing the appropriate link.

*Santa Barbara County FCWCD/Central Coast Water Authority.* As of July 1, 1989, Santa Barbara County FCWCD transferred certain of its rights under its Water Supply Contract to certain local water purveyors and users within Santa Barbara County. On September 26, 1991, the local water purveyors and users transferred those rights to the Central Coast Water Authority in consideration for its agreement to provide for the delivery of water under the related Water Supply Contract to the local water purveyors and users. Although the Department did not object to these transfers, the Department considers Santa Barbara County FCWCD to be the party to which the Department is obligated under the Water Supply Contract, and the Department did not release Santa Barbara County FCWCD from its Water Supply Contract obligations. The audited financial statements of Santa Barbara County FCWCD for the year ended June 30, 2018, and the audited financial statements of Central Coast Water Authority for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword "Series BA" and choosing

the appropriate link. As part of the annual “true-up” calculation of water charges described above (see “THE WATER SUPPLY CONTRACTS – Basic Contract – *Water Charges*”), the Department increased the transportation minimum (operating) charges allocable to Santa Barbara County FCWCD from approximately \$10 million for 2018 to \$24 million for 2019. This increase is primarily due to additional planned expenditures in 2019 and a true-up of 2017 and 2018 expenditures.

*San Bernardino Valley Municipal Water District.* The audited financial statements of the San Bernardino Valley Municipal Water District for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword “Series BA” and choosing the appropriate link.

*KCWA.* The audited financial statements of KCWA for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword “Series BA” and choosing the appropriate link.

*Alameda County Flood Control and Water Conservation District, Zone 7.* The audited financial statements of the Alameda County Flood Control and Water Conservation District, Zone 7 for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword “Series BA” and choosing the appropriate link.

*San Geronio Pass Water Agency.* The audited financial statements of the San Geronio Pass Water Agency for the year ended June 30, 2018, can be obtained at <http://www.munios.com>, then searching for keyword “Series BA” and choosing the appropriate link.

*Certain Limitations.* **The Department has made no independent verification of the data contained in the audited financial statements of any Contractor and makes no representations as to its correctness, completeness, or comparability.**

*Contractor Official Statements and Continuing Disclosure Filings.* Various contractors periodically file Official Statements and disclosure reports with the Municipal Securities Rulemaking Board (“MSRB”) in connection with their publicly offered debt. Such Official Statements and disclosure reports are available from the MSRB but are not incorporated by reference herein and the Department does not assume any responsibility for the completeness or accuracy thereof.

## **CERTAIN LIMITATIONS ON CONTRACTOR REVENUE SOURCES**

This section describes certain constitutional or statutory provisions that may limit the ability of some or all of the Contractors to levy and collect fees, charges, taxes or assessments.

### **Article XIII A of the Constitution**

An initiative measure approved by the California voters on June 6, 1978 (Proposition 13), added Article XIII A to the California Constitution. Section 1(a) of Article XIII A limits the maximum *ad valorem* taxes on real property to one percent of the “full cash value” of the property, subject to certain exceptions, including *ad valorem* taxes to pay debt service indebtedness approved by voters prior to July 1, 1978. (See “THE WATER SUPPLY CONTRACTS – Obligation to Levy Taxes or Assessments.”) “Full cash value” is defined as the valuation of real property as shown on the 1975-76 tax roll, and thereafter the appraised value of property when purchased, newly constructed or a change in ownership has occurred. The value base of the property may also be increased to reflect the inflation rate, but not to exceed 2 percent per year.

On June 3, 1986, the California voters approved an amendment to Section 1(b) of Article XIII A permitting *ad valorem* taxes or special assessments in excess of the one percent limit in Section 1(a) to pay

the interest and redemption charges on 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.

### **Article XIII B of the Constitution**

An initiative amendment to the California Constitution (Article XIII B) was approved by the California electorate on November 6, 1979. This amendment establishes limits on certain annual appropriations of state and local government entities. Initially, the limits are based generally on appropriations for the fiscal year 1978-79 with future adjustments permitted for changes in the cost of living, population and certain other factors. The definition of appropriations subject to limitation is stated so as to exclude, among other things, (1) appropriations of proceeds received by a government entity from user fees to the extent such proceeds do not exceed the costs reasonably borne by such entity in providing the product or service, (2) the appropriations of any special district “which did not as of the 1977-78 fiscal year levy an *ad valorem* tax on property in excess of 12 1/2 cents per \$100 of assessed value,” and (3) “appropriations required to pay the cost of interest and redemption charges, including the funding of any reserve or sinking fund required in connection therewith, on indebtedness existing or legally authorized as of January 1, 1979, or a bonded indebtedness thereafter approved . . .” by vote of the electors of the issuing entity. In addition, the amendment provides that nothing in it “shall be construed to impair the ability of the State or any local government to meet its obligations with respect to existing or future bonded indebtedness.”

### **Article XIII C and Article XIII D of the Constitution**

A substantial portion of the revenues of the Contractors is derived from the collection of charges for water service. In addition, each Contractor has agreed to levy a tax or assessment sufficient to provide for all payments under its Water Supply Contract if it is unable to raise sufficient funds by other means. The Contractors’ ability to collect such charges, and to levy such taxes or assessments, may be limited by the Right to Vote on Taxes Act (“Proposition 218”), an initiative amendment to the California Constitution approved by the California voters in November 1996.

Proposition 218 added Articles XIII C and XIII D to the California Constitution, creating additional requirements for the imposition by most local governments of “general taxes,” “special taxes,” “assessments,” “fees,” and “charges.” Proposition 218 became effective, pursuant to its terms, as of November 6, 1996, although compliance with some of its provisions was deferred until July 1, 1997, and certain of its provisions purport to apply to any tax imposed for general governmental purposes (i.e., “general taxes”) imposed, extended or increased on or after January 1, 1995 and prior to November 6, 1996. Article XIII D imposes substantive and procedural requirements on the imposition, extension or increase of any “fee” or “charge” subject to its provisions. A “fee” or “charge” subject to Article XIII D includes any levy, other than an *ad valorem* tax, special tax or assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership. Article XIII D prohibits, among other things, the imposition of any proposed fee or charge, and, possibly, the increase of any existing fee or charge, in the event written protests against the proposed fee or charge are presented at a required public hearing on the fee or charge by a majority of owners of the parcels upon which the fee or charge is to be imposed. Except for fees and charges for water, sewer and refuse collection services, the approval of a majority of the property owners subject to the fee or charge, or at the option of the agency, by a two-thirds vote of the electorate residing in the affected area, is required within 45 days following the public hearing on any such proposed new or increased 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 vs. Verjil (published July 24, 2006) (“Bighorn”) have clarified some of the uncertainty surrounding the applicability of Section 6 of Article XIII D to service fees and charges. In Richmond, the Shasta Community Services

District charged a water connection fee, which included a capacity charge for capital improvements to the water system and a fire suppression charge. The Court held that both the capacity charge and the fire suppression charge were not subject to Article XIID because a water connection fee is not a property-related fee or charge because it 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.

Article XIID also provides that "standby charges" are considered "assessments" and must follow the procedures required for "assessments" under Article XIID and imposes several procedural requirements for the imposition of any assessment, which may include (1) various notice requirements, including the requirement to mail a ballot to owners of the affected property; (2) the substitution of a property owner ballot procedure for the traditional written protest procedure, and providing that "majority protest" exists when ballots (weighted according to proportional financial obligation) submitted in opposition exceed ballots in favor of the assessments; and (3) the requirement that the levying entity "separate the general benefits from the special benefits conferred on a parcel" of land. Article XIID also precludes standby charges for services that are not immediately available to the parcel being charged.

Article XIID provides that all existing, new or increased assessments are to comply with its provisions beginning July 1, 1997. Existing assessments imposed on or before November 5, 1996, and "imposed exclusively to finance the capital costs or maintenance and operations expenses for [among other things] water" are exempted from some of the provisions of Article XIID applicable to assessments.

Article XIIC extends the people's initiative power to reduce or repeal existing local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees, taxes, assessment fees and charges imposed after November 6, 1996 and absent other authority could result in retroactive reduction in any existing taxes, assessments, fees or charges. In Bighorn, the Court concluded that under Article XIIC local voters by initiative may reduce a public agency's water rates and delivery charges. The Court noted, however, that it was not holding that the authorized initiative power is free of all limitations, stating that it was not determining whether the electorate's initiative power is subject to the public agency's statutory obligation to set water service charges at a level that will "pay the operating expenses of the agency, ... provide for repairs and depreciation of works, provide a reasonable surplus for improvements, extensions, and enlargements, pay the interest on any bonded debt, and provide a sinking or other fund for the payment of the principal of such debt as it may become due."

In November 2010, the California voters approved the Supermajority Vote to Pass New Taxes and Fees Act ("Proposition 26"), an initiative amendment to Article XIIC. Proposition 26 amended Article XIIC to add additional restrictions on local agencies' ability to impose new or increase existing charges. These additional restrictions do not, however, apply to, among other things, "property-related fees imposed in accordance with the provisions of Article XIID," which includes a fee for ongoing water service.

No assurance may be given that Articles XIIC and XIID will not have a material adverse impact on Contractors' ability to generate revenues.

## **Other Initiative Measures and Related Litigation**

Articles XIII A, XIII B, XIII C and XIII D were adopted, and in some cases amended, pursuant to California's constitutional initiative process. From time to time other initiative measures could be adopted by California voters, placing additional limitations on the ability of the Contractors to increase and/or collect revenues.

In November 2018, a property owner filed a class action lawsuit against the Coachella Valley Water District ("Coachella") challenging Coachella's assessment of property taxes to collect the monies to pay its Water Supply Contract charges to the Department. The complaint alleges violations of, among other things, Constitutional Articles XIII A (Proposition 13), XIII C and XIII D (Propositions 218 and 26) and Coachella's Water Supply Contract with the Department. That lawsuit is currently pending. If the plaintiffs are successful, Coachella may be required to raise the amounts necessary to pay the Water Supply Contract charges through other means, such as through charges to water users.

## **Special Limitations Applicable to Metropolitan**

In 1983, the California Legislature placed additional restrictions on the taxing power of Metropolitan. The restrictions reflected the ongoing debates among Metropolitan's member agencies over whether to continue using property taxes as a major source of revenue or whether to shift to reliance on water rates. The legislation permitted Metropolitan to raise its property tax rate above one percent only under limited circumstances. The rate could be higher in 1983-84, but in 1984-85 and 1985-86, the rate would have to return to its 1982-83 level unless 80 percent of Metropolitan's board found that a fiscal emergency existed. The bill also required Metropolitan to report to the Legislature regarding its efforts to reduce its reliance on property taxes. Metropolitan reached an agreement among its member agencies for gradually shifting to an increased reliance on water rates and filed its report. In response, the Legislature codified the agreement in SB 1445 in 1984 (Chapter 271, Statutes of 1984), which, among other things, made several amendments to Metropolitan's organizing Act. One provision provides that commencing with fiscal year 1990-91, any *ad valorem* property tax levied by Metropolitan, other than special annexation tax levies, shall not exceed the composite amount required to pay (1) its general obligation bond debt service, and (2) that portion of its Water Supply Contract payment that is reasonably allocable, as determined by Metropolitan, to the portion of the debt service payment for the Burns-Porter Act bonds that were approved by the State's voters in 1960 and which were used to finance construction of facilities for the benefit of Metropolitan. This statutory tax levy restriction would not apply, however, if Metropolitan's board, following a hearing to consider the issue, should find that a tax in excess of the limitation would be essential to Metropolitan's fiscal integrity.

## **TAX MATTERS**

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Department ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series BA Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code") and is exempt from State of California personal income taxes. Bond Counsel is of the further opinion that interest on the Series BA Bonds is not a specific preference item for purposes of the federal alternative minimum tax. A complete copy of the proposed form of opinion of Bond Counsel is set forth in APPENDIX F hereto.

To the extent the issue price of any maturity of the Series BA Bonds is less than the amount to be paid at maturity of such Series BA Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Series BA Bonds), the difference constitutes "original issue discount," the

accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the Series BA Bonds which is excluded from gross income for federal income tax purposes and exempt from State of California personal income taxes. For this purpose, the issue price of a particular maturity of the Series BA Bonds is the first price at which a substantial amount of such maturity of the Series BA Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the Series BA Bonds accrues daily over the term to maturity of such Series BA Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series BA Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Series BA Bonds. Beneficial Owners of the Series BA Bonds should consult their own tax advisors with respect to the tax consequences of ownership of Series BA Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such Series BA Bonds in the original offering to the public at the first price at which a substantial amount of such Series BA Bonds is sold to the public.

Series BA Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) (“Premium Bonds”) will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax exempt interest received, and a beneficial owner’s basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such beneficial owner. Beneficial owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Series BA Bonds. The Department has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Series BA Bonds will not become includable in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Series BA Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Series BA Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring), or any other matters coming to Bond Counsel’s attention after the date of issuance of the Series BA Bonds may adversely affect the value of, or the tax status of interest on, the Series BA Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the Series BA Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Series BA Bonds may otherwise affect a beneficial owner’s federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the beneficial owner or the beneficial owner’s other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Series BA Bonds to be subject, directly or indirectly, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent beneficial owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of

any such legislative proposals, clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Series BA Bonds. Prospective purchasers of the Series BA Bonds should consult their own tax advisors regarding any pending or proposed federal or state tax legislation, regulations or litigation, and regarding the impact of future legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Series BA Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of the Department or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. The Department has covenanted, however, to comply with the requirements of the Code.

Unless separately engaged, Bond Counsel is not obligated to defend the Department or the beneficial owners regarding the tax-exempt status of the Series BA Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than the Department and their appointed counsel, including the beneficial owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which the Department legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the Series BA Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the Series BA Bonds, and may cause the Department or the beneficial owners to incur significant expense.

## **RATINGS**

Moody's Investors Service, Inc. ("Moody's"), and S&P Global Ratings ("S&P"), have assigned ratings of "Aa1" and "AAA," respectively, to the Series BA Bonds. Such ratings are based in part upon information provided by the Department. Each rating reflects only the views of the applicable rating agency, and an explanation of the significance of such rating may be obtained only from such rating agency. Such ratings are not a recommendation to buy, sell or hold the Series BA Bonds. There can be no assurance that either such rating will continue for any given period of time or that it will not be revised downward or withdrawn entirely if, in the judgment of the applicable rating agency, circumstances so warrant. Any such downward revision or withdrawal of any rating may have an adverse effect on the marketability or market price of the Series BA Bonds. The Department undertakes no responsibility to maintain its current credit ratings on the Bonds or to oppose any downward revision, suspension or withdrawal.

## **MUNICIPAL ADVISOR**

Montague DeRose and Associates, LLC is serving as municipal advisor to the Department in connection with the issuance of the Series BA Bonds.

## **APPROVAL OF LEGAL PROCEEDINGS**

The issuance of each of the Series BA Bonds is subject to the delivery on the issuance date of the approving opinions of The Honorable Xavier Becerra, Attorney General of the State, and Orrick, Herrington & Sutcliffe LLP, Bond Counsel. The proposed forms of such opinions are set forth in APPENDIX E and APPENDIX F, respectively to this Official Statement.

## **FINANCIAL STATEMENTS**

The financial statements of the State Water Resources Development System as of and for the year ended June 30, 2018 (with comparative amounts for fiscal year ending June 30, 2017), appearing in APPENDIX B to this Official Statement have been audited by Vavrinek, Trine, Day & Co., LLP (the “Auditor”), independent auditors, as set forth in the report of the Auditor appearing in APPENDIX B. GALLINA LLP, whose practice became part of CliftonLarson Allen LLP as of January 1, 2017, audited the financial statements of the State Water Resources Development System as of and for the year ended June 30, 2017.

The State Water Resources Development System includes the State Water Project, the Davis-Grunsky Act Program and the San Joaquin Drainage Program.

## **PURCHASE AND REOFFERING**

The Series BA Bonds were sold at a competitive sale on April 16, 2019, and awarded to Jefferies LLC (the “Initial Purchaser”). The Initial Purchaser has agreed to purchase the Series BA Bonds at a price of \$368,971,358.56, representing the principal amount of the Series BA Bonds, plus original issue premium of \$70,262,310.15, less an Initial Purchaser’s discount of \$880,951.59. The Notice of Sale related to the sale of the Series BA Bonds (the “Notice of Sale”) provides that the Initial Purchaser will purchase all of the Series BA Bonds, if any Series BA Bonds are purchased, the obligation to make such purchase is subject to certain terms and conditions set forth in the Notice of Sale, the approval of certain legal matters by counsel and certain other conditions. The Initial Purchaser has represented to the Department that the Series BA Bonds were reoffered to the public at the applicable price set forth on the inside cover page of this Official Statement. The Initial Purchaser may offer and sell the Series BA Bonds to certain dealers and others at prices lower than the offering prices stated on the inside cover page of this Official Statement. The public offering prices stated may be changed from time to time by the Initial Purchaser.

## **CERTAIN RELATIONSHIPS**

The financing of the Water System Project and related activities, including the sale of Bonds, has been made possible, in part, by hiring underwriters, financial advisors, consultants and lawyers to assist and advise the Department. Many of the firms and individuals involved in this effort have prior or ongoing relationships with other governmental entities (including Contractors), utilities and other businesses that contract or compete with the Department or contract with the State and other State agencies or that may do so in the future. The Department has required disclosure of, and has taken into account, these relationships and has determined it to be in the best interests of the Department to continue to work with these firms and individuals.

In addition, in the ordinary course of sales, trading, brokerage and financing activities, the Initial Purchaser 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 or senior loans, as applicable, of the Department, the State, other governmental entities and utilities. In connection with these activities and the provision of other services, the Initial Purchaser may be or become creditors of such entities. In addition, the Initial Purchaser, 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, the Department, the State, other State agencies, other governmental entities and utilities.



## **LITIGATION**

No litigation is pending or threatened concerning the validity or enforceability of the Series BA Bonds. Except as described above under “WATER SUPPLY CONTRACT RELATED LITIGATION – Monterey Amendment Litigation,” no litigation is pending or threatened concerning the validity or enforceability of the Water Supply Contracts.

At any given time, including the present, there are a number of civil actions pending against the Department, which could, if determined adversely to the Department, affect the Department’s expenditures and in some cases, its revenues. However, based in part upon discussions with the Attorney General, the Department does not believe there are any pending actions that are likely to have a material adverse effect on the Department’s ability to pay principal of, and premium, if any, and interest on the Bonds when due.

## **CONTINUING DISCLOSURE**

The Department will covenant for the benefit of the Holders and Beneficial Owners (as defined in the Continuing Disclosure Certificate) of the Series BA Bonds to provide certain financial information and operating data relating to the Department by not later than nine months following the end of the Department’s fiscal year (which shall be March 31 of each year, so long as the Department’s fiscal year ends on June 30) (the “Annual Report”), commencing with the report containing 2018-2019 Fiscal Year financial information, and to provide notices of the occurrence of certain enumerated events (“Event Notices”). These covenants have been made in order to assist the Initial Purchaser in complying with Rule 15c2-12 of the Securities and Exchange Commission. Unless otherwise directed by the MSRB or the Securities and Exchange Commission, the Annual Report and Event Notices will be filed by the Department with the MSRB through its Electronic Municipal Market Access website. The specific nature of the information to be contained in the Annual Report or the Event Notices and certain other terms of this continuing disclosure obligation is summarized in APPENDIX D – “Form of Continuing Disclosure Certificate.” Pursuant to the Resolution, failure of the Department to comply with its obligations under the Continuing Disclosure Certificate (as that same may be supplemented or amended from time to time, the “Continuing Disclosure Certificate”) will not be considered an event of default under the Resolution. However, the State Treasurer, any Holder or Beneficial Owner (as defined in the Continuing Disclosure Certificate) may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Department to comply with its obligations under the Continuing Disclosure Certificate.

In the past five years, the Department has always filed each annual report on a timely basis as required by its continuing disclosure undertakings; however, the annual reports for fiscal years 2013 through 2014, solely with respect to KCWA, omitted the information for such Contractor described in Section 2(f) of APPENDIX D – “FORM OF CONTINUING DISCLOSURE CERTIFICATE – Annual Reports.” In addition, the annual reports for fiscal years 2013 through 2016 contained assessed valuation information for Santa Barbara County (instead of Santa Barbara County FCWCD), and certain information regarding Coachella Valley Water District tax rates was omitted. The Department’s annual report for fiscal year 2017 contained the required information for the Santa Barbara County FCWCD and the Coachella Valley Water District.

## MISCELLANEOUS

The Appendices to this Official Statement are integral parts of this Official Statement and must be read together with all other parts of this Official Statement.

All references to the Bonds, the Resolution, any supplemental resolution, the Water Supply Contracts, the Continuing Disclosure Certificate and any provision of law are subject to the terms and provisions of each such document or law and do not purport to be complete statements of the terms and provisions thereof, and reference to the complete texts is made for further information in connection therewith. Copies of the Resolution, the Water Supply Contracts and the Continuing Disclosure Certificate are on file at the offices of the Department and the State Treasurer. Statements herein involving matters of opinion, whether or not specifically so designated, are intended merely as such and not as representations of fact.

The Department maintains a website at <http://www.water.ca.gov>. Certain information regarding the Department and any current bond offerings, including the Series BA Bonds, are available via the Department's investor website at <https://www.cawaterbonds.com>. The information contained on such websites is not incorporated herein by reference and is not intended to be relied upon in making an investment decision with respect to the Series BA Bonds.

The agreement of the Department is fully set forth in the Resolution, and this Official Statement is not to be construed as, and is not, a contract with the purchasers of the Series BA Bonds.



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**APPENDIX A**

**ESTIMATED DIRECT AND OVERLAPPING DEBT OF CERTAIN CONTRACTORS**

The data presented in this Appendix summarize certain information regarding taxes and tax-supported debt outstanding within the service territory of each of the Contractors whose payments are expected (accounting for projected capital expenditures on Water System Projects after the issuance of the Series BA Bonds) to contribute at least five percent (5%) of Revenues for payment of the Bonds based on projected payments to the Department through the final maturity of the Bonds. These Contractors and the expected percentage contribution of each to such Revenues over the term of the Bonds are as follows (these percentages may change over time).

<b>Contractor</b>	<b>Projected Percentage Contribution of Revenues</b>
The Metropolitan Water District of Southern California .....	41%
Santa Barbara County Flood Control and Water Conservation District/Central Coast Water Authority* .....	11
San Bernardino Valley Municipal Water District .....	10
Kern County Water Agency .....	8
Alameda County Flood Control and Water Conservation District, Zone 7 .....	7
San Geronio Pass Water Agency .....	5
Twenty-three other Contractors .....	18
Total .....	100%

\* As of July 1, 1989, Santa Barbara County FCWCD transferred certain of its rights under its Water Supply Contract to certain local water purveyors and users within Santa Barbara County. Thereafter, on September 26, 1991, the local water purveyors and users transferred those rights to the Central Coast Water Authority in consideration for its agreement to provide for the delivery of water under the related Water Supply Contract to the local water purveyors and users. Although the Department did not object to these transfers, the Department considers Santa Barbara County FCWCD to be the party to which the Department is obligated under the Water Supply Contract, and the Department did not release Santa Barbara County FCWCD from its Water Supply Contract obligations.

The Department has made no independent verification of the data contained in this Appendix and makes no representations as to its correctness, completeness, or comparability.

**METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**  
**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT**  
(unaudited)

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation		
			Amount	Percent	Agency Total Rate (3)	Typical Total Rate (6)	
1997	\$ 804,045,644,470	(4)	(4)	(4)	(4)	0.0089	1.051802
1998	817,424,957,700	(4)	(4)	(4)	(4)	0.0089	1.055796
1999	851,898,186,329	(4)	(4)	(4)	(4)	0.0089	1.067214
2000	910,809,885,402	(4)	(4)	(4)	(4)	0.0089	1.074728
2001	980,279,077,736	(4)	(4)	(4)	(4)	0.0088	1.078822
2002	1,169,293,222,451	(4)	(4)	(4)	(4)	0.0077	1.114077
2003	1,258,093,521,782	(4)	(4)	(4)	(4)	0.0067	1.102497
2004	1,359,534,425,177	(4)	(4)	(4)	(4)	0.0061	1.155130
2005	1,478,635,379,913	(4)	(4)	(4)	(4)	0.0058	1.169638
2006	1,643,013,823,543	(4)	(4)	(4)	(4)	0.0052	1.155967
2007	1,839,880,963,698	(4)	(4)	(4)	(4)	0.0047	1.179045
2008	2,015,721,475,188	(4)	(4)	(4)	(4)	0.0045	1.174687
2009	2,120,944,531,740	(4)	(4)	(4)	(4)	0.0043	1.189738
2010	2,081,864,775,527	(4)	(4)	(4)	(4)	0.0043	1.220441
2011	2,049,887,037,949	(4)	(4)	(4)	(4)	0.0037	1.269859
2012	2,068,668,852,729	(4)	(4)	(4)	(4)	0.0037	1.245849
2013	2,097,369,921,305 (7)	(4)	(4)	(4)	(4)	0.0035	1.265550
2014	2,183,386,537,251	47,704,924.11	536,777.41	1.13%	(5)	0.0035	1.224234
2015	2,314,948,470,714	48,035,283.02	521,310.97	1.09	(5)	0.0035	1.218651
2016	2,451,003,605,785	52,507,872.55	582,061.13	1.11	(5)	0.0035	1.191994
2017	2,583,386,184,090	56,623,896.43	507,550.17	0.90	(5)	0.0035	1.191849
2018	2,739,625,782,568 (8)	61,460,534.68	566,960.01	0.92	(5)	0.0035	1.193027
2019	2,916,620,002,752					0.0035	1.196046

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$60,600,000
Less: Self-supporting Debt	0
Total Net Direct Debt	\$60,600,000
Total Overlapping Tax and Assessment Debt	\$54,356,814,746
Direct and Overlapping Tax and Assessment Debt	\$54,417,414,746
Total Gross Overlapping General Fund Obligation Debt	\$13,482,567,643
Less: Self-supporting Debt	1,158,568,100
Total Net Overlapping General Fund Obligation Debt	\$12,323,999,543
Overlapping Tax Increment Debt	\$6,874,109,601
Gross Direct and Overlapping Bonded Debt	\$74,774,091,990
Net Direct and Overlapping Bonded Debt	\$73,615,523,890

Ratios to Assessed Valuation at January 15, 2019:

Gross Direct Debt .....	0.002%
Net Direct Debt .....	0.002%
Direct and Overlapping Tax and Assessment Debt .....	1.87%
Total Gross Direct and Overlapping Bonded Debt .....	2.56%
Total Net Direct and Overlapping Bonded Debt .....	2.52%

- (1) Assessed Valuations are based on 100% of cash value beginning in 1981-82, rather than 25% as in previous years. The assessed valuations include state-reimbursable exemptions. Beginning in 1988-89, assessed valuations exclude unitary utility valuations.
- (2) Excludes tax levy on inventories and other unsecured property.
- (3) Base rate for all member areas. Some areas added after formation of the District pay higher rates.
- (4) Information unavailable.
- (5) Los Angeles County portion only.
- (6) Los Angeles County TRA 67.
- (7) Excludes Orange County November 2012 unsecured adjustments.
- (8) The 2017-18 Assessed Valuation is \$1,005,087,583 less than the 8/15/2017 reported certified assessed valuation. The reduction is due to the discovery of 28 tax rate areas in Los Angeles County with double-counted assessed valuations.

**METROPOLITAN WATER DISTRICT**

2018-19 Assessed Valuation: \$2,916,620,002,752

<u>OVERLAPPING TAX AND ASSESSMENT DEBT:</u>	<u>% Applicable</u>	<u>Debt 1/15/19</u>
Community College Districts	Various	\$11,277,561,594
Los Angeles Unified School District	99.557	10,154,291,326
San Diego Unified School District	99.961	3,385,733,924
Other Unified School Districts	Various	12,616,590,877
High School and School Districts	Various	6,181,489,562
City of Los Angeles	99.995	877,216,137
Other Cities	Various	235,197,286
Irvine Ranch Water District Improvement Districts	100.	556,800,000
Santa Margarita Water District Improvement Districts	100.	58,440,000
Other Water Districts	Various	35,510,843
Healthcare Districts	Various	670,864,356
Other Special Districts	Various	14,255,323
Community Facilities Districts	Various	7,212,164,396
1915 Act Bonds and Other Special Assessment District Bonds	Various	<u>1,080,699,122</u>
TOTAL OVERLAPPING TAX AND ASSESSMENT DEBT		\$54,356,814,746

**METROPOLITAN WATER DISTRICT TOTAL DIRECT DEBT** **\$60,600,000**

TOTAL DIRECT AND OVERLAPPING TAX AND ASSESSMENT DEBT \$54,417,414,746

<u>OVERLAPPING GENERAL FUND DEBT:</u>		
Los Angeles County Obligations	93.143%	\$ 2,020,748,774
Orange County Obligations	99.908	789,705,041
Riverside County Obligations	66.008	688,946,630
San Bernardino County Obligations	50.834	349,128,557
San Diego County Obligations	96.681	750,524,935
Ventura County Obligations	76.847	256,668,980
City of Anaheim General Fund Obligations	99.861	587,876,833
City of Long Beach General Fund Obligations and Pension Obligation Bonds	100.	138,290,000
City of Los Angeles General Fund and Judgment Obligations	99.995	1,466,054,506
City of Pasadena General Fund and Pension Obligation Bonds	100.	546,707,722
City of San Diego General Fund Obligations	99.949	533,222,569
Other City General Fund Obligations	Various	3,038,006,975
Water District General Fund Obligations	Various	80,042,901
Los Angeles Unified School District Certificates of Participation	99.557	179,745,186
Other School District General Fund Obligations	Various	1,952,779,401
Other Special District General Fund Obligations	Various	<u>104,118,633</u>
TOTAL GROSS OVERLAPPING GENERAL FUND DEBT		\$13,482,567,643
Less: Obligations supported from other revenue sources		<u>1,158,568,100</u>
TOTAL NET OVERLAPPING GENERAL FUND DEBT		\$12,323,999,543

OVERLAPPING TAX INCREMENT DEBT (Successor Agencies): \$6,874,109,601

GROSS COMBINED TOTAL DEBT \$74,774,091,990

NET COMBINED TOTAL DEBT (1) \$73,615,523,890

(1) Debt instruments included are general obligation bonds, lease revenue bonds and certificates of participation (when supported by the general fund), pension obligation bonds, 1915 Act special assessment bonds and Mello-Roos Act special assessment bonds. Excluded are enterprise revenue bonds, mortgage revenue bonds, tax and revenue anticipation notes and non-bonded capital lease obligations. Qualified Zone Academy Bonds are included based on principal due at maturity.

Ratios to 2018-19 Assessed Valuation:

<b>Direct Debt (\$60,600,000)</b> .....	<b>0.002%</b>
Total Direct and Overlapping Tax and Assessment Debt.....	1.87%
Gross Combined Total Debt.....	2.56%
Net Combined Total Debt.....	2.52%

Ratios to Redevelopment Incremental Valuation (\$405,720,851,445):

Total Overlapping Tax Increment Debt.....	1.69%
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**SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION  
DISTRICT**

**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT  
(unaudited)**

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation	
			Amount	Percent	Agency Total Rate	Typical Total Rate
1996	\$23,727,401,813	\$254,306,422	\$5,249,677	2.06%	0.00000	1.00761
1997	24,437,672,493	263,655,875	4,229,750	1.60	0.00000	1.01223
1998	25,413,740,531	272,955,441	3,252,689	1.19	0.00000	1.01106
1999	26,929,428,510	292,586,142	2,482,863	0.85	0.00000	1.02221
2000	28,506,012,483	312,186,449	4,545,263	1.46	0.00000	1.01919
2001	30,811,725,758	336,579,195	6,194,044	1.84	0.00000	1.02724
2002	33,470,431,216	325,958,442	4,097,562	1.26	0.00000	1.02799
2003	35,986,575,550	348,404,287	4,327,765	1.24	0.00000	1.02707
2004	38,619,690,313	378,733,525	3,827,763	1.01	0.00000	1.02530
2005	42,010,491,267	412,156,061	4,490,277	1.09	0.00000	1.02086
2006	46,430,715,568	459,630,599	5,978,796	1.30	0.00000	1.02586
2007	51,053,483,690	508,780,407	10,760,629	2.11	0.00000	1.02631
2008	54,591,882,970	547,037,318	13,322,133	2.44	0.00000	1.02633
2009	56,957,844,751	570,319,442	15,942,615	2.80	0.00000	1.03483
2010	57,102,686,939	573,825,003	13,723,941	2.39	0.00000	1.03496
2011	57,601,688,658	575,911,027	9,363,054	1.63	0.00000	1.03496
2012	58,359,033,685	582,738,827	7,131,251	1.22	0.00000	1.03619
2013	58,837,930,366	590,636,407	5,574,662	0.94	0.00000	1.03969
2014	61,284,526,961	617,343,477	4,463,837	0.72	0.00000	1.04840
2015	64,587,513,414	658,541,674	4,942,942	0.75	0.00000	1.04840
2016	67,794,437,086	684,498,184	1,674,439	0.24	0.00000	1.04515
2017	70,290,131,386	720,076,190	4,641,237	0.64	0.00000	1.04088
2018	74,174,960,316	749,310,498	7,405,629	0.98	0.00000	1.05136
2019	77,584,016,408		available at end of year		0.00000	1.06593

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$0
Less: Supported Debt	<u>0</u>
Total Net Direct Debt	\$0
Total Gross Overlapping Tax and Assessment Debt	\$795,065,406
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax and Assessment Debt	\$795,065,406
Total Gross Overlapping General Fund Debt	\$134,546,271
Less: Supported Debt	<u>50,480,000</u>
Total Net Overlapping General Fund Debt	\$ 84,066,271
Total Gross Overlapping Tax Increment Debt	\$38,635,000
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax Increment Debt	\$38,635,000
Total Gross Direct and Overlapping Bonded Debt	\$968,246,677
Less: Self-supporting Debt	<u>50,480,000</u>
Total Net Direct and Overlapping Bonded Debt	\$917,766,677

Ratio to Assessed Valuation at January 15, 2019:

Gross Direct Debt .....	0.00%
Net Direct Debt.....	0.00%
Total Gross Overlapping Tax and Assessment Debt.....	1.02%
Total Net Overlapping Tax and Assessment Debt .....	1.02%
Gross Direct and Overlapping Bonded Debt.....	1.25%
Net Direct and Overlapping Bonded Debt .....	1.18%

- (1) The assessed valuations include state-reimbursable exemptions and exclude redevelopment incremental valuations. Beginning in 1988-89, assessed valuations exclude unitary utility valuations.
- (2) Excludes tax levy on inventories and other unsecured property.
- (3) Information not available until fiscal year is completed.

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**  
**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT**  
(unaudited)

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation		
			Amount	Percent	Agency Rate	School District Total Rate	Total Tax Rate
2015	44,303,762,567				0.1625	0.0987	1.2612
2016	46,634,312,131				0.1625	0.0970	1.2595
2017	49,387,383,172				0.1625	0.0874	1.2499
2018	52,417,437,603				0.1525	0.0870	1.2395
2019	56,318,797,318				0.1525	0.0731	1.2256

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$0
Less: Supported Debt	<u>0</u>
Total Net Direct Debt	\$0
Total Gross Overlapping Tax and Assessment Debt	\$1,107,986,420
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax and Assessment Debt	\$1,107,986,420
Total Gross Overlapping General Fund Debt	\$353,781,939
Less: Self-supporting Debt	<u>768</u>
Total Net Overlapping General Fund Debt	\$353,781,171
Total Gross Overlapping Tax Increment Debt	\$578,290,562
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax Increment Debt	\$578,290,562
Gross Direct and Overlapping Bonded Debt	\$2,040,058,921
Net Direct and Overlapping Bonded Debt	\$2,040,058,153

Ratios to Assessed Valuation at January 15, 2019:

Gross Direct Debt.....	0.00%
Net Direct Debt .....	0.00%
Gross Direct and Overlapping Tax and Assessment Debt .....	1.97%
Net Direct and Overlapping Tax And Assessment Debt.....	1.97%
Gross Direct and Overlapping Bonded Debt .....	3.62%
Net Direct and Overlapping Bonded Debt.....	3.62%

- (1) The assessed valuations include state-reimbursable exemptions and exclude redevelopment incremental valuations.  
(2) Information unavailable.

**KERN COUNTY WATER AGENCY**  
**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT**  
(unaudited)

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation		
			Amount	Percent	Agency Rate	Typical Total Rate	
						City of Bakersfield Total Rate	Elk Hills School District
1994	\$32,986,554,039	\$12,246,716	\$364,041	2.97%	0.066719	1.171248	1.020210
1995	30,100,052,112	9,370,510	287,927	3.07	0.070116	1.135179	1.019195
1996	30,538,512,132	12,656,809	338,224	2.67	0.095807	1.173827	1.020669
1997	31,943,215,222	13,283,378	395,321	2.98	0.091633	1.179749	1.022585
1998	34,411,749,796	12,984,313	480,525	3.70	0.091601	1.172489	1.019745
1999	32,692,348,290	13,035,390	282,929	2.17	0.089041	1.139540	1.016470
2000	36,368,798,648	(3)	(3)	(3)	0.088270	1.162026	1.035082
2001	38,813,931,812	15,981,366	295,032	1.85	0.077322	1.157759	1.017135
2002	41,429,323,346	15,210,702	339,798	2.23	0.061936	1.117621	1.015612
2003	39,976,729,738	15,776,379	476,821	3.02	0.060665	1.160526	1.019332
2004	42,165,212,745	18,525,332	(3)	(3)	0.063662	1.146391	1.021406
2005	45,443,236,748	16,054,006	237,483	1.48	0.063200	1.156496	1.056077
2006	52,596,138,408	13,726,652	258,314	1.88	0.047579	1.133705	1.055929
2007	64,149,863,242	12,223,309	384,215	3.14	0.038184	1.122182	1.047846
2008	71,491,760,384	18,521,313	802,472	4.33	0.053401	1.157296	1.050210
2009	75,766,431,779	17,059,057	572,984	3.36	0.052517	1.151185	1.054710
2010	70,423,049,669	19,500,828	565,663	2.90	0.064063	1.180167	1.064484
2011	74,597,201,953	17,863,779	345,942	1.94	0.058402	1.176436	1.053897
2012	76,240,534,603	25,718,178	379,982	1.48	0.074783	1.191102	1.054265
2013	81,254,773,400	18,041,862	234,670	1.30	0.057330	1.174290	1.043923
2014	81,080,979,985	21,461,367	244,116	1.14	0.062029	1.144662	1.073345
2015	85,601,304,520	21,947,286	235,109	1.07	0.056660	1.117595	1.069056
2016	76,936,246,496	22,535,818	231,106	1.03	0.060768	1.133600	1.079475
2017	72,752,296,314	24,676,414	301,531	1.22	0.068450	1.118033	1.142412
2018	77,288,726,481	33,033,896	351,729	1.06	0.090374	1.220308	1.112009
2019	80,502,901,315				0.082148	1.200369	1.094740

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$0
Less: Supported Debt	<u>0</u>
Total Net Direct Debt	\$0
Total Gross Overlapping Tax and Assessment Debt	\$1,407,305,132
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax and Assessment Debt	\$1,407,305,132
Total Gross Overlapping General Fund Debt	\$715,369,580
Less: Self-supporting Debt	<u>0</u>
Total Net Overlapping General Fund Debt	\$715,369,580
Total Gross Overlapping Tax Increment Debt	\$74,320,000
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax Increment Debt	\$74,320,000
Gross Direct and Overlapping Bonded Debt	\$2,196,994,712
Net Direct and Overlapping Bonded Debt	\$2,196,994,712

Ratios to Assessed Valuation at January 15, 2019:

Gross Direct Debt .....	0.00%
Net Direct Debt .....	0.00%
Gross Direct and Overlapping Tax and Assessment Debt .....	1.75%
Net Direct and Overlapping Tax And Assessment Debt .....	1.75%
Gross Direct and Overlapping Bonded Debt .....	2.73%
Net Direct and Overlapping Bonded Debt .....	2.73%

- (1) Assessed Valuations are based on 100% of cash value beginning in 1981-82, rather than 25% as in previous years. The assessed valuations include state-reimbursable exemptions and exclude redevelopment incremental valuations. Beginning in 1988-89, assessed valuations exclude unitary utility valuations.
- (2) Excludes tax levy on inventories and other unsecured property.
- (3) Information unavailable.

**ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT,  
ZONE 7**

**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT  
(unaudited)**

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation	
			Amount	Percent	Agency Total Rate	Typical Total Rate
2015	\$46,590,971,389	\$11,113,571	\$ 74,553	0.67%	0.0250	1.1292
2016	50,227,748,217	16,575,533	221,027	1.33	0.0343	1.0873
2017	53,661,748,685	17,078,709	131,010	0.77	0.0333	1.0915
2018	57,115,444,470	19,695,457	126,311	0.64	0.0359	1.1581
2019	61,423,451,270	(3)	(3)	(3)	0.0332	1.1654

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$0
Less: Supported Debt	0
Total Net Direct Debt	\$0
Total Gross Overlapping Tax and Assessment Debt	\$1,199,663,851
Less: Supported Debt	0
Total Net Overlapping Tax and Assessment Debt	\$1,199,663,851
Total Gross Overlapping General Fund Debt	\$251,480,286
Less: Supported Debt	20,581,854
Total Net Overlapping General Fund Debt	\$230,898,432
Total Gross Overlapping Tax Increment Debt	\$21,035,000
Less: Supported Debt	0
Total Net Overlapping Tax Increment Debt	\$21,035,000
Total Gross Direct and Overlapping Bonded Debt	\$1,472,179,137
Less: Self-supporting Debt	20,581,854
Total Net Direct and Overlapping Bonded Debt	\$1,451,597,283

Ratio to Assessed Valuation at January 15, 2019:

Gross Direct Debt.....	0.00%
Net Direct Debt .....	0.00%
Total Gross Overlapping Tax and Assessment Debt.....	1.95%
Total Net Overlapping Tax and Assessment Debt .....	1.95%
Gross Direct and Overlapping Bonded Debt .....	2.40%
Net Direct and Overlapping Bonded Debt.....	2.36%

- (1) The assessed valuations include state-reimbursable exemptions.
- (2) Excludes tax levy on inventories and other unsecured property.
- (3) Information not available until fiscal year is completed.

**SAN GORGONIO PASS WATER AGENCY**  
**ESTIMATED DIRECT AND OVERLAPPING BONDED DEBT**  
(unaudited)

Fiscal Year Ended 6/30	Assessed Valuation (1)	Tax on Secured Property (2)	Delinquencies at June 30		Tax Rate Per \$100 Assessed Valuation	
			Amount	Percent	Agency Total Rate	Typical Total Rate
2015	\$7,153,758,801	\$12,452,588	\$233,658	1.88%	0.1850	1.37965
2016	7,690,055,788	13,427,522	232,231	1.73	0.1850	1.35143
2017	8,130,682,113	14,310,311	234,673	1.64	0.1850	1.35370
2018	8,729,481,463	15,241,124	225,619	1.48	0.1825	1.36299
2019	9,436,463,325	(3)	(3)	(3)	0.1825	1.35694

Direct and Overlapping Bonded Debt at January 15, 2019:

Total Gross Direct Debt	\$0
Less: Supported Debt	<u>0</u>
Total Net Direct Debt	\$0
Total Gross Overlapping Tax and Assessment Debt	\$512,776,499
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax and Assessment Debt	\$512,776,499
Total Gross Overlapping General Fund Debt	\$55,306,030
Less: Supported Debt	<u>86,170</u>
Total Net Overlapping General Fund Debt	\$55,219,860
Total Gross Overlapping Tax Increment Debt	\$49,535,143
Less: Supported Debt	<u>0</u>
Total Net Overlapping Tax Increment Debt	\$49,535,143
Total Gross Direct and Overlapping Bonded Debt	\$617,617,672
Less: Self-supporting Debt	<u>86,170</u>
Total Net Direct and Overlapping Bonded Debt	\$617,531,502

Ratio to Assessed Valuation at January 15, 2019:

Gross Direct Debt.....	0.00%
Net Direct Debt .....	0.00%
Total Gross Overlapping Tax and Assessment Debt.....	5.43%
Total Net Overlapping Tax and Assessment Debt .....	5.43%
Gross Direct and Overlapping Bonded Debt.....	6.55%
Net Direct and Overlapping Bonded Debt.....	6.54%

- (1) The assessed valuations include state-reimbursable exemptions.
- (2) Excludes tax levy on inventories and other unsecured property.
- (3) Information not available until fiscal year is completed.

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**APPENDIX B**

**AUDITED FINANCIAL STATEMENT  
FOR THE YEAR ENDED JUNE 30, 2018  
(WITH COMPARATIVE AMOUNTS FOR THE YEAR ENDED JUNE 30, 2017)**

**STATE WATER RESOURCES  
DEVELOPMENT SYSTEM**

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DEPARTMENT OF WATER RESOURCES

# STATE WATER RESOURCES DEVELOPMENT SYSTEM

An Enterprise Fund  
of the State of California

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*Comprehensive Annual Financial Report for the fiscal year ended June 30, 2018  
(with comparative amounts for fiscal year ending June 30, 2017)*



# STATE WATER RESOURCES DEVELOPMENT SYSTEM

An Enterprise Fund  
of the State of California

---

*Comprehensive Annual Financial Report for the fiscal year ended June 30, 2018  
(with comparative amounts for fiscal year ending June 30, 2017)*



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*The Lake Oroville main spillway flows into its diversion pool, making way for expected spring runoff in March 2011.*  
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## STATE OF CALIFORNIA

Gavin Newsom, *Governor*

## CALIFORNIA NATURAL RESOURCES AGENCY

Wade Crowfoot, *Secretary for Natural Resources*

## DEPARTMENT OF WATER RESOURCES

Karla Nemeth  
*Director*

Cindy Messer  
*Chief Deputy Director*

Michelle Banonis  
*Assistant Chief Deputy Director*

### Deputy Directors and Executives

Joel Ledesma  
*State Water Project*

Eric Koch  
*Flood Management and Dam Safety*

Kristopher Tjernell  
*Integrated Watershed Management Program*

Christy Jones  
*Statewide Emergency Management Program*

Gary Lippner  
*Delta Conveyance*

Katherine S. Kishaba  
*Business Operations*

Taryn Ravazzini  
*Special Initiatives*

Spencer Kenner  
*Chief Counsel*

Erin Mellon  
*Assistant Director, Public Affairs Office*

Kasey Schimke  
*Assistant Director, Legislative Affairs Office*

Anecita Agustinez  
*Government and Community Liason*

## Business Operations, Division of Fiscal Services

Vinay Narjit Singh Behl, CPA  
*Comptroller & Chief Financial Officer*  
*Chief, Division of Fiscal Services*

*This document was prepared under the direction of the  
Enterprise Branch of the Department's Fiscal Services Division:*

Lisa Toms, *Accounting Administrator III*

### Enterprise Accounting Branch

Lori Lay, *Accounting Administrator II*

Rachel Corbett, *Accounting Administrator II*

Cynthia Quach, *Accounting Administrator I*

Antonio Perez, *Accounting Administrator I*

Geeta Devi, *Accounting Administrator I*

Omid Torabian, *Accounting Administrator I*

Jesse Gonzalez-Perez, *Accounting Administrator I*

Eleanor De Anda, *Accounting Administrator I*

Tina Nguyen, *Accounting Administrator I*

Thu Nguyen, *Associate Accounting Analyst*

Jeanet Uy, *Associate Accounting Analyst*

Bess Leung, *Associate Accounting Analyst*

Jesus Parrilla, *Associate Accounting Analyst*

Sharon Chu, *Associate Accounting Analyst*

Carla Elder, *Associate Accounting Analyst*

Abby Palma H, *Senior Accounting Officer*

Nakithia Thomas, *Senior Accounting Officer*

Alex Caputo, *Senior Accounting Officer*

Michelle Wong-Chiu, *Accounting Officer*

Maigia Yang, *Accounting Officer*

Iesha Williams, *Executive Secretary*

Loan Tran, *Office Technician*

## SENIOR MANAGEMENT AND KEY FINANCIAL OFFICERS

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**Karla Nemeth**  
**DIRECTOR**

Karla Nemeth was appointed Director of the California Department of Water Resources by Governor Edmund G. Brown Jr. on January 10, 2018.

DWR operates and maintains the California State Water Project, manages floodwaters, monitors dam safety, conducts habitat restoration, and provides technical assistance and funding for projects for local water needs. Karla oversees the Department and its mission to manage and protect California's water resources, working with other agencies in order to benefit the State's people and to protect, restore and enhance the natural and human environments.

Karla worked at the California Natural Resources Agency as Governor Brown's Deputy Secretary and Senior Advisor for water policy since 2014. She was the Bay Delta Conservation Plan project manager from 2009 to 2014.

Karla was the environmental and public affairs director for the Alameda County Flood Control and Water Conservation District from 2005 to 2009. She was also the community affairs manager at Jones and Stokes from 2003 to 2005.

Karla has a Master's degree in public administration from the University of Washington.



**Cindy Messer**  
**CHIEF DEPUTY DIRECTOR**

Cindy Messer was appointed as the Department's Chief Deputy Director in February 2017. Cindy was the Deputy Director of the Planning, Performance, and Technology Division at the Delta Stewardship Council from 2012 until her appointment with DWR. As Deputy Director, she coordinated the preparation and implementation of the Delta Plan. Prior to this position, Cindy served as the assistant executive officer for the Sacramento-San Joaquin Delta Conservancy where she provided oversight for the development of the Delta Conservancy's Interim Strategic Plan. She also worked for more than ten years in various technical and managerial roles within DWR's Division of Environmental Services.

Cindy is a graduate of the University of California, Davis, where she earned her Bachelor of Arts degree in environmental policy analysis and planning. She also obtained a Master of Science degree in conservation biology from California State University, Sacramento.



**Katherine Kishaba**  
**DEPUTY DIRECTOR,**  
**BUSINESS OPERATIONS**

Katherine S. Kishaba was appointed Deputy Director of Business Operations in March 2011. Her primary responsibilities include managing the Department's fiscal, information technology, procurement, human resources, facilities, and safety programs. Business Operations consists of approximately 400 employees department-wide.

Prior to assuming her current role, Katherine served as the Department's Budget Officer, beginning in 2003, and was responsible for the development and administration of DWR's multi-billion dollar budget. Previously, Katherine also oversaw all administrative activities of DWR's Bay-Delta Office and worked in the administrative sections of DWR's former Division of Land and Right of Way and Office of Water Education (now the Public Affairs Office). She participated in the implementation and upgrade of SAP, the Department's enterprise financial system, and more recently managed the design and roll-out of the Department's Enterprise Budget Planning system in 2009.

Katherine holds both a Master of Business Administration degree from the University of California, Davis' Graduate School of Management and a Bachelor of Arts degree in Social Science from the University of California, Berkeley.



**Spencer Kenner**  
**CHIEF COUNSEL**

Spencer Kenner was appointed Chief Counsel, in February 2016, overseeing the Office of Chief Counsel. He provides legal advice to the Director and Management, and oversees approximately 40 attorneys. The Office of Chief Counsel is responsible for a broad range of issues, including water rights; water transfers; energy law; flood management; integrated water management; dam safety; personnel; and state contracting.

Spencer was Assistant Chief Counsel beginning in 2013; acting Chief Deputy Director in 2015, and Senior Staff Counsel from 2008 to 2013. He served as commission counsel at the California Water Commission, staff counsel at the Employment Training Panel, and deputy general counsel at the California State Lottery. He also served as court counsel at Yolo County Superior Court, staff attorney at Empower Yolo, deputy district attorney at Yolo County District Attorney's Office, and senior associate at Downey Band LLP.

Spencer earned a Juris Doctor degree from Brigham Young University.



**Joel Ledesma**  
DEPUTY DIRECTOR, STATE WATER PROJECT

Joel Ledesma was appointed State Water Project (SWP) Deputy Director, in July 2017, by Governor Edmund G. Brown Jr.

Joel is an electrical engineer who has worked with the Department for more than three decades and has expertise in water, energy, and project management. He served as assistant Division Chief of Operations and Maintenance, Chief of the Plant Asset Management Branch, Chief of the Delta Field Division, Chief of the Systems Support Office, and Chief of the Energy Management Systems Branch.

He's led several projects, including preparation of the initial start-up of the California Independent System operator (ISO) Corporation, Business 2000-Phase 2B, implementation of Cyber Infrastructure Protection Program for SWP, and Market Redesign Technical Upgrade project in compliance with Federal Energy Regulatory Commission and ISO regulatory and energy market requirements.

As SWP Deputy Director, Joel oversees the Division of Engineering, Delta Habitat Conservation and Conveyance Program, SWP Power and Risk Office, Hydropower License Planning and Compliance Office, SWP Analysis Office, Delta Conveyance Office, Division of Environmental Services, Bay-Delta Office, and the largest division—the Division of Operations and Maintenance, which includes five field division offices.

A native of Sacramento, Joel earned a Bachelor of Science degree in electrical engineering, with a concentration in power, from the California State University, Sacramento.



**Vinay Narjit Singh Behl, CPA**  
COMPTROLLER & CHIEF FINANCIAL OFFICER

Vinay Narjit Singh Behl has served as the Chief of the Division of Fiscal Services since April 2017 and as such is the Comptroller and Chief Financial Officer of the Department. Vinay is also responsible for the long-term financial planning of the State Water Project and management of the outstanding debt for the Department.

Prior to joining the Department, Vinay served as Chief Financial Officer of a subsidiary of Guardian Life Insurance Corporation from 2015 through 2017; Chief Financial Officer of an operating division of the United States Department of Health & Human Services from 2010 through 2015; and Vice President of Finance having worked for multinational software companies from 1997 through 2010.

Vinay is a licensed CPA in California and Delaware with various certifications in Accounting, Audit and Finance. He holds a Bachelors and Masters in Finance and graduated with a Masters In Business Administration from University of California, Davis, specializing in mergers and acquisitions. Vinay is a Chartered Accountant; Certified Internal Auditor; Chartered Global Management Accountant; Certified Management Accountant; Certified Internal Auditor; Certified Fraud Examiner; Certified in Finance Qualification; Certified Government Audit Professional; Certified Government Finance Manager; Certified in International Financial Reporting Standards; Certified Information Systems Auditor; and Certified Information Technology Professional.



**Lisa Toms**  
CHIEF, ENTERPRISE ACCOUNTING BRANCH

Lisa Toms has served as Chief of the Enterprise Accounting Branch, within the Division of Fiscal Services, since March 2014. She has over 27 years of financial experience at the Department of Water Resources and has served in many leadership roles within the Division of Fiscal Services.

She oversees the reporting of the State Water Resources Development System's financial records, including the preparation of the Comprehensive Annual Financial Report, as well as ensures adequate financing needs are met for all State Water Project funding needs, including the issuance of Commercial Paper and Central Valley Project (CVP) Water System Revenue bonds.

Her institutional knowledge of the Department and many years of State Water Project experience has allowed her to become one of the key financial representatives of the Department.

Lisa received her Bachelor's Degree in Business Administration, with a concentration in Accounting, from the California State University, Sacramento.

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**Behl, continued**

He is also a graduate of the prestigious Strategic Leadership program for Healthcare Executives from Cornell University. In addition, Vinay has held official positions as an advisory board member on the Performance and Accountability committee composed of eight members selected nationwide of American Institute of Certified Public Accountants (AICPA) tasked with recommending performance improvements and governance in large organizations.

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An aerial view of the Lake Oroville Main Spillway Control Structure in Butte County, California, July, 2011.

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# INTRODUCTORY SECTION

*The construction phase of Oroville Diversion Tunnel No. 1 at the  
Butte County damsite, August 1963.*

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March 26, 2019

To the Citizens of the State of California:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the State Water Resources Development System ("the System") for the fiscal year ended June 30, 2018, with comparative amounts for fiscal year ended June 30, 2017, along with the Independent Auditors' Report. The CAFR has been prepared by the California Department of Water Resources (DWR) in conformance with the principles and standards for financial reporting set forth by the Governmental Accounting Standards Board (GASB). Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with DWR management. We believe that the data, as presented, is accurate in all material respects; that its presentation fairly shows the financial position and the results of the System's operations as measured by the financial activity of its various funds; and that the included disclosures will provide the reader with an understanding of the System's financial affairs.

This CAFR was prepared using the financial reporting requirements as prescribed by the GASB Statement No. 34, *Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments* (GASB 34), as amended. This GASB Statement requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of a Management's Discussion & Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the report of the independent auditors.

## The Reporting Entity and Its Services

### REPORTING ENTITY

The System operates as an Enterprise fund of the State of California administered by the California Department of Water Resources (DWR)<sup>1</sup>. DWR operates within the Natural Resources Agency of the State of California, and is responsible for the planning, construction, and operation of the System. The System includes the State Water Project (SWP), the Davis-Grunsky Act Program, and the San Joaquin Drainage Implementation Program.

DWR was established in 1956 by an act of the State Legislature that combined the functions of the Water Project Authority and certain responsibilities of the Department of Public Works' former Division of Water Resources. At present, DWR employs 3,174 full-time staff throughout the State, of which approximately 2,136 are allocated to the System. The

---

<sup>1</sup> See the accompanying MD&A for more on Enterprise Funds

Director of DWR oversees the Department's activities, with the assistance of a Chief Deputy Director and eight Deputy Directors. The Director, Chief Deputy Director, Deputy Director for the State Water Project, and Chief Counsel are each appointed by the Governor.

On August 30, 2018, Karla Nemeth was officially confirmed by the Governor of California as the Director of DWR.

DWR's operations, with respect to the SWP, are accounted for and conducted under Segments<sup>2</sup> consisting of special funds established by the California Water Code. These Segments are (a) the State Water Resources Development Bond Fund (Bond Fund), which was formed when the voters of the State of California passed the Burns-Porter Act in 1960; and (b) the Central Valley Project Construction Fund (Construction Fund) and the Central Valley Project Revenue Fund (Revenue Fund), which were enabled under California's Central Valley Project Act of 1933.

DWR's operations, with respect to the System, are separate and apart from DWR's operations that are primarily funded by State General Fund appropriations and from DWR's Power Supply Program.

## **SERVICES**

The System encompasses dams, reservoirs, pumping plants, power plants, aqueducts, and pipelines owned<sup>3</sup> and operated by the State of California. The System was developed in order to deliver water to areas of need, throughout the State, for domestic, industrial, and agricultural purposes, as well as to provide flood control, recreation, fish and wildlife enhancement, hydroelectric power, and other benefits. DWR is responsible for the planning, construction, and operation of the System. All 647 miles of the initially planned aqueduct system have been completed. The 444-mile main stem of the California Aqueduct runs from a point near Stockton southward to a terminus in Riverside County. The dependable annual water supply available for delivery by the existing System varies yearly depending on hydrologic conditions and regulatory mandates.

## **JOINT-USE FACILITIES**

Portions of the System consist of facilities developed and used jointly with the Federal Central Valley Water Project (FCVP) operated by the U.S. Bureau of Reclamation (USBR). In addition, both projects have primary sources of water north of the Sacramento-San Joaquin Delta (Delta), transport water across the Delta and draw water from the southern edge of the Delta. The FCVP, like the System, provides water for irrigation in the Central Valley, urban water supply, water quality, flood control, power, recreation, and fish and wildlife enhancement. Capital costs, for the jointly developed facilities, are shared approximately 55 percent State and 45 percent Federal.

In 1986, the System and USBR entered into a Coordinated Operation Agreement (COA) under which the System and the FCVP coordinate operations, including releases from upstream reservoirs and pumping from the Delta. The COA permits increased operational efficiency of both projects, ensures that each project receives an equitable share of available surplus water and provides for sharing of responsibilities in meeting certain Delta water quality standards.

---

2 See the accompanying MD&A for more on the System's Segments

3 Certain assets are owned jointly by the State and the United States Bureau of Reclamation. See *Joint-Use Facilities*

## THE WATER SUPPLY CONTRACTS

DWR has entered into Water Supply Contracts with 29 local public agencies (Water Contractors), which provide for DWR to recover substantially all System costs. The Water Contractors are principally located in the San Francisco Bay Area, the Central Coast, the Central Valley, and Southern California, and their service areas encompass approximately 25 percent of the State's land area and approximately 69 percent of its population.

Payments by the Water Contractors under the Water Supply Contracts provide for the operation, maintenance, planning, and capital costs, including interest, of the SWP. The Water Contractors may request up to a maximum annual aggregate amount totaling 4,172,786 acre-feet of water from the System. This maximum does not assure delivery of that amount of water, but rather provides the basis for proportional allocation of available supplies and certain costs among the Water Contractors.

Generally, the existing Water Supply Contracts are to remain in effect until 2035 or until all bonds issued to finance construction costs of SWP facilities have been repaid (currently fiscal 2036), whichever period is longer. Under its Water Supply Contract, each Water Contractor may request water deliveries from the SWP up to a maximum specified annual amount, and agrees to pay its allocated share of the costs of gathering, storing, conveying, and delivering water. Generally, DWR's costs of providing the facilities of the SWP, including interest, are payable by the Water Contractors whether or not water is delivered. If a Water Contractor defaults under their Water Supply Contract, DWR may, upon six months' notice, suspend water deliveries to that Water Contractor. During such period, the Water Contractor remains obligated to make all payments required by the Water Supply Contract. If a Water Contractor fails or is unable to raise sufficient funds, by other means, to make contract payments, the Water Contractor is required, by the contract, to levy a tax or assessment sufficient for such purpose.

DWR and the affected Water Contractors have entered into an Off-Aqueduct Power Facilities Amendment, East Branch Enlargement Amendment, Water System Revenue Bond Amendment, Coastal Branch Extension Amendment, East Branch Extension Amendment, and a South Bay Aqueduct Enlargement Amendment to the Water Supply Contracts for the purpose of financing certain Water System Projects. These Amendments established procedures to provide for the payment of construction costs financed with Revenue Bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs, including coverage, of the Bonds allocable to such Amendment Projects. If any Water Contractor defaults on payment under any of these Amendments, other than the Coastal Branch Extension Amendment, East Branch Extension Amendment, and the South Bay Aqueduct Enlargement Amendment, the shortfall may be collected from non-defaulting affected Water Contractors, subject to certain limitations.

In December 1994, representatives of DWR and certain Water Contractors adopted a set of principles pursuant to which additional amendments to the Water Supply Contracts have since been negotiated. This amendment is known as the "Monterey Amendment." The Monterey Amendment includes provision relating to the allocation of water, the transfer of the land and related assets of the Kern Fan Element, the operation of certain SWP reservoirs, transfers of the annual Table A amounts, other water transfers, the creation of and limitations on a Department reserve for operation, maintenance and replacement costs, and the description of facilities that may be financed with revenue bonds. In addition, the Monterey Amendment provides for the reduction of annual Water Supply Contract charges.

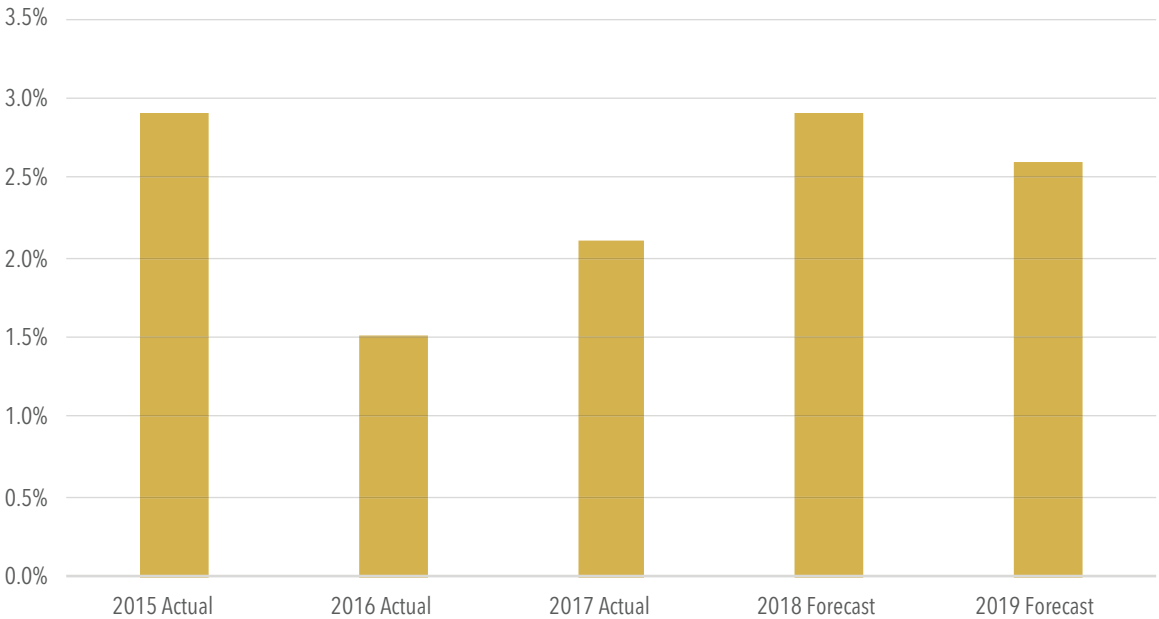
# Economic Outlook

## A MACROECONOMIC VIEW

Department day-to-day operations are not significantly impacted by normal fluctuations in global or national economic conditions. However, macroeconomic trends can affect market interest rates and energy costs, which in turn can impact investment income earned on financial assets, borrowing costs, and water transportation costs. Significant changes in economic conditions also can affect the availability and cost of bank credit products and other sources of capital relied on by the Department from time to time.

U.S. economic growth picked up in the 2nd quarter, with real GDP growing by 4.2%, the highest reading since 2011. Gradual monetary policy normalization is set to continue, but tax reductions and higher government expenditure are providing a substantial short-term boost to domestic demand, adding to the impetus from solid job creation, strong asset prices and record levels of oil production. Higher tariffs and uncertainty about future policies are, however, likely to moderate investment growth, and growth is likely to decline going forward, with current forecasts calling for U.S. Real GDP growth of about 2.6% in calendar year 2019. As of June 2018, the median forecasted probability of a recession in the next 12 months was 17%.<sup>4</sup>

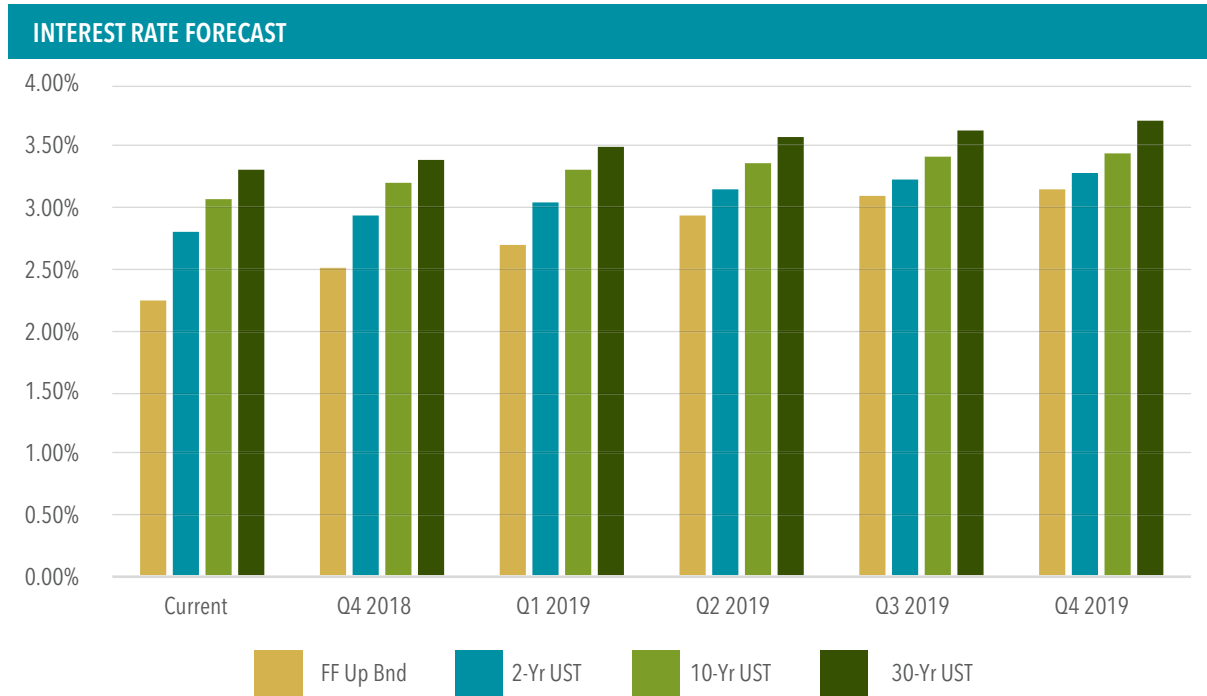
### U.S. REAL GDP GROWTH



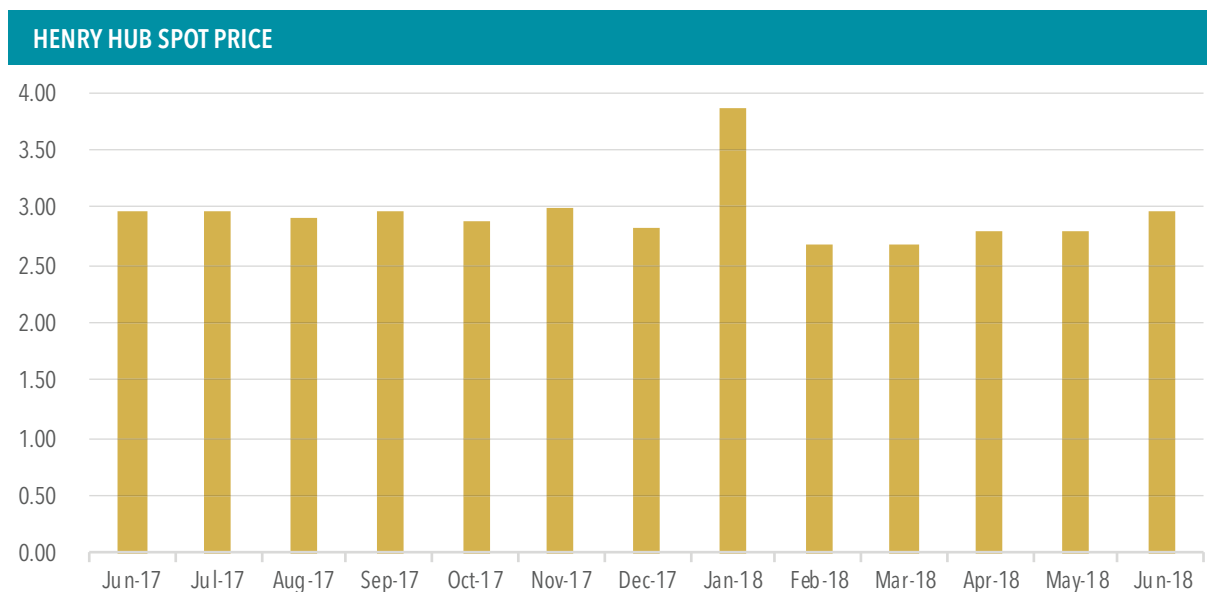
4 Source: US Conference Board



The Bloomberg Economist weighted average forecast yields for 2-year, 10-year and 30-year U.S. Treasury bonds for the 4th quarter of 2019 are 3.28%, 3.45% and 3.70%, respectively. The Fed Funds rate is forecast to rise to 3.15%. These forecasts represent increases of about 0.40% to 0.90% from current levels.<sup>5</sup>



In energy markets, the Henry Hub natural gas spot price averaged \$2.93 per million British thermal units (MMBtu) during fiscal year 2018. It is forecast to average \$2.98 per MMBtu in calendar year 2019, with strong growth in U.S. natural gas production.<sup>6</sup>



<sup>5</sup> Source: The Bloomberg Economist

<sup>6</sup> Source: US Energy Information Administration

## CALIFORNIA ECONOMY

According to the UCLA Anderson School of Management June 2018 Outlook, the California economy expanded as expected in the first half of calendar year 2018. In June 2018, the unemployment rate held steady at 4.2%, compared with 4.7% in June 2017. The June 2018 unemployment rate was 0.2% higher than the national unemployment rate of 4.0%. The UCLA Anderson forecast anticipates that California's average unemployment rate will remain higher than the U.S. rate and be at 4.3% in 2020, a consequence of a younger and more entrepreneurial workforce. UCLA Anderson projects total employment growth for 2019 of 1.8%, with payrolls growing at about the same rate. In the first quarter of 2018, California's personal income grew 4.5%, versus growth in U.S. personal income of 3.6%. UCLA Anderson forecasts real California personal income growth to be 2.5% and 3.6% percent in calendar years 2018 and 2019, respectively. In fiscal year 2018, California's all urban consumer annualized price inflation was 3.9%, compared with 2.6% for fiscal year 2017. California's median home price hit an all-time high in May 2018 of \$600,860, up 9.2% from May 2017.<sup>7</sup>

The State reported that Preliminary General Fund agency cash for June 2018 exceeded the 2018-19 Budget Act forecast of \$17.773 billion by about \$1.601 billion and fiscal year 2017-18 revenues were \$1.541 billion higher than the forecast of \$134.502 billion.<sup>8</sup>

## INTEREST RATES

Long-term tax-exempt interest rates have risen over the last year. As of June 30, 2018, the 20-year "AAA" tax-exempt borrowing rate was approximately 2.82%, versus 2.65% as of June 30, 2017. Variable rate tax-exempt rates have also risen since last summer as the Federal reserve has continued to tighten monetary conditions. As of June 30, 2018, variable rate tax-exempt rates were 1.51%, versus 0.91% a year earlier.<sup>9</sup>

In December of 2017, the Department sold its tax-exempt \$350,670,000 Central Valley Project Water System Revenue Bonds, Series AX with a final maturity of 2035, a weighted average maturity of 8.6 years and an average borrowing cost of 2.26%. At the same time, the Department sold \$140,825,000 in taxable Central Valley Project Water System Revenue Bonds, Series AY with a final maturity of 2029, a weighted average maturity of 7.5 years and an average borrowing cost of 2.90%.

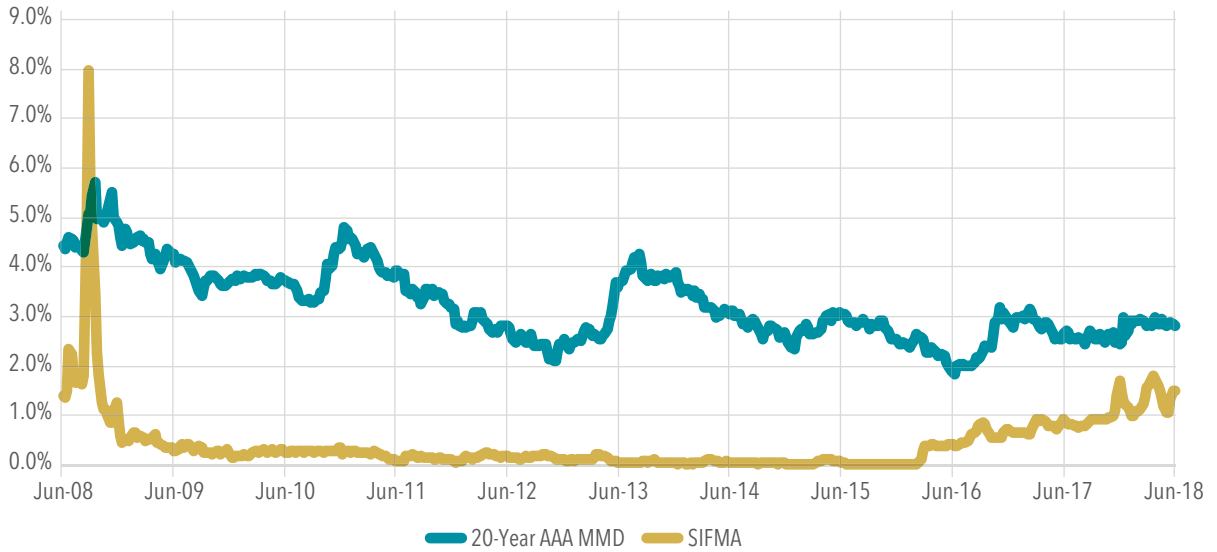
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7 Source: UCLA Anderson School of Management Forecasts

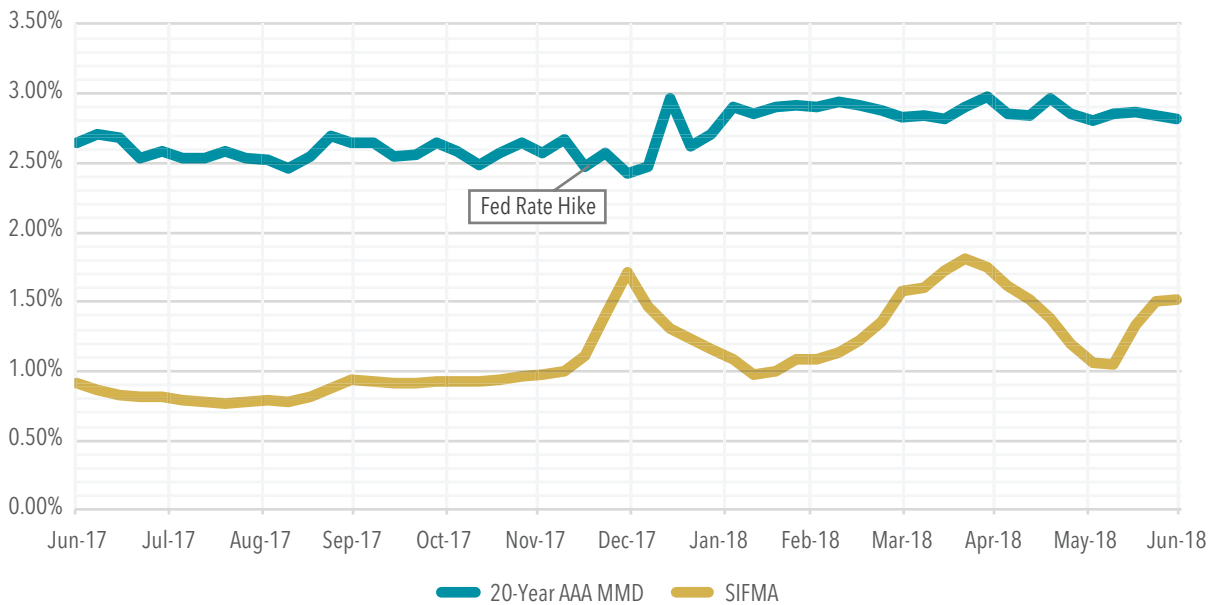
8 Source: State of California Department of Finance

9 Source: Thompson-Reuters TM3

### 10-YEAR HISTORY OF SHORT AND LONG TERM INTEREST RATES



### 1-YEAR HISTORY OF SHORT AND LONG TERM INTEREST RATES



# State Water Project

## **STATE WATER PROJECT CAPITAL PROJECTS**

Since the State Water Project began construction in 1960, its original scope has been modified and expanded to address the needs of the growing population as well as commercial, industrial and agricultural demands for water in California. The following table shows the projects that have been undertaken as part of the State Water Project and the amounts that have been spent, as of October 10, 2018, for each project and each's project's estimated future capital expenditures.

**ESTIMATED CAPITAL FINANCING FROM WATER SYSTEM REVENUE BONDS FOR EXISTING WATER SYSTEM PROJECTS<sup>(1)</sup>**  
(in Millions)

Water System Project	Capital Expenditures To Date	Estimated Future Capital Expenditures	Total Capital Expenditures
Power plants:			
Small Hydro Project	\$46.6	\$0.0	\$46.6
Pyramid Hydroelectric Project	74.4	0.0	74.4
Alamo Project	30.4	0.0	30.4
Bottle Rock Facilities <sup>(2)</sup>	80.2	0.0	80.2
South Geysers Project <sup>(3)</sup>	40.9	0.0	40.9
Reid Gardner Project <sup>(4)</sup>	176.2	0.0	176.2
East Branch Enlargement - Phase I	453.0	0.0	453.0
Additional East Branch Improvements	124.1	0.0	124.1
East Branch Enlargement - Phase II	7.9	0.2	8.1
Delta Pumping Plant Completion	73.6	0.0	73.6
Suisun Marsh Environmental Facilities	37.2	0.0	37.2
San Bernardino Tunnel Intake Structure	29.3	0.0	29.3
San Luis Rock Quarry	4.5	0.0	4.5
Castle Rock-Lakeville Transmission Line	6.9	0.0	6.9
Midway-Wheeler Ridge Transmission Line	10.1	0.0	10.1
Kern Water Bank	37.0	0.0	37.0
Vista del Lago Visitor Center	9.0	0.0	9.0
North Bay Aqueduct-Phase II	87.1	0.0	87.1
North Bay Aqueduct Improvements - Terminal Tanks	7.4	6.1 <sup>(6)</sup>	13.5
North Bay Aqueduct Alternate Intake	0.0	545.0	545.0
Project Monitor and Control System	71.5	0.0	71.5
SWP Communications System Replacement <sup>(5)</sup>	36.4	0.9	37.3
Arroyo Pasajero Program	6.3	0.1	6.4
Hyatt Pump-Turbine Refurbishment	17.9	4.6 <sup>(6)</sup>	22.5
Edmonston Pump Replacement <sup>(5)</sup>	24.2	14.9 <sup>(6)</sup>	39.1
Delta Facilities Program	230.3	423.4	653.6
Tehachapi East Afterbay <sup>(5)</sup>	70.2	11.8	82.0
Perris Dam Remediation <sup>(5)</sup>	121.3	97.1	218.4
Thermalito Powerplant Cleanup and Reconstruction <sup>(7)</sup>	219.1	14.0	233.1
Oroville Dam Spillway Response, Recovery and Restoration <sup>(7)</sup>	45.0	490.8	535.8
Oroville Dam Safety Comprehensive Needs Assessment <sup>(7)</sup>	0.0	25.0	25.0
FERC Relicensing - State Water Project <sup>(7)</sup>	21.6	78.4	100.0
Facilities Reconstruction and Improvement Project	523.2	614.7	1,137.9
Project Planning Costs	112.8	36.2	149.0
Coastal Branch - Phase II	491.3	0.0	491.3
East Branch Extension - Phase I	126.0	0.0	126.0
East Branch Extension - Phase I Improvements <sup>(5)</sup>	38.6	0.8 <sup>(6)</sup>	39.4
East Branch Extension - Phase II <sup>(5)</sup>	270.3	0.0	271.4
South Bay Aqueduct Enlargement and Improvement <sup>(5)</sup>	268.8	0.0	269.9
<b>Total Water System Projects<sup>(8)</sup></b>	<b>\$4,030.5</b>	<b>\$2,366.1</b>	<b>\$6,396.6</b>

(1) The projections contained in this table have been prepared by the Department's management for management purposes on the basis of certain assumptions, and consistent with certain requirements of the Water Supply Contracts. The projections are the responsibility of the Department.

(2) Sold by the Department in 2001.

(3) Sold by the Department in 2004.

(4) The Department's ownership interest terminated in 2013.

(5) The original Bond Anticipation Bonds ("BABs") for East Branch Extension - Phase I Improvements and East Branch Extension Phase II exceeded the projected expenditures.

\$44.5 million of the proceeds of the Series AE refunding of the BABs was redistributed from East Branch Extension - Phase I Improvements and East Branch Extension - Phase II to Communications System Replacement, Edmonston Pump Replacement, Tehachapi East Afterbay, Perris Dam Remediation, and South Bay Aqueduct Enlargement.

(6) Projects are completed. Amounts are treated as "Estimated Future Capital Expenditures" pending reallocation.

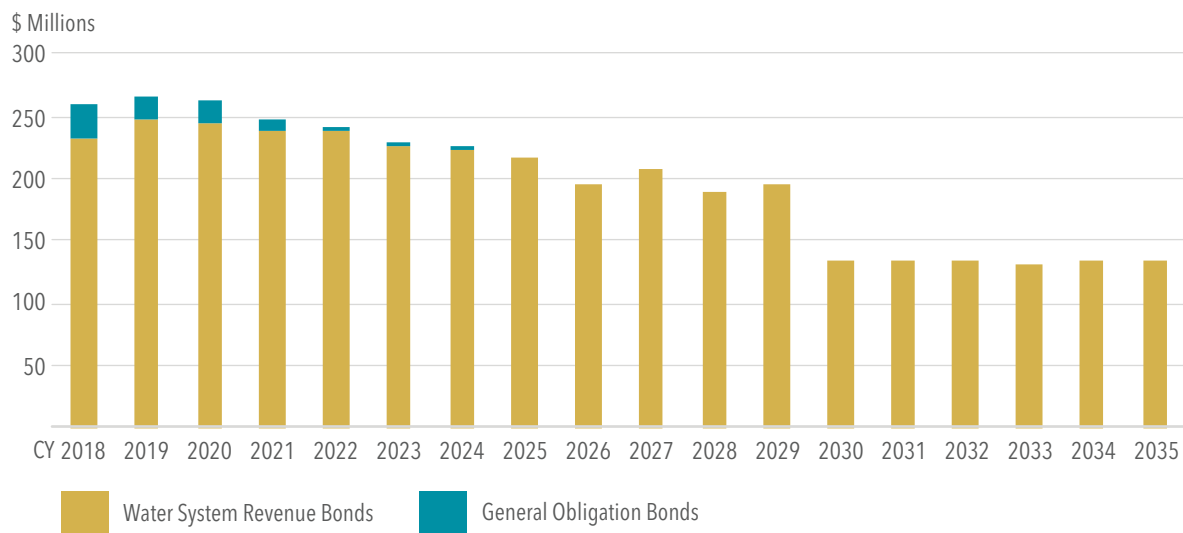
(7) These projects are each a project authorized under the Resolution as part of the Facilities Reconstruction and Improvement Project, the Department has decided to show these projects individually due to the estimated aggregate principal amount.

(8) Totals may not sum due to rounding.

### STATE WATER PROJECT DEBT PROFILE

The Department currently has \$3.56 billion of total debt outstanding. These amounts include revenue bonds, general obligation bonds, commercial paper, and Surplus Money Investment Fund loan. The debt has a final maturity of December 1, 2035. The State Water Contractors are responsible for the payment of debt service on the bonds and are billed annually for their share of the debt obligation. The Department has generally structured each new money issuance of bonds with level annual debt service payments. However, from 2018 to the final maturity of the Department's bonds in 2035, annual debt service payments will gradually decline from approximately \$275 million to approximately \$130 million.

#### ANNUAL DEBT SERVICE



### STATE WATER PROJECT CREDIT RATINGS

The Department's Water System Revenue Bond credit is rated AAA (highest possible rating) by Standard & Poor's and Aa1 (second to highest possible rating) by Moody's Investor's Service. The Water System Revenue Bond credit rating is not tied to or impacted by the State of California's general obligation bond ratings or the Department's \$11 billion in Power Supply Revenue Bonds sold in 2002 to finance power for the state's investor owned utilities during the 2000-2001 energy crisis are rated separately.

### OROVILLE DAM SPILLWAY EMERGENCY REPAIRS

Record rainfall in early February 2017 caused extensive damage to the spillways at the State Water Project's Oroville Dam. In May 2017, the Department implemented a \$500 million short-term borrowing program to fund repairs to the spillways and other related facility repair costs. In January 2018, the program was increased to \$800 million. The Department expects FEMA reimbursement for up to 75% of eligible repair costs. Once all FEMA reimbursement has been received and applied to reduce the short-term borrowing program, any remaining short-term debt related to the Oroville Dam Spillway repairs is expected to be refinanced with long-term bonds. The State Water Contractors will be

responsible for the debt service on these bonds and will bill customers accordingly. Through June 2018, \$555.8 million of short-term borrowing has been incurred for Oroville Dam Spillway repairs.

## State Water Contractors

### **CONTRACTOR SHARE OF PAYMENTS**

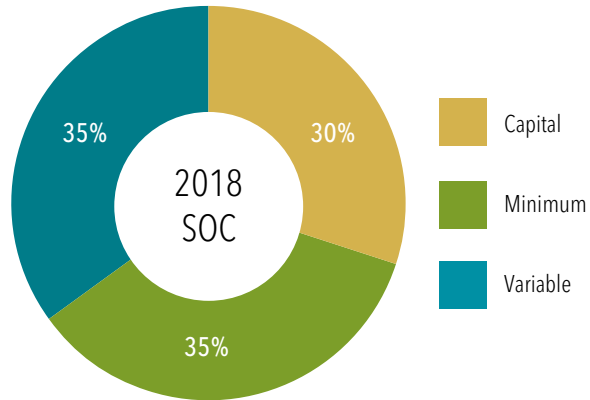
The State Water Contractors are billed each July for projected operating and capital costs for the upcoming calendar year. These Annual Statements of Charges include three types of charges:

- Capital (Repay Construction, Major Replacement/Refurbishment Costs)
- Minimum (Repay O&M and Non-Capital Replacement Costs)
- Variable (Repay Power Costs)

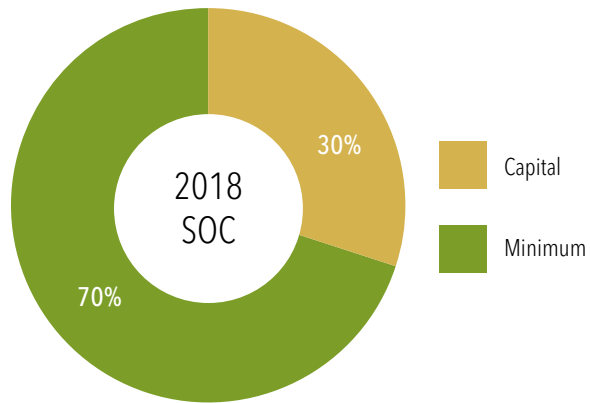
The capital, minimum and variable charges are applied in the following five main areas:

- Transportation - Capital, Minimum, Variable
- Conservation - Capital & Minimum
- Off-Aqueduct Power Facilities
- Water System Revenue Bond Surcharge
- Separate Bond Charges (East Branch Enlargement, East Branch Extension, Coastal Branch Extension, South Bay Aqueduct Enlargement, RAS)

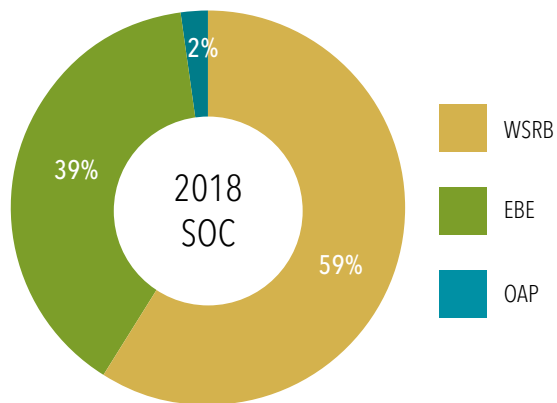
## TRANSPORTATION CHARGES



## CONSERVATION CHARGES



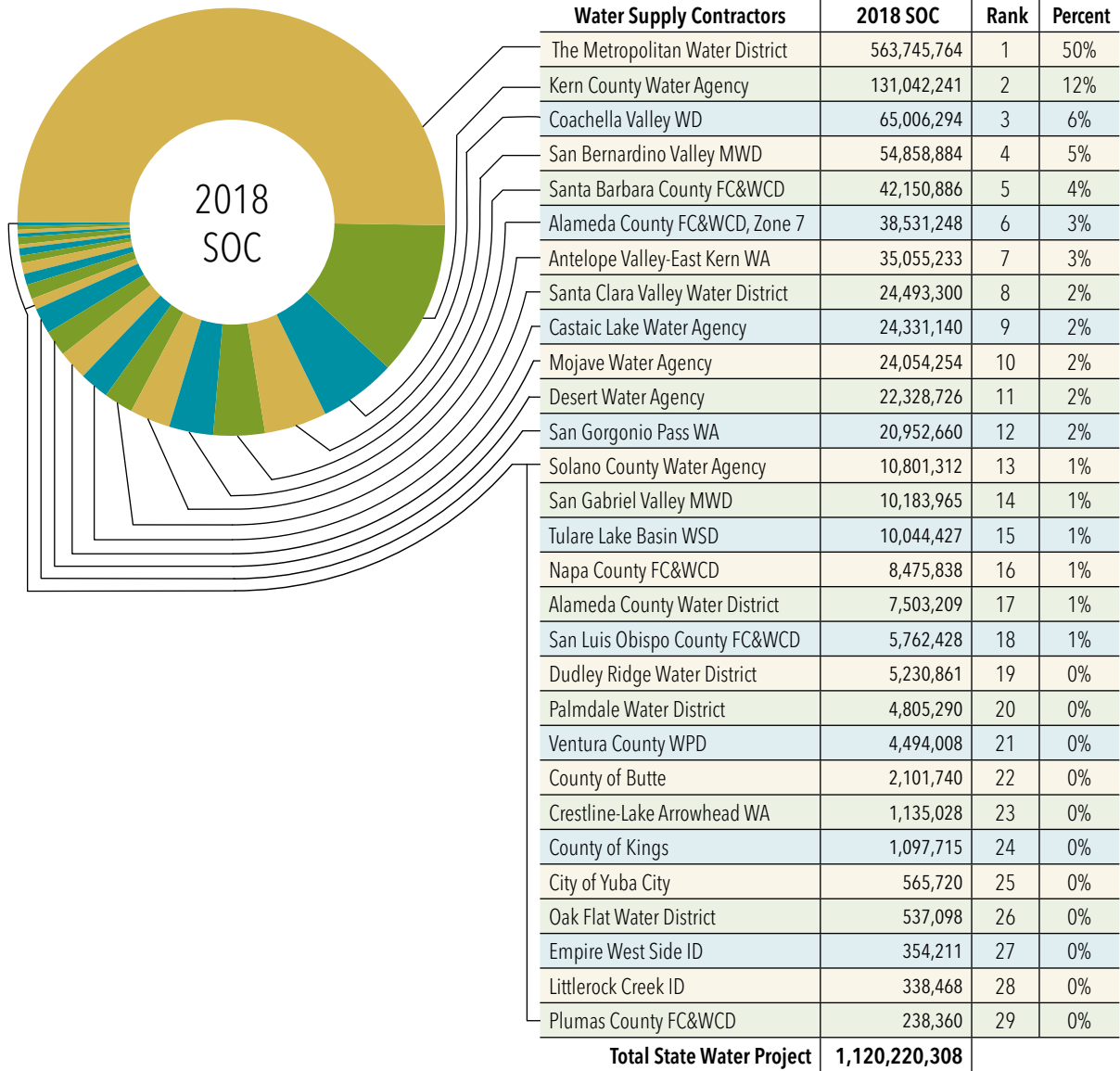
## OFF AQUEDUCT POWER FACILITY CHARGES





The 29 State Water Contractors pay for the costs of the State Water Project through a combination of monthly and semi-annual charges. In 2018, seven of the Water Contractors have accounted for more than 84 percent of water system revenues.

**REVENUE COLLECTED BY THE DEPARTMENT**



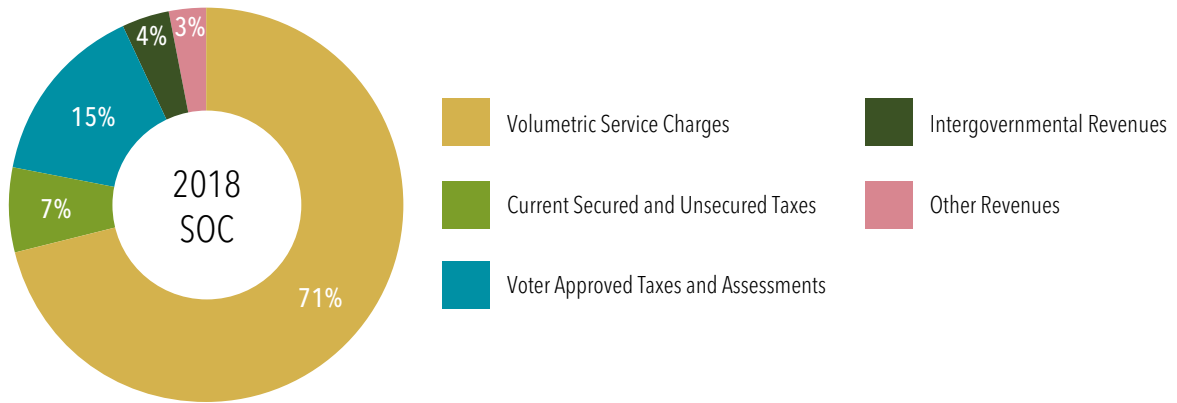
The percentage of total revenue collected by the Department from each Water Contractor varies significantly from the percentage of water the Water Contractor may be eligible to receive based on what is referred to as Table A. Table A is contained in the Long-Term Water Supply Contracts executed by the Department with each of the 29 State Water Contractors and details the maximum amount of water that each Water Contractor is entitled to request from the Department. The Water Contractors make their requests by October 1 for water to be delivered in the upcoming calendar year. Below are the Table A shares of water each Water Agency may request. Municipal and Industrial Contractors represent 76% of the Water Contractors' share of the Table A water supply, while Agricultural Contractors represent 24%.

**MAXIMUM TABLE A AMOUNTS (IN ACRE FEET)**

<b>UPPER FEATHER RIVER</b>	
County of Butte	27,500
Plumas County Flood Control & Water Conservation District	2,700
City of Yuba	9,600
<b>Subtotal</b>	<b>39,800</b>
<b>NORTH BAY AREA</b>	
Napa County Flood Control & Water Conservation District	29,025
Solano County Water Agency	47,756
<b>Subtotal</b>	<b>76,781</b>
<b>SOUTH BAY AREA</b>	
Alameda County Flood Control & Water Conservation District, Zone 7	80,619
Alameda County Water District	42,000
Santa Clara Valley Water District	100,000
<b>Subtotal</b>	<b>222,619</b>
<b>SAN JOAQUIN VALLEY</b>	
Oak Flat Water District	5,700
County of Kings	9,305
Dudley Ridge Water District	45,350
Empire West Side Irrigation District	3,000
Kern County Water Agency	982,730
Tulare Lake Basin Water Storage District	87,471
<b>Subtotal</b>	<b>1,133,556</b>
<b>CENTRAL COAST</b>	
San Luis Obispo County Flood Control & Water Conservation District	25,000
Santa Barbara County Flood Control & Water Conservation District	45,486
<b>Subtotal</b>	<b>70,486</b>
<b>SOUTHERN CALIFORNIA</b>	
Antelope Valley-East Kern Water Agency	144,844
Castaic Lake Water Agency	95,200
Coachella Valley Water District	138,350
Crestline-Lake Arrowhead Water Agency	5,800
Desert Water Agency	55,750
Littlerock Creek Irrigation District	2,300
The Metropolitan Water District of Southern California	1,911,500
Mojave Water Agency	85,800
Palmdale Water District	21,300
San Bernardino Valley Municipal Water District	102,600
San Gabriel Valley Municipal Water District	28,800
San Geronio Pass Water Agency	17,300
Ventura County Watershed Protection District	20,000
<b>Subtotal</b>	<b>2,629,544</b>
<b>Total State Water Project</b>	<b>4,172,786</b>

72% of the revenues collected by the Water Contractors for the payment of State Water Project charges are based on volumetric service charges. Other sources include property taxes, assessments, intergovernmental revenues, and other revenues.

#### SOURCES OF REVENUE



## Major Initiatives and Achievements

### WATER SUPPLY CONTRACT EXTENSION

In May 2013, DWR and the Water Contractors began negotiations in a public forum to develop contract amendments to extend the term and change certain financial provisions of the Water Supply Contracts. In June 2014, the negotiators for DWR and the Water Contractors reached a general agreement on principles for such an amendment. DWR and 25 of the 29 Contractors have signed the Agreement in Principle (AIP). The County of Butte, Plumas County Flood Control and Water Conservation District, San Luis Obispo Flood Control and Water Conservation District, and the Santa Barbara Flood Control and Water Conservation District have not signed the AIP.

Currently, subject to individual elections for continued service by each Water Contractor, the Water Supply Contracts are to remain in effect for the longest of 75 years, December 31, 2035, or until all bonds issued to finance construction costs of SWP facilities have been repaid, whichever period is longest. No Bonds have been sold with a maturity date later than December 1, 2035. The 75-year term provision currently results in the Water Supply Contracts having varying termination dates that range between December 31, 2035 and 2042, subject to the aforementioned election.

A proposed contract extension amendment has now been prepared based on the AIP. Under the proposed amendment, the term of the Water Supply Contract for each Water Contractor that signs the amendment would be extended until December 31, 2085. Also under the proposed amendment, certain provisions that provide for charges to the Water Contractors for capital costs and certain other costs, currently made on an amortized basis, would be amended to provide for charges to the Contractors on an annual "pay-as-you-go" basis to provide the revenues needed by DWR to make payments each year. The current provisions authorizing DWR to charge the Water Contractors annually for the full amount of the required annual debt service and coverage on the Bonds will continue in any extended contract.

Other provisions addressed in the proposed amendment would provide for, among other things, an increase in DWR's operating reserves; a mechanism for financing capital projects, using System funds, and recovering those costs with interest from the Water Contractors; establishment of an account to pay for certain System expenses not chargeable to the Water Contractors; and the establishment of a Finance Committee consisting of DWR and Water Contractor representatives to serve as a forum for discussions and to provide a channel for recommendations to the Director of DWR concerning financial policies of the System.

As required by statute, on September 11, 2018, DWR presented the terms of the proposed amendment in an informational hearing to the Legislature's Joint Legislative Budget Committee. With regard to the required environmental review pursuant to the California Environmental Quality Act (CEQA), in August 2016, DWR released, for public comment, a draft Environmental Impact Report (EIR) for the proposed contract extension amendment. The public comment period on the draft EIR closed in October 2016 and DWR is in the process of preparing a final EIR. Any amendment that is ultimately adopted will comply with DWR's covenant in the General Bond Resolution not to agree to any amendment to the Water Supply Contracts, which would materially adversely affect the security for the Bonds.

## **RENEWABLE ENERGY**

The System plans to procure approximately 920 gigawatt of renewable energy by 2025. Purchase agreements for such power include:

- A 20-year contract with RE Camelot Solar Photovoltaic Project<sup>10</sup> for the purchase of 45 megawatt (MW) of solar photovoltaic energy and associated capacity bundled with Renewable Energy Credits from their facility located in southeastern Kern County. The RE Camelot Plant is expected to deliver 125,000 MW of annual generation.
- A 20-year contract for 85 MW from Solverde 1, LLC whose facility, built near Lancaster in northern Los Angeles County, is expected to deliver 230,000 MW of annual generation.
- A 20-year contract for 9.5 MW with Solar Star California XLIV, LLC for a facility built at the Pearblossom power plant. This Pearblossom facility includes an additional 10-year option to extend and is expected to deliver 27,400 MW of annual generation.

## Other Financial Information

### **INTERNAL CONTROLS**

In developing and evaluating the System's accounting system, consideration is given to the adequacy of internal accounting controls. Internal accounting controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss from unauthorized use or disposition, and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and the evaluation of

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<sup>10</sup> Owned and operated by Dominion Solar Holdings, Inc.

costs and benefits requires estimates and judgments by management. We believe that the System's internal accounting controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

## Independent Audit

The System requires an annual audit of its financial records. These records, represented in the CAFR, have been audited with an unmodified opinion by a certified public accounting firm, Vavrinek, Trine, Day & Co., LLP. The Independent Auditors' Report on our current financial statements is presented in the Financial Section.

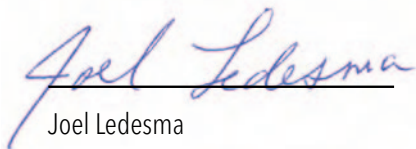
## Awards and Acknowledgments

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the System for its CAFR for the fiscal year ended June 30, 2017. This was the second consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, the System published an easily readable and efficiently organized CAFR. This report satisfies both Generally Accepted Accounting Principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year. We believe that our current CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

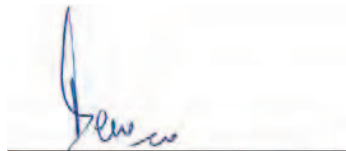
We would like to express our appreciation to the entire staff of the Fiscal Services Division and the State Water Project Analysis Office, whose professionalism, dedication, and efficiency are responsible for the preparation of this report. We would also like to thank Vavrinek, Trine, Day & Co., LLP for their invaluable professional support in the preparation of the CAFR.

Respectfully submitted,



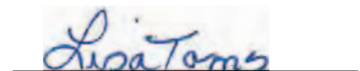
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Joel Ledesma  
SWP Deputy Director



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Vinay Narjit Singh Behl, CPA  
Comptroller & Chief Financial Officer  
Chief, Division of Fiscal Services



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Lisa Toms  
Accounting Admin III

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Government Finance Officers Association

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Presented to

**California State Water  
Resources Development System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2017**

*Christopher P. Morill*

Executive Director/CEO

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# FINANCIAL SECTION

*The East Branch Aqueduct, part of the State Water Project, just east of the Pearblossom Pumping Plant, in Los Angeles County in April, 2007.*

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**VAVRINEK, TRINE, DAY & CO., LLP**  
Certified Public Accountants

VALUE THE *difference*

## INDEPENDENT AUDITORS' REPORT

To the Director of the State of California  
Department of Water Resources  
Sacramento, California

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the State Water Resources Development System (System), an enterprise fund of the State of California, as of and for the year ended June 30, 2018, and the related notes to the financial statements, as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

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

### ***Auditors' Responsibility***

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

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

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

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2018, and the changes in financial position, and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matters***

#### *Reporting Entity*

As disclosed in Note 1, the financial statements present only the System and do not purport to, and do not, present fairly the financial position of the State of California as of June 30, 2018, and the changes in its financial positions, or where applicable, its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

#### *Change in Accounting Principles*

As disclosed in Note 14 to the financial statements, the System implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, effective July 1, 2017. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### *Report on Summarized Comparative Information*

Other auditors have previously audited the System's 2017 financial statements, and they expressed an unmodified audit opinion on those audited financial statements in their report dated January 10, 2018.

#### *Required Supplementary Information*

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

#### *Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The introductory section, calculation of the adequacy of debt service coverage for the Central Valley Project revenue bonds, and statistical section, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The calculation of the adequacy of debt service coverage for the Central Valley Project revenue bonds are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the calculation of the adequacy of debt service coverage for the Central Valley Project revenue bonds are fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated March 26, 2019, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

*Vavrinik, Trine, Day & Co. LLP*

Sacramento, California  
March 26, 2019

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# MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

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## Management's Discussion and Analysis

*(Required Supplementary Information)*

This discussion and analysis is designed to assist the reader in focusing on significant financial issues and activities for the fiscal year ended June 30, 2018, and to identify any significant changes in the financial position of the State Water Resources Development System (System), which is administered by the California Department of Water Resources (DWR). Readers are encouraged to consider the information presented in conjunction with the financial statements as a whole, which follow Management's Discussion and Analysis. This discussion and analysis and the financial statements do not relate to DWR's other governmental and proprietary funds. The System includes the State Water Project (SWP), the Davis-Grunsky Act Program, and the San Joaquin Drainage Implementation Program.

## Financial Highlights

- During fiscal 2018, the System recorded an increase in total assets of \$1,213 million on total operating revenues of \$1,207 million. However, this did not cause an increase in net position because of the deferral of timing differences in revenues collected and expenses incurred.
- Deferred inflows of resources for capital costs increased by \$153 million to an ending balance of \$1,105 million in fiscal 2018 compared to \$952 million in fiscal 2017. The increase is primarily due to net revenues collected for principal payments of previous costs incurred to construct Utility Plant in Service (UPIS) assets.
- On August 3, 2017, the System remarketed its Central Valley Project (CVP) Water System Revenue variable rate bonds Series AT and AU with par amounts of \$149.2 million and \$109.3 million, respectively. This resulted in the weighted average interest rate for both series decreased 0.13% from 0.44% to 0.31%, and the weighted average remarketing term increased from 2.6 years to 4.5 years.
- On August 29, 2017, the System received an \$18.6 million FEMA disaster grant, included in other revenues, to reimburse the System for costs associated with the Oroville Dam Spillway Recovery and Restoration Project.

- On November 21, 2017, the System received an additional \$50.4 million FEMA disaster grant, included in other revenues, to reimburse the System for costs associated with the Oroville Dam Spillway Recovery and Restoration Project.
- On December 19, 2017, the System issued its CVP Water System Revenue Bonds Series AX (Tax-Exempt) and its CVP Water System Revenue Bonds Series AY (Federally Taxable) with par amounts of \$350.7 million and \$140.8 million, respectively, and to advance refund portions of Series AE, AF, AG, AH, AI, AK, AN, AO, AP, AQ, and AR. The Series AX was issued with a premium of \$71.5 million and the Series AY was issued at par. The Series AX and AY Bonds were issued using a fixed rate structure and the final maturity of these bonds will be in 2035.

## Overview of Financial Statements

This discussion and analysis is intended to serve as an introduction to the System's basic financial statements. The System's basic financial statements are comprised of three components: 1) Financial Statements, 2) Notes to the Financial Statements, and 3) Other Information.

### FINANCIAL STATEMENTS

The System is accounted for as an enterprise fund. Enterprise funds account for the acquisition, operation and maintenance of governmental facilities and services that are entirely or predominantly self-supported by user charges. These financial statements report information using accounting methods similar (although not identical) to those used by private sector companies. The Statement of Net Position includes all the assets, liabilities, deferred outflows and inflows of resources, and net position. The Statement of Revenues, Expenses and Changes in Net Position reports all of the revenues and expenses incurred during the fiscal year presented. The Statement of Cash Flows reports the cash inflows and outflows classified by operating, investing, noncapital financing, and capital and related financing activities during the reporting period presented.

The Financial Statements can be found on pages 41-47 of this report.

### NOTES TO THE FINANCIAL STATEMENTS

The notes to the financial statements communicate certain information required by Generally Accepted Accounting Principles (GAAP). The notes to the financial statements can be found on pages 49-99 of this report.

### REQUIRED SUPPLEMENTARY INFORMATION AND OTHER INFORMATION

In addition to the basic financial statements and accompanying notes, this report also presents certain supplementary information related to the pension and other postemployment benefits plans and certain supplementary information concerning the System's adequacy of debt service coverage. Supplementary information can be found on pages 101-103 of this report.



## Financial Analysis

The SWP is considered a regulated entity, as such, rates are permitted to be set at levels intended to recover the estimated costs of providing regulated services or products, including the cost of capital. If revenues intended to cover some costs are provided before costs are incurred, those revenues are reported as deferred inflows of resources and recognized as revenue when the associated costs are incurred. If regulation provides assurance that incurred costs will be recovered in the future, those costs are capitalized as receivables and recovered through future billings. As a result, net position does not change over time. The total net position of the System exceeded liabilities and deferred inflows of resources at June 30, 2018 and 2017 by \$1,205.4 million each year.

### Condensed Statements of Net Position

	June 30,			% Change 2018-2017	% Change 2017-2016
	2018	2017	2016		
	(amounts in thousands)				
Assets:					
Other assets	\$ 3,053,908	\$ 2,477,088	\$ 2,268,741	23.3%	9.2%
Total utility plant	4,710,002	4,073,662	3,699,323	15.6%	10.1%
Total assets	7,763,910	6,550,750	5,968,064	18.5%	9.8%
Total deferred outflows of resources	401,026	282,685	230,231	41.9%	22.8%
Total assets and deferred outflows of resources	\$ 8,164,936	\$ 6,833,435	\$ 6,198,295	19.5%	10.2%
Liabilities:					
Other liabilities	\$ 547,137	\$ 499,386	\$ 460,713	9.6%	8.4%
Noncurrent liabilities	5,077,345	4,025,771	3,599,051	26.1%	11.9%
Total liabilities	5,624,482	4,525,157	4,059,764	24.3%	11.5%
Total deferred inflows of resources	1,335,026	1,102,850	933,103	21.1%	18.2%
Net position:					
Net investment in capital assets	826,871	664,533	736,203	24.4%	-9.7%
Restricted	378,557	540,895	469,225	-30.0%	15.3%
Total net position	1,205,428	1,205,428	1,205,428	0.0%	0.0%
Total liabilities, deferred inflows of resources, and net position	\$ 8,164,936	\$ 6,833,435	\$ 6,198,295	19.5%	10.2%

## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

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The largest portion of the System's current fiscal year net position is investments in capital assets, including but not limited to land, improvements, buildings, machinery, and equipment. Investments in capital assets are reflected net of accumulated depreciation less any outstanding related debt used to construct or acquire those assets. The main use of these capital assets is to provide water delivery and storage, flood control, recreation, fish and wildlife enhancement, and hydroelectric power. There was an increase in capital assets of \$636.3 million primarily due to the construction of the Oroville Dam Spillway Recovery and Restoration Project. This increase was offset by an increase of \$474.7 primarily in debt related to capital assets, causing an overall increase in net investment in capital assets of \$161.6 million. Although the System's investments in its capital assets is reported net of related debt, it should be noted that resources needed to repay this debt must be provided from other sources, mainly contractual billings to the Water Contractors, since the capital assets themselves cannot be used to liquidate these liabilities.

The remaining balance of the System's current fiscal year net position represents restricted net position, which are resources subject to external restrictions on how they may be used.

The following table reflects how the System recognized revenues and expenses during the year:

**Condensed Statements of Revenues, Expenses, and Changes in Net Position**

	Fiscal Year Ended June 30,			% Change 2018-2017	% Change 2017-2016
	2018	2017	2016		
	(amounts in thousands)				
Operating revenues:					
Water supply	\$ 1,076,238	\$ 1,082,587	\$ 948,105	-0.6%	14.2%
Power sales	88,148	85,089	71,236	3.6%	19.4%
Federal and State reimbursements	42,127	55,664	67,309	-24.3%	-17.3%
Total operating revenues	1,206,513	1,223,340	1,086,650	-1.4%	12.6%
Operating expenses:					
Operations and maintenance	566,620	544,925	511,926	4.0%	6.4%
Purchased power	342,115	339,993	219,661	0.6%	54.8%
Depreciation and amortization	80,101	77,265	77,170	3.7%	0.1%
Operating expenses recovered, net	(88,572)	57,066	65,004	-255.2%	0.0%
Total operating expenses	900,264	1,019,249	873,761	-11.7%	16.7%
Income from operations	306,249	204,091	212,889	50.1%	-4.1%
Nonoperating revenues/expenses:					
Capital revenues recovered (deferred), net	(275,746)	(130,147)	(118,510)	111.9%	9.8%
Interest expense	(105,429)	(105,768)	(106,978)	-0.3%	-1.1%
Investment income (loss), net	15,353	9,012	6,235	70.4%	44.5%
Other revenues (expenses), net	59,573	22,812	6,365	161.1%	258.4%
Total nonoperating revenues/expenses	(306,249)	(204,091)	(212,889)	50.1%	-4.1%
Change in net position	-	-	-	-	-
Net position, beginning of year	1,205,428	1,205,428	1,205,428	0.0%	0.0%
Net position, end of year	\$ 1,205,428	\$ 1,205,428	\$ 1,205,428	0.0%	0.0%

\* Certain amounts have been reclassified from amounts previously reported to conform with the current year presentation.

## Revenues

### OPERATING REVENUES

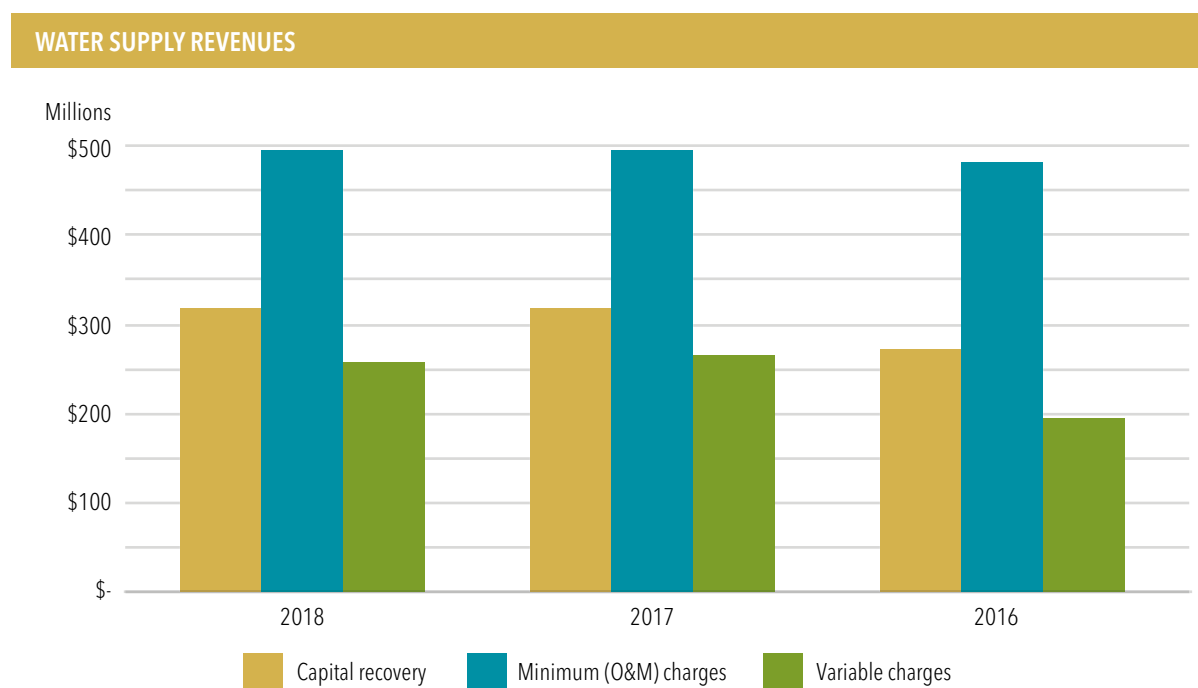
The decrease of \$16.8 million in operating revenues for fiscal 2018 is attributable to a decrease of \$13.5 million in federal and state reimbursements primarily due to funds depleted for capital cost recovery from Proposition 84 and Greenhouse Gas Reduction funds, and a decrease of \$6.3 million in water supply revenue billings mainly due to a change in the Delta Water rate. These decreases were offset by an increase of \$3 million in power sales.

The increase of \$136.7 million in operating revenues for fiscal 2017 is attributable to an increase of \$134.5 million in water supply revenue billings due to significant increases in precipitation throughout Northern California, which resulted in increased water deliveries, and an increase of \$13.8 million in power sales. These increases were offset by a decrease of \$11.6 million in federal and state reimbursements.

### WATER SUPPLY REVENUE

The largest portion of operating revenues, approximately 89.2%, comes from Water Supply Revenue. In fiscal 2018, the System generated \$1,076.2 million in Water Supply Revenue, compared to \$1,082.6 million in fiscal 2017, and \$948.1 million in fiscal 2016.

The following table shows a comparative breakdown of the components of water supply revenue for fiscal years 2018, 2017, and 2016:



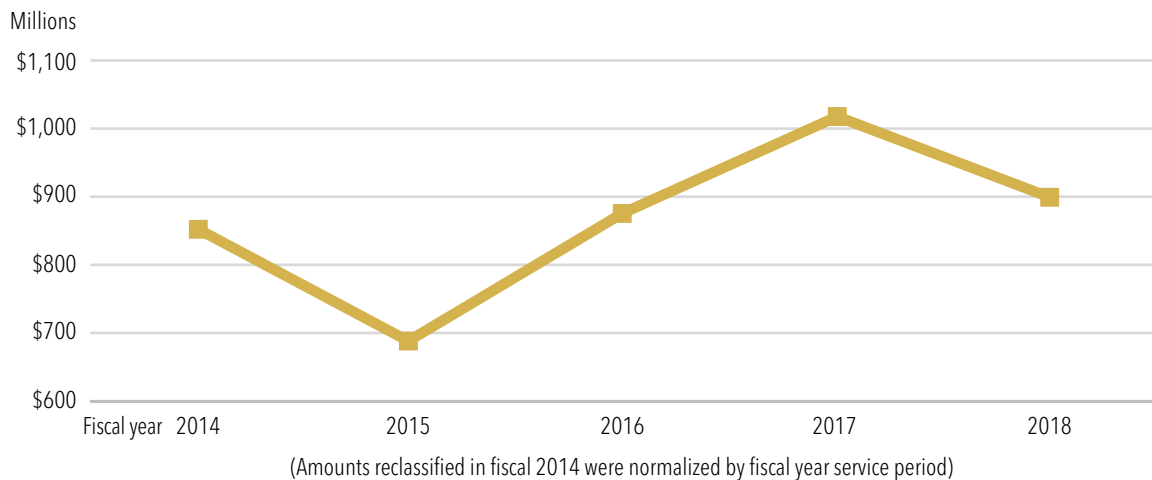
## Expenses

### OPERATING EXPENSES

Total operating expenses decreased by \$119 million for fiscal 2018 to a total of \$900 million. The decrease is primarily due to the timing difference between recovery and recognition of operating costs, offset in part by increased employment costs.

Total operating expenses increased by \$145.4 million for fiscal 2017 to a total of \$1,019.2 million. The increase included \$20.3 million of higher power purchases and increased operations and maintenance expenses.

### OPERATING EXPENSES



### OPERATIONS AND MAINTENANCE EXPENSES

The increase in operations and maintenance expenses of \$22 million in fiscal 2018 was primarily due to a \$30 million increase in employment costs related to a change in the assumed discount rate used to calculate pension obligations.

Total operations and maintenance expenses increase of \$33 million in fiscal 2017 was mostly attributed to the following factors: \$48.1 million increase in wages and salaries costs related to the Oroville Dam Spillway Recovery and Restoration Project, pension expense and Other Postemployment Benefits other than Pensions (OPEB); \$7.5 million increase in purchased water supply expenses due to the purchase of environmental pulse flow water from Goodwin Dam and resold under the new multi-year Turnback Water Pool Program; and \$22.6 million net decrease in expenses included reduction in pollution remediation costs, general supplies, and miscellaneous expenses related to general operations and maintenance expenses.

### PURCHASED POWER

In fiscal 2018, purchased power increased by \$2.1 million to a total of \$342.1 million. This slight increase was due to above average water levels at the reservoirs during fiscal 2018. This resulted in continued pumping demand.

In fiscal 2017, power purchases increased by \$120.3 million to a total of \$340 million. This was mainly due to significant increases in water deliveries. Heavy rains from January through April of 2017 helped refill the System's reservoirs, and

allowed for greater water deliveries than in previous years. The increased water deliveries resulted in increased pumping demand, and hence greater power purchases and increased transmission costs.

#### **OPERATING AND MAINTENANCE EXPENSE RECOVERED (DEFERRED)**

Operating and maintenance expense recovered (deferred) represents an adjustment for the timing difference between operations and maintenance (O&M) costs recovered as per the Water Supply Contracts and the incurrence of such O&M costs. Operating and maintenance expense recovered (deferred) decreased by \$145.6 million in fiscal 2018. This is due mainly to the normal-course timing differences for prior year over-recoveries offset in part by \$30 million of increased employment costs.

In fiscal 2017, operating and maintenance expense recovered decreased by \$7.9 million. This decrease resulted from increased power costs due to increased pumping demand and a decrease in net suspended costs.

#### **CAPITAL REVENUES DEFERRED**

Capital revenues deferred represents an adjustment for the timing difference between capital revenue recovered as per the Water Supply Contracts and the depreciation expense recognition of such capital assets and their associated financing costs. Capital revenues deferred increased by \$146 million in fiscal 2018. This is due primarily to the normal-course compensation for prior year under-recoveries of \$88 million as well as an increased current year depreciation timing difference.

In fiscal 2017, capital revenues recovered increased by \$11.6 million in fiscal 2017. This increase was primarily due to the System having recognized current year capital revenues in excess of annual amounts in depreciation expense.

#### **INTEREST EXPENSE**

Interest expense for fiscal 2018 decreased by \$339 thousand to a total of \$105.4 million. The \$339 thousand decrease was attributable to the issuance of Revenue Bonds Series AX and AY, which refunded other bonds, as well as the gradual decrease in interest paid on the General Obligation (GO) and Devil Canyon Castaic (DCC) bonds as those bonds continue to mature.

Interest expense for fiscal 2017 decreased by \$1.2 million to a total of \$105.8 million. The \$1.2 million decrease was attributable to the issuance of Revenue Bonds Series AW, which refunded other bonds, as well as the gradual decrease in interest paid on the GO and DCC bonds as those bonds continue to mature.

## Capital Assets and Debt Administration

#### **CAPITAL ASSETS**

Investments in capital assets include utility plant and equipment, land, construction work in progress (CWIP), land use rights, computer software, other intangible assets, and general. The increase in the System's investment in capital assets for fiscal 2018 was \$636 million (including \$4.5 million of capitalized interest) and for fiscal 2017 was \$374 million (including \$29.8 million of capitalized interest), an increase of 15.62% and 10.12%, respectively. Additional details of capital assets are contained in Note 4.

The System's investment in capital assets is presented below:

**Capital Assets**

	Balance (in thousands)		
	2018	2017	2016
Nondepreciable Utility Plant	\$ 1,670,646	\$ 1,363,938	\$ 1,029,435
Depreciable Utility Plant	5,224,850	4,826,862	4,754,564
Total Utility Plant	6,895,496	6,190,800	5,783,999
Less Accumulated depreciation / amortization	(2,185,494)	(2,117,138)	(2,084,676)
Utility Plant, Net	\$ 4,710,002	\$ 4,073,662	\$ 3,699,323

**LONG-TERM DEBT**

The System's total debt increased \$302.8 million (9.3%) during fiscal 2018. This increase was comprised of the issuance of approximately \$504.4 million in new debt, net of refundings, including premiums, offset by bond principal payments and amortization of premiums and discounts of \$262.5 million. The change in debt included the issuance of new bond Series AX and AY with a par amount of \$491.5 million and a premium of \$43.7 million, the issuance of \$500.5 million of commercial paper notes, which was partially offset by a \$531.2 million decrease due to the refunding of bond Series AX and AY, and the enactment of California Senate Bill 84, which increased the System's debt by an additional \$60.9 million. The most significant increase in debt was due to the issuance of commercial notes, which were used to finance costs related to the Oroville Dam Spillway Recovery and Restoration Project. During fiscal 2017, the System's total debt increased by \$313.1 million. This was comprised of new debt of \$515.1 million, net of refundings, and principal payments and amortization of premiums and discounts of \$202 million.

The System's long-term debt is presented below:

**Long-Term Debt**

	Balance (in thousands)		
	2018	2017	2016
Revenue Bonds	\$ 2,869,007	\$ 3,026,368	\$ 2,770,888
General Obligation Bonds	54,065	88,300	135,045
Commercial Paper	580,672	147,165	42,776
Surplus Money Investment Fund Loan	60,910	-	-
Total	3,564,654	3,261,833	2,948,709
Less current portion	(155,375)	(172,805)	(180,930)
Long-term portion	\$ 3,409,279	\$ 3,089,028	\$ 2,767,779

Additional information on the System's long-term debt can be found in Notes 6 and 7 of this report.

## Economic Factors

The SWP must enter the power market to facilitate the operation of the California aqueduct. Operations continue 24 hours a day, seven days a week, with constant coordination with other utilities, Water Contractors, the California Independent System Operator (CAISO), and SWP pumping and generating plants. The power market, controlled by CAISO, can have a material impact on the power sales revenues and power purchase expenses of the SWP.

Economics, climate changes, and new legislation have required the System to explore and include more renewable energy sources. In 2005, Executive Order S-3-05 was signed into law and in 2006 Assembly Bill (AB-32) was passed, requiring California to reduce its Green House Gas (GHG) emissions to 1990 levels by 2020. By 2050, GHG emission levels must be below 80% of 1990 levels.

As a result of these new laws, California will require a higher percentage of the System's pumping load to be served by renewable energy sources. By 2050, approximately 50% of the System pump load will need to be supplied by renewable energy. In fiscal 2015, the System began purchasing renewable energy under a purchase contract with Dominion Solar-RE Camelot, a 45 MW solar plant. The System is also under contract for solar energy purchases with Solverde 1 and Solar Star California XLIV, which came on line near the end of calendar year 2016 and added an additional 95 MW of renewable power.

Every year, the SWP is confronted with factors that affect how the operation of the System is conducted. Some factors include plant or unit outages, environmental concerns, weather, fluctuations in natural gas prices, transmission line outages, and wild fires. In fiscal 2018, the SWP was still affected by the loss of the Thermalito Hyatt Power Plant (THPP) causing ongoing unavailability of units at DWR's Oroville complex.

Increased water allocations resulted in increased water deliveries and pumping through the SWP. Water deliveries increased from 2.94 million acre-feet in fiscal 2017 to 3.13 million acre-feet in fiscal 2018, an increase of 0.19 million acre-feet or 6.46%. The System maintained its increased water deliveries, although it experienced a dry winter in fiscal 2018. Factors that contributed to increased water deliveries were attributed to above average statewide precipitation and statewide snowpack in fiscal 2017. Additionally, the System experienced a significant wet winter in 2017, which provided some additional water in storage, with 1.4 million acre-feet of stored water in Lake Oroville reservoir increasing to over 2 million acre-feet in fiscal 2018.

While the weather is very unpredictable, the Department is hopeful that upcoming storms in the next fiscal year will continue to build up snowpack water content in Northern California.



## Requests for Information

This financial report is designed to provide a general overview of the System's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Chief, Enterprise Accounting Branch, 1416 Ninth Street Room 816, Sacramento, CA 95814.

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# FINANCIAL STATEMENTS

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## FINANCIAL STATEMENTS

### Statement of Net Position

(amounts in thousands)

(with comparative amounts for June 30, 2017)

	June 30,	
	2018	2017
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 731,382	\$ 808,769
Receivables:		
Interest on investments	4,229	2,552
Water supply and power billings (net)	97,025	106,591
Due from federal and state governments	53,636	35,253
Due from others	115	85
Inventories	5,437	5,011
Total current assets	891,824	958,261
Noncurrent assets:		
Restricted assets:		
Cash and cash equivalents restricted for plant replacements	37,408	33,204
Cash and investments restricted for debt service	126,042	126,990
Cash and cash equivalents on deposit with revenue bond trustee	33,913	33,695
Amounts recoverable through future billings under long-term water supply contracts:		
Operations and maintenance expense	956,860	202,725
Capital credit due from water contractors	372,608	348,845
Unamortized project costs	220,458	318,574
Unbilled interest incurred on capital costs	308,742	347,724
Loans receivable from local water agencies	10,924	11,934
Advances to other state funds	95,129	95,136
Total noncurrent assets	2,162,084	1,518,827
Utility Plant:		
Nondepreciable utility plant	273,896	267,941
Depreciable utility plant	5,224,850	4,826,862
Less accumulated depreciation/amortization	(2,185,494)	(2,117,138)
Net utility plant in service	3,313,252	2,977,665
Construction work in progress	1,396,750	1,095,997
Total utility plant	4,710,002	4,073,662
<b>Total assets</b>	7,763,910	6,550,750
<b>Deferred outflows of resources</b>		
Deferral of loss on refunding	149,380	155,183
Deferral of resources related to pensions	230,393	127,502
Deferral of resources related to OPEB	21,253	-
Total deferred outflows of resources	401,026	282,685
<b>Total assets and deferred outflows of resources</b>	\$ 8,164,936	\$ 6,833,435

The accompanying notes are an integral part of these financial statements.

## Statements of Net Position (continued)

(amounts in thousands)

(with comparative amounts for June 30, 2017)

	June 30,	
	2018	2017
<b>Liabilities</b>		
Current liabilities:		
Current maturities of bonds	\$ 155,375	\$ 172,805
Accounts payable	185,119	147,651
Accrued compensated absences	15,402	15,590
Pollution remediation	8,557	4,207
Accrued interest on long-term debt	10,685	11,491
Due to other state funds	53,059	52,292
Proceeds due to water contractors	118,940	95,350
Total current liabilities	<u>547,137</u>	<u>499,386</u>
Noncurrent liabilities:		
General obligation bonds, net of current portion	28,090	54,065
Revenue bonds, net of current portion	2,739,607	2,887,798
Commercial paper	580,672	147,165
Net pension liability	630,912	556,748
Net OPEB liability	912,912	-
Postemployment benefits other than pension obligations	-	262,390
Surplus Money Investment Fund (SMIF) Loan	60,910	-
Accrued compensated absences, net of current portion	26,926	25,313
Pollution remediation, net of current portion	41,311	37,909
Unearned revenue - State and Federal capital recovery	17,061	17,653
Advances for plant replacements	38,944	36,730
Total noncurrent liabilities	<u>5,077,345</u>	<u>4,025,771</u>
<b>Total liabilities</b>	<u>5,624,482</u>	<u>4,525,157</u>
<b>Deferred inflows of resources</b>		
Operations and maintenance expense	1,800	1,866
Capital costs	1,104,772	952,245
Power sales credit due to Water Contractors	133,249	137,348
Deferral of resources related to pensions	13,472	11,391
Deferral of resources related to OPEB	81,733	-
<b>Total deferred inflows of resources</b>	<u>1,335,026</u>	<u>1,102,850</u>
<b>Total liabilities and deferred inflows of resources</b>	<u>6,959,508</u>	<u>5,628,007</u>
Net position:		
Net investment in capital assets	826,871	664,533
Restricted for:		
Debt service and plant replacements	197,363	193,889
SWP related activities	181,194	347,006
Total net position	<u>1,205,428</u>	<u>1,205,428</u>
<b>Total liabilities, deferred inflows of resources, and net position</b>	<u>\$ 8,164,936</u>	<u>\$ 6,833,435</u>

The accompanying notes are an integral part of these financial statements.

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## Statements of Revenues, Expenses, and Changes in Net Position

*(amounts in thousands)*

(with comparative amounts for June 30, 2017)

	Fiscal Year Ended June 30,	
	2018	2017
Operating revenues:		
Water supply	\$ 1,076,238	\$ 1,082,587
Power sales	88,148	85,089
Federal and State reimbursements	42,127	55,664
Total operating revenues	<u>1,206,513</u>	<u>1,223,340</u>
Operating expenses:		
Operations and maintenance	566,620	544,925
Purchased power	342,115	339,993
Depreciation and amortization	80,101	77,265
Operating expenses recovered, net	(88,572)	57,066
Total operating expenses	<u>900,264</u>	<u>1,019,249</u>
Income from operations	306,249	204,091
Nonoperating revenue (expenses):		
Capital revenues recovered (deferred), net	(275,746)	(130,147)
Interest expense	(105,429)	(105,768)
Investment income, net	15,353	9,012
Other revenues (expenses), net	59,573	22,812
Total nonoperating revenues (expenses)	<u>(306,249)</u>	<u>(204,091)</u>
Change in net position	-	-
Net position, beginning of year, as restated	<u>1,205,428</u>	<u>1,205,428</u>
Net position, end of year	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>

The accompanying notes are an integral part of these financial statements.

## FINANCIAL STATEMENTS

### Statements of Cash Flows

(amounts in thousands)

(with comparative amounts for June 30, 2017)

	Fiscal Year Ended June 30,	
	2018	2017
<b>Cash flows from operating activities:</b>		
Receipts from customers	\$ 1,222,810	\$ 1,249,998
Payment to employees for services	(374,955)	(367,083)
Payments to suppliers	(421,068)	(437,278)
Other receipts	59,082	21,044
Net cash provided by operating activities	<u>485,869</u>	<u>466,681</u>
<b>Cash flows from capital and related financing activities:</b>		
Proceeds from issuance of revenue obligation bonds including premium	-	330,700
Payments to advance refund bonds	(39,760)	-
Principal payments on long-term debt	(172,805)	(180,930)
Commercial paper notes issued	500,484	200,379
Principal payments on commercial paper notes	(66,976)	(95,990)
Interest payments on long-term debt	(79,462)	(40,069)
Additions to utility plant and construction work in progress	(716,441)	(416,936)
Net cash used by capital and related financing activities	<u>(574,960)</u>	<u>(202,846)</u>
<b>Cash flows from investing activities:</b>		
Cash received from investment earnings	14,650	11,247
Proceeds of investments matured	211,911	102,111
Purchases of investments	(202,547)	(102,110)
Loan payments from local water agencies	1,010	1,034
Net cash provided by investing activities	<u>25,024</u>	<u>12,282</u>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(64,067)</b>	<b>276,117</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>942,746</b>	<b>666,629</b>
<b>Cash and cash equivalents, end of year</b>	<b>\$ <u>878,679</u></b>	<b>\$ <u>942,746</u></b>
<b>Noncash capital and related financing activities:</b>		
Amortization of bond premium/discount	\$ 50,505	\$ 34,541
Amortization of deferred loss on refunding	(10,151)	(11,109)
Principal retirements of long-term debt on proceeds received from issuance of Series AX and AY Water System Revenue Bonds	<u>531,255</u>	<u>97,430</u>
<b>Noncash capital and related financing activities:</b>	<b>\$ <u>571,609</u></b>	<b>\$ <u>120,862</u></b>

The accompanying notes are an integral part of these financial statements.



## Statements of Cash Flows (continued)

(amounts in thousands)

(with comparative amounts for June 30, 2017)

	Fiscal Year Ended June 30,	
	2018	2017
<b>Reconciliation to the statement of net position:</b>		
Cash and cash equivalents	\$ 731,382	\$ 808,769
Restricted assets:		
Cash and cash equivalents restricted for plant replacements	37,408	33,204
Cash and cash equivalents restricted for debt service (net of \$50,066 and \$59,913 of U.S. Agency securities for 2018 and 2017, respectively)	75,976	67,077
Cash and cash equivalents on deposit with revenue bond trustee	33,913	33,696
<b>Cash and cash equivalents</b>	<b>\$ 878,679</b>	<b>\$ 942,746</b>
	2018	2017
<b>Reconciliation of income from operations to net cash provided by operating activities:</b>		
Income from operations	\$ 306,249	\$ 204,091
Adjustment to reconcile income from operations to net cash provided by operating activities:		
Depreciation expense	80,101	77,265
Other receipts	59,082	21,044
Other non current liabilities	218,888	72,038
(Increase) decrease in deferred charges and credits, net	(890,707)	7,631
Changes in assets and liabilities:		
Decrease in receivables	9,535	13,025
(Increase) decrease in inventories	(427)	161
(Increase) decrease in due from federal government	(18,383)	3,343
Increase in accounts payable, accrued vacation, and pollution remediation	61,652	22,170
Increase in pension & other post employment benefits (OPEB)	650,522	32,192
Increase (decrease) in due to other state funds	(14,233)	12,922
Increase in proceeds due to Water Contractors	23,590	799
Total adjustments	179,620	262,590
<b>Net cash provided by operating activities</b>	<b>\$ 485,869</b>	<b>\$ 466,681</b>

The accompanying notes are an integral part of these financial statements.

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# NOTES TO FINANCIAL STATEMENTS

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## 1. Reporting Entity

The State Water Resources Development System (System), administered by the Department of Water Resources (DWR), includes the State Water Project (SWP), the Davis-Grunsky Act Program, and the San Joaquin Drainage Implementation Program. It was constructed as the result of initial legislation in 1951 and subsequent legislation in the 1960s providing various financing mechanisms. The funds of the System are a part of the primary government of the State of California and are reported as a proprietary fund and business-type activity (non-governmental cost funds) within the State of California's financial statements. The SWP is a system of dams, water storage facilities, aqueducts, pumping stations and electric generation facilities, which have been constructed for purposes of developing firm water supply and conveying water to areas of need within the State and providing flood control, recreation, fish and wildlife enhancement, and hydroelectric power. The System has entered into Water Supply Contracts with 29 customers (Water Contractors) in order to recover substantially all System costs. The 29 Water Contractors are principally located in the San Francisco Bay Area, the Central Coast, the Central Valley and Southern California and their service areas encompass approximately 25% of the State's land area and 69% of its population.

The operations of the System are separate and distinct from other operations of the State of California. The accompanying financial statements only reflect the activity of the System and do not purport to, and do not, present fairly, the financial position of the State of California and the changes in its financial position and cash flows, where applicable, in conformity with accounting principles generally accepted in the United States of America. The System is accounted for as an enterprise fund comprised of two segments, the Burns-Porter Act and the Central Valley Project Act, and is financed and operated in a manner similar to that of a private business enterprise. The System uses the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

## 2. Summary of Significant Accounting Policies

DWR is a department within the California Natural Resources Agency of the State, and is responsible for the planning, construction, and operation of the System's SWP. The System's operating revenues include water supply, power sales, and Federal and State Reimbursements. Under the Water Supply Contracts, the Water Contractors are required to pay to the System amounts calculated and billed as operating revenues, thus returning to the System substantially all annual operating costs. These operating expenses are comprised of the costs of sales and services, depreciation and amortization of capital assets, power and transmission costs, and administrative expenses.

Revenues from the Water Contractors pledged to the payment of debt, and net investment income are related to capital and financing activities and are defined as non-operating revenues and expenses.

### UTILITY PLANT

Utility plant is recorded at historical cost. Historical cost includes labor, materials, and indirect items such as engineering, supervision, transportation, and interest on borrowed funds incurred during construction. Repairs, maintenance, and minor purchases of equipment are expensed as incurred.

### DEPRECIATION

Depreciation is provided on a straight-line basis over the estimated useful lives of the various classes of utility plant, as follows:

Various Classes of Utility Plant	Estimated Useful Lives
Aqueducts	80 - 100 years
Dams and reservoirs	85 years
Environmental preservation and mitigation	50 years
Power plants	30 - 50 years
Pumping plants	30 - 40 years
Fish protection	35 - 36 years
Facilities	20 - 30 years
Equipment, computers, and vehicles	3 - 5 years
General	1 - 20 years

The System's intangible assets, consisting of software, land use and legal rights, costs associated with the Federal Energy Regulatory Commission (FERC) licenses, and compliance instruments are included in Utility Plant in Service (UPIS). Software costs are amortized on a straight-line basis over a five to ten-year useful life. Easements are land use rights and considered as either permanent or temporary. Permanent easements have an indefinite useful life and are non-depreciable while temporary easements are being amortized over a five-year useful life, unless otherwise specified in the purchase agreement.

A central element of California's Global Warming Solutions Act (AB 32) requires the System to obtain and surrender emission credits and allowances. Currently, these compliance instruments consist of Green House Gas (GHG) emission

allowances for the System's share of compliance cost for the Lodi Energy Center (LEC). Since the economic benefit is not diminished until the credits are consumed, they will not be amortized. The credits will be included in UPIS and charged to expense as they are surrendered.

### **CASH AND CASH EQUIVALENTS**

Cash and cash equivalents, for purposes of the statement of cash flows, includes cash on hand, restricted cash for plant replacements, restricted cash for debt service, and restricted cash on deposit with revenue bond trustee. Such amounts include deposits in the State of California Pooled Money Investment Account (PMIA), Surplus Money Investment Fund (SMIF), and instruments with original maturities of three months or less. Cash and cash equivalents do not include U.S. Government and Agency securities with maturities of more than three months.

### **RESTRICTED CASH AND INVESTMENTS**

Cash and cash equivalents on deposit with revenue bond trustee consists of debt service reserve funds held with a major national bank for the Series 1973 Devil Canyon – Castaic Facilities bonds and amounts held for Reid Gardner Unit 4 contingencies under the termination agreement.

Cash and cash equivalents with the State Treasurer for plant replacements and debt service are restricted as required by the provisions of the Water Supply Contracts and bond resolutions. Restricted funds consist of investments of the same type as those described below.

### **CASH AND INVESTMENTS**

Cash not required for current use, including restricted cash, is invested in SMIF, which is stated at fair value. The weighted average to maturity of PMIA investments was 193 days as of June 30, 2018 and 194 days as of June 30, 2017. The total amount of deposits in SMIF was \$36.4 billion as of June 30, 2018 and \$37.3 billion as of June 30, 2017. The Pooled Money Investment Board (PMIB) has oversight responsibility for SMIF. The Board consists of three members as designated by state statute which shall consist of the State Controller, State Treasurer and Director of Finance. The value of the pool shares in SMIF, which may be withdrawn, is determined on an amortized cost basis, which is different than the fair value of the System's portion of the pool. PMIA funds are on deposit with the State's Centralized Treasury System and are not SEC registered, but are managed in compliance with the California Government Code and State policy.

The State's Investment Policy for the PMIA, which is managed by the State Treasurer's Office, sets forth the permitted investment vehicles, liquidity parameters and maximum maturity of investments. These investments consist of U.S. government securities, securities of federally-sponsored agencies, U.S. corporate bonds, interest bearing time deposits in California banks, prime-rated commercial paper, bankers' acceptances, negotiable certificates of deposit, repurchase and reverse repurchase agreements. The PMIA policy limits the use of reverse repurchase agreements subject to limits of no more than 10% of PMIA. The PMIA does not invest in leveraged products or inverse floating rate securities.

The System is authorized by statute to invest in the same types of investment vehicles permitted by the State's Centralized Treasury System. U.S. Treasury and agency debt securities are carried at fair value. Because investing is not a core part of the System's mission, the Systems determines that the disclosure related to these investments only

need to be disaggregated by major type. Fair value is the amount at which a financial instrument could be exchanged in a current transaction between willing parties, and is determined from published data (quoted prices) provided by the exchanges, computerized pricing sources, the National Association of Securities Dealers' National Market System, securities custodians and other authoritative sources. Investments made by the System during the year ended June 30, 2018 are of a similar nature as those held at June 30, 2017.

### ADVANCES TO OTHER STATE FUNDS

Advances to Other State Funds represent the System's advances to DWR's internal service fund that functions as a revolving working capital account for the System. The other Advances to Other State Funds represent the System's advances to the Department of General Services to fund the Rio Vista Science Center, a joint venture between DWR and the United States Fish and Wildlife Services.

### RECEIVABLES

Receivables include amounts due from Water Contractors, organizations that purchase power from the System, Federal and State governments, accrued interest from financial institutions, and other miscellaneous customers.

### INVENTORIES

The System carries two types of inventories, operating supplies and fuel. The method of accounting used for operating supplies is first-in, first-out inventory valuation. Fuel station tanks are located throughout the System, and fuel inventory is accounted for using the moving average cost method. Components of inventories at June 30, 2018 and 2017 were as follows:

Inventories		
	2018	2017
Operating supplies	\$ 5,080	\$ 4,793
Fuel	357	218
Total	\$ 5,437	\$ 5,011

### AMOUNTS RECOVERABLE THROUGH FUTURE BILLINGS

The System records unbilled costs as assets recoverable through future billings under the Water Supply Contracts. These costs include operations and maintenance costs and capital costs.

Unamortized project costs represent abandoned utility plant costs and certain research and development expenses that are recoverable through future billings to the Water Contractors under the terms of the Water Supply Contracts.

Unbilled interest incurred on unrecovered capital costs are classified as other long-term assets until billed under the terms of the Water Supply Contracts. Unbilled interest incurred represents the System's unrecovered interest since inception, recalculated annually at the System's cumulative weighted average cost of borrowing (Project Interest Rate). The System's Project Interest Rate was 4.61% for the years ended June 30, 2018 and 2017.

## REGULATED OPERATIONS

The System has the authority to establish the level of rates necessary to recover generally all System costs, including debt service. As a regulated entity, the System's financial statements are prepared in accordance with the standards established by the Governmental Accounting Standards Board (GASB). The System is considered to be a Regulated Operation pursuant to GASB Statement No. 62, which requires that the effects of the rate-making process are recorded in the financial statements. Accordingly, certain expenses and credits, normally reflected in the change in net position, as incurred, are recognized when included in rates and recovered from or refunded to customers, the state, and the federal government. The System records various regulatory assets and credits to reflect rate-making actions of management.

## DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

In addition to assets, the statement of net position reports a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period(s) and so will not be recognized as an expense/expenditure until then.

In addition to liabilities, the statement of net position reports a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period(s) and so will not be recognized as revenue until that time.

### *Deferred Outflows of Resources*

Deferral of loss on refunding represents the difference between the reacquisition price and the net carrying amount of the refunded debt. The unamortized balance of deferred loss on refunding was \$149.4 million as of June 30, 2018 and \$155.2 million as of June 30, 2017. The \$5.8 million decrease is due to the scheduled annual amortization expense of \$10.1 million, offset with an increase of \$4.3 unamortized loss resulting from the current year refunding of Series AX and AY.

The System's allocated share of the deferred outflows of resources related to pensions was \$230.4 million and \$127.5 million as of June 30, 2018 and 2017, respectively. See Note 8 for additional information.

The System's allocated share of the deferred outflows of resources related to OPEB was \$21.3 million as of June 30, 2018. See Note 9 for additional information.

### *Deferred Inflows of Resources*

Deferred operations and maintenance expenses represent operations and maintenance revenues collected in excess of operations and maintenance expenses incurred resulting from specific terms of the Water Supply Contracts and timing differences. The System had an ending balance of \$1.8 million and \$1.9 million in deferred inflows of operations and maintenance expenses as of June 30, 2018 and 2017, respectively.

Since the capital component of revenue allows for the recovery of capital costs plus interest related to the construction of the System's facilities, these revenues are presented as deferred inflows of resources. As these facilities are depreciated over time, the deferred capital costs are recovered. The System had an ending balance of \$1,104.8 million and \$952.2 million in deferred inflows of capital costs as of June 30, 2018 and 2017, respectively.

The power sales credit due to Water Contractors arises from revenue collected for the power generated by the Hyatt-

Thermalito Power Plant (HTPP). The power sales credit is amortized over time by a credit issued to the Water Contractors through the Delta Water Charge. The power sales credit decreased by \$4.1 million to an ending balance of \$133.2 million in fiscal 2018 compared to \$137.3 million in fiscal 2017.

The System's allocated share of the deferred inflows of resources related to pensions was \$13.5 million and \$11.4 million as of June 30, 2018 and 2017, respectively. See Note 8 for additional information.

The System's allocated share of the deferred inflows of resources related to OPEB was \$81.7 million as of June 30, 2018. See Note 9 for additional information.

### **UNEARNED REVENUE - STATE AND FEDERAL CAPITAL RECOVERY**

Unearned Revenue represents reimbursement payments made by the State and Federal governments for their share of the System's capital costs in excess of the related depreciation expense recognized in the statement of revenues, expenses, and changes in net position.

### **ADVANCES FOR PLANT REPLACEMENTS**

Advances for plant replacements represent billings under the terms of the Water Supply Contracts for future replacement of certain System assets. Receipts from such billings are restricted. Costs of plant replacements are charged to this reserve, as incurred.

### **BOND ISSUANCE DISCOUNTS AND PREMIUMS**

Bond issuance discounts and premiums are reflected as a reduction/increase to the carrying value of the bonds outstanding and are amortized over the lives of the related debt instruments.

### **NET POSITION**

The System classifies its net position into two components: net investment in capital assets and restricted.

Net investment in capital assets includes utility plant in service, net of accumulated depreciation, construction work in progress, unamortized project costs, less debt related to capital assets, unearned revenue, and other assets and liabilities related to the recovery of utility plant. Net investment in capital assets were \$826.9 million and \$664.5 million at June 30, 2018 and 2017, respectively.

The restricted component of net position is for debt service and State Water Project (SWP) related activities. Net position restricted for debt service represents reserves held by the System as required by its bond resolutions. Net position restricted for SWP related activities represents the requirements of legislation that created the System and authorized the construction of the SWP, to use the System's net position solely in support of the SWP, the Davis-Grunsky Act Program, and the San Joaquin Drainage Implementation Program. Restricted net position totaled \$378.6 million and \$540.9 million at June 30, 2018 and 2017, respectively.



## REVENUES

The cost of providing services from the System is required to be recovered through user charges and other reimbursements. Under the terms of the Water Supply Contracts, the System granted the Water Contractors rate management reductions of approximately \$40.5 million for the years ended June 30, 2018 and 2017. Rate management reductions are reductions in capital related billings to the Water Contractors.

Revenues under the Water Supply Contracts are recognized when billings are due and payable. The billings cover debt service requirements, an additional 25% of revenue bond debt service to satisfy certain bond covenants, current operations and maintenance costs, and under collections. The Water Supply Contracts provide that the 25% portion of the billings collected for the purpose of satisfying certain bond covenants be refunded in the subsequent year. These billings, which totaled \$56.3 million for both fiscal years ended June 30, 2018 and 2017 are included as Proceeds Due to Water Contractors as presented in the Supplementary Information Debt Service Coverage. The Water Contractors received bond cover refunds of \$56.3 million and \$57.9 million in fiscal years 2018 and 2017, respectively.

Revenues from the sale of surplus power are recognized as the power is delivered.

The Federal government reimburses the System for certain operating and capital costs incurred by the System for flood control purposes. In addition, the Federal government reimburses the System for the Federal government's 39.90% share of the operating costs and 45% share of the capital costs of the San Luis joint use facilities and other water facilities. The State of California also reimburses the System for certain operating and capital costs incurred by the System for facilities located within the SWP. Revenue from the State and Federal government in excess of their share of the related depreciation expense is deferred until the related depreciation expense is recognized.

## COMPENSATED ABSENCES

Compensated absences represent employees' vested unpaid vacation, annual leave, and other similar paid leave programs which are eligible for payment upon separation from state service. Unused sick-leave balances are not included in the compensated absences as they do not vest to employees.

## PENSIONS

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the System's portion of the California Public Employees' Retirement System (CalPERS) pension plan and additions to or deductions from the plan's fiduciary net position have been determined on the same basis as they are reported by CalPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

## OTHER POSTEMPLOYMENT BENEFIT (OPEB)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the System's portion of the CalPERS OPEB plan and additions to or deductions from the plan's fiduciary net position have been determined on the same

basis. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

## SEGMENTS

The System has two segments, which are defined under governmental accounting standards, as an identifiable activity for which one or more revenue bonds or other revenue-backed debt instruments are outstanding:

1. Activities Allowed Under the Burns-Porter Act – This segment accounts for the costs to build, operate, and maintain the facilities financed by General Obligation (GO) bonds as authorized by the Burns-Porter Act. Transportation and conservation revenues from the Water Contractors are recorded in this segment as well as power sales and reimbursements from Federal and State governments and interest on investments. Expenses are limited to operations and maintenance of the SWP constructed with GO bond proceeds, power purchases, replacements, and debt service on the GO bonds.
2. Activities Allowed Under the Central Valley Project Act – This segment accounts for the costs to build, operate, and maintain the facilities financed by the Central Valley Project Water System revenue bonds. Capital and operating revenues from the Water Contractors for projects financed by revenue bond proceeds are recorded in this segment, as well as commercial paper sales, reimbursements from Federal and State governments for the San Luis Dam and Reservoir, Suisun Marsh, recreation costs, and interest on investments. Expenses are limited to the construction and operation of SWP facilities constructed with revenue bond proceeds and power facilities and debt service payments on the revenue bonds.

## COMPARATIVE DATA AND RECLASSIFICATIONS

Comparative data for prior years have been presented for certain section of the accompanying financial statements in order to provide an understanding of changes in the System’s financial position and operations. Also, certain amounts presented in the prior year have been reclassified in order to conform to the current year’s presentation.

These reclassifications were necessary to accurately present amounts of the System’s net position by its components: net investment in capital assets, restricted for debt service, and restricted for SWP related activities.

### Statements of Net Position

	Balance Previously reported at June 30, 2017	Reclassification	June 30, 2017 (After Reclassification)
Net position:			
Net investment in capital assets	\$ 825,218	\$ (160,685)	\$ 664,533
Restricted for:			
Debt service	-	193,889	193,889
SWP related activities	380,210	(33,204)	347,006

### 3. Interests in Jointly Owned Facilities

At June 30, 2018 and 2017, the System owned the following undivided interests in jointly- owned facilities that are recorded in UPIS:

#### Interests in Joint-Use Facilities

	Joint Party	% Owned by System	System's Portion Based on % Owned			
			Utility Plant/Construction Work in Progress		Accumulated Depreciation	
			<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
San Luis Joint-Use Facilities	USBR	55%	\$ 278,031	\$ 241,307	\$ 57,531	\$ 54,223
SWP Hydropower Facilities License	LADWP	50%	\$ 2,718	\$ 1,735	\$ -	\$ -

The amounts above include the System's share of direct costs related to constructing the facilities. Each participant provides its own financing for the jointly-owned facility.

DWR is the operator of the San Luis Joint-Use Facilities. All of the operating expenses related to these facilities are included as operating expenses in the statement of revenues, expenses, and changes in net position. The Federal government is billed for its share of the operating expenses and these billings are included as operating revenues in the statement of revenues, expenses, and changes in net position.

## 4. Utility Plant

The summarized activity of the System's utility plant during 2018 is presented below:

### Utility Plant June 30, 2018

	Beginning Balance	Transfers and Additions	Transfers and Deletions	Ending Balance
<b>Nondepreciable Utility Plant:</b>				
Land	\$ 156,934	\$ 5,523	\$ -	\$ 162,457
Construction work in progress (CWIP)	1,095,997	705,995	(405,202)	1,396,750
Land use rights	11,767	691	-	12,458
Other intangible assets	99,240	-	(259)	98,981
<b>Total nondepreciable utility plant</b>	<b>1,363,938</b>	<b>712,169</b>	<b>(405,461)</b>	<b>1,670,646</b>
<b>Depreciable Utility Plant:</b>				
Aqueducts	2,126,713	57,126	-	2,183,839
Dams & reservoirs	729,521	87,520	-	817,041
Power plants	477,044	46,485	-	523,529
Pumping plants	850,475	168,152	-	1,018,627
Environmental preservation and mitigation	67,797	-	-	67,797
Fish protection	35,544	-	-	35,544
Facilities	298,295	2,862	-	301,157
Equipment and other depreciable assets	82,526	4,451	(11,763)	75,214
Computer software	27,108	98	-	27,206
Land use rights	272	-	-	272
Other intangible assets	12,005	-	-	12,005
General	119,562	43,057	-	162,619
<b>Total depreciable utility plant</b>	<b>4,826,862</b>	<b>409,751</b>	<b>(11,763)</b>	<b>5,224,850</b>
<b>Less: accumulated depreciation and amortization:</b>				
Aqueducts	(616,435)	(24,448)	-	(640,883)
Dams & reservoirs	(380,536)	(9,159)	-	(389,695)
Power plants	(306,011)	(11,121)	-	(317,132)
Pumping plants	(600,979)	(11,519)	-	(612,498)
Environmental preservation and mitigation	(36,380)	(1,366)	-	(37,746)
Fish protection	(30,545)	(730)	-	(31,275)
Facilities	(29,418)	(9,878)	-	(39,296)
Equipment and other depreciable assets	(65,537)	(5,939)	11,745	(59,731)
Computer software	(24,534)	(643)	-	(25,177)
Land use rights	(272)	-	-	(272)
Other intangible assets	(4,806)	(1,202)	-	(6,008)
General	(21,685)	(4,096)	-	(25,781)
<b>Total accumulated depreciation and amortization</b>	<b>(2,117,138)</b>	<b>(80,101)</b>	<b>11,745</b>	<b>(2,185,494)</b>
<b>Net depreciable plant</b>	<b>2,709,724</b>	<b>329,650</b>	<b>(18)</b>	<b>3,039,356</b>
<b>Total Utility Plant - net</b>	<b>\$ 4,073,662</b>	<b>\$ 1,041,819</b>	<b>\$ (405,479)</b>	<b>\$ 4,710,002</b>

The summarized activity of the System's utility plant during 2017 is presented below:

**Utility Plant June 30, 2017**

	Beginning Balance	Transfers and Additions	Transfers and Deletions	Ending Balance
<b>Nondepreciable Utility Plant:</b>				
Land	\$ 147,681	\$ 9,279	\$ (26)	\$ 156,934
Construction work in progress (CWIP)	769,871	405,719	(79,593)	1,095,997
Land use rights	11,760	7	-	11,767
Other intangible assets	100,123	-	(883)	99,240
<b>Total nondepreciable utility plant</b>	<b>1,029,435</b>	<b>415,005</b>	<b>(80,502)</b>	<b>1,363,938</b>
<b>Depreciable Utility Plant:</b>				
Aqueducts	2,171,981	-	(45,268)	2,126,713
Dams & reservoirs	708,303	34,921	(13,703)	729,521
Power plants	470,818	8,839	(2,613)	477,044
Pumping plants	838,880	11,595	-	850,475
Environmental preservation and mitigation	67,797	-	-	67,797
Fish protection	35,544	-	-	35,544
Facilities	271,965	33,101	(6,771)	298,295
Equipment and other depreciable assets	79,229	9,680	(6,383)	82,526
Computer software	24,717	2,391	-	27,108
Land use rights	272	-	-	272
Other intangible assets	12,005	-	-	12,005
General	73,053	46,509	-	119,562
<b>Total depreciable utility plant</b>	<b>4,754,564</b>	<b>147,036</b>	<b>(74,738)</b>	<b>4,826,862</b>
<b>Less: accumulated depreciation and amortization:</b>				
Aqueducts	(614,557)	(24,832)	22,954	(616,435)
Dams & reservoirs	(382,522)	(9,715)	11,701	(380,536)
Power plants	(297,433)	(11,146)	2,568	(306,011)
Pumping plants	(588,036)	(11,030)	(1,913)	(600,979)
Environmental preservation and mitigation	(35,014)	(1,366)	-	(36,380)
Fish protection	(29,842)	(703)	-	(30,545)
Facilities	(23,425)	(9,113)	3,120	(29,418)
Equipment and other depreciable assets	(67,364)	(4,546)	6,373	(65,537)
Computer software	(24,100)	(434)	-	(24,534)
Land use rights	(229)	(43)	-	(272)
Other intangible assets	(3,603)	(1,203)	-	(4,806)
General	(18,551)	(3,134)	-	(21,685)
<b>Total accumulated depreciation and amortization</b>	<b>(2,084,676)</b>	<b>(77,265)</b>	<b>44,803</b>	<b>(2,117,138)</b>
<b>Net depreciable plant</b>	<b>2,669,888</b>	<b>69,771</b>	<b>(29,935)</b>	<b>2,709,724</b>
<b>Total Utility Plant - net</b>	<b>\$ 3,699,323</b>	<b>\$ 484,776</b>	<b>\$ (110,437)</b>	<b>\$ 4,073,662</b>

## 5. Investments

The System maintains cash deposits with the State's Surplus Money Investment Fund (SMIF), which is part of the Pooled Money Investment Account (PMIA). The State Treasurer manages the PMIA in accordance with various provisions of the California Water Code and the State's investment policies. The State Treasurer also acts as trustee for the System's revenue bonds, and manages the System's investments. Investment of the System's funds is administered in accordance with California Government Code, State's policies, and applicable provisions of the Central Valley Project Act bond resolutions.

The System follows GASB Statement No. 40, *Deposit and Investment Risk Disclosures*. This statement requires the disclosure of five types of risks: interest, credit, custodial, concentration, and foreign currency. Additional disclosures required by GASB No. 40 for cash deposits and investments within the State's centralized treasury system can be found in the State of California's Comprehensive Annual Financial Report.

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles (GAAP) and in accordance with GASB Statement No. 72. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. Deposits and withdrawals are made on the basis of \$1 and not fair value. Accordingly, the System's proportionate share of investments in the State Treasury at June 30, 2018 of \$844.8 million is an uncategorized input not defined as a Level 1, Level 2, or Level 3 input.

The following is a summary of the System's cash and investments by percentage of total, their related credit ratings and by fair value measurement as of June 30, 2018:

### Cash and Investments at June 30, 2018

	% of Total	Credit Rating (S&P)	Maturities			6/30/2018	Fair Value Measurement
			Under 30 Days	31-180 Days	181-365 Days		Using Quoted Prices in Active Markets for Identical Assets (Level 1)
<b>Investments by fair value level:</b>							
US Treasury Notes	5%	AA+	\$ 50,066	\$ -	\$ -	\$ 50,066	\$ 50,066
Total investment by fair value level			<u>\$ 50,066</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 50,066</u>	<u>\$ 50,066</u>
<b>Investments not subject to fair value level:</b>							
Surplus Money Investment Fund	91%	Not rated	-	-	844,766	844,766	
Cash and Investments held outside State Treasury:							
Money Market Funds	4%	AAA	33,913	-	-	33,913	
<b>Total cash and investments</b>			<u>\$ 83,979</u>	<u>\$ -</u>	<u>\$ 844,766</u>	<u>\$ 928,745</u>	

The following is a summary of the System's cash and investments by percentage of total, their related credit ratings and by fair value measurement as of June 30, 2017:

**Cash and Investments at June 30, 2017**

	% of Total	Credit Rating (S&P)	Maturities			6/30/2017	Fair Value Measurement
			Under 30 Days	31-180 Days	181-365 Days		Using Quoted Prices in Active Markets for Identical Assets (Level 1)
<b>Investments by fair value level:</b>							
Federal National Mortgage Association	1%	AA+	\$ -	\$ -	\$ 9,172	\$ 9,172	\$ 9,172
Federal Home Loan Bank	5%	AA+	50,741	-	-	50,741	50,741
Total investment by fair value level			<u>\$ 50,741</u>	<u>\$ -</u>	<u>\$ 9,172</u>	<u>\$ 59,913</u>	<u>\$ 59,913</u>
<b>Investments not subject to fair value level:</b>							
Surplus Money Investment Fund	91%	Not rated	-	-	909,050	909,050	
Cash and Investments held outside State Treasury:							
Money Market Funds	3%	AAA	33,695	-	-	33,695	
<b>Total cash and investments</b>			<u>\$ 84,436</u>	<u>\$ -</u>	<u>\$ 918,222</u>	<u>\$1,002,658</u>	

**Interest Rate Risk:** Interest rate risk is the risk that the value of fixed income securities will decline because of rising interest rates. The prices of fixed income securities with a longer time to maturity, measured by weighted average to maturity, tend to be more sensitive to changes in interest rates than those with a shorter duration. As of June 30, 2018 and 2017, the weighted average maturity of the investments contained in SMIF is approximately 193 days and 194 days, respectively.

**Custodial Credit Risk:** For deposits, custodial credit risk is that in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The California Government Code does not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits or investments, other than the following provision for deposits: the California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law. The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits.

**Credit Risk:** Credit risk is the risk that a debt issuer will fail to fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. PMIA funds are on

deposit with the State's Centralized Treasury System and are managed in compliance with the California Government Code, according to a statement of investment policy discussed in Note 2. The PMIA is not rated.

**Concentration of Credit Risk:** Concentration of credit risk is the risk of loss attributed to the magnitude of an investor's holdings in a single issuer. The investment policy of the State Treasurer's Office contains no limitations on the amount that can be invested in any one issuer beyond those limitations stipulated in the California Government Code. As of June 30, 2018 and 2017, the System had investments contained in SMIF totaling 91% for both fiscal years. The System's PMIA investments totaled \$844,766 and \$909,050 for the fiscal years ended June 30, 2018 and 2017, respectively. Investments outside the State's Centralized Treasury System totaled \$83,979 and \$93,608 for the fiscal years ended June 30, 2018 and 2017, respectively.

Interest on deposits in PMIA varies with the rate of return of the underlying portfolio and averaged 1.376%, and 0.754% for the years ended June 30, 2018 and 2017, respectively. For the years ended June 30, 2018 and 2017, interest earned on the deposits with PMIA approximated \$12.1 million and \$6.9 million, respectively. Interest earned is included in the other revenues (expenses) line item on the statement of revenues, expenses, and changes in net position.

The U.S. Treasury Notes of \$50.1 million are valued using quoted market prices (Level 1 input). Income is comprised of interest, dividends, realized gains and losses, and unrealized gains and losses due to changes in the fair value of investments held at year-end.



## 6. Long-Term Debt

The following is a summary of changes in long-term debt for the years ended June 30, 2018 and 2017:

	Revenue Bonds				General	Commercial	SMIF Loan	Total Long
				Total	Obligation	Paper		Term Debt
	Par Amount	Unamortized Discount	Unamortized Premium	Revenue Bonds	Par Amount	Par Amount	Loan Amount	
Balance at June 30, 2016	\$ 2,489,675	(7)	\$ 281,220	\$ 2,770,888	\$ 135,045	\$ 42,776	\$	\$ 2,948,709
Additions	428,130	-	93,506	521,636	-	200,379		722,015
Retirements	(97,430)	-	(13,404)	(110,834)	-	(95,990)		(206,824)
Amortization		1	(21,138)	(21,137)	-	-		(21,137)
Payments	(134,185)	-	-	(134,185)	(46,745)	-		(180,930)
Balance at June 30, 2017	2,686,190	(6)	340,184	3,026,368	88,300	147,165	-	3,261,833
Additions	491,495	-	71,473	562,968	-	500,483	60,910	1,124,361
Retirements	(531,255)	-	(27,767)	(559,022)	-	(66,976)	-	(625,998)
Amortization	-	-	(22,737)	(22,737)	-	-	-	(22,737)
Payments	(138,570)	-	-	(138,570)	(34,235)	-	-	(172,805)
Balance at June 30, 2018	2,507,860	(6)	361,153	2,869,007	54,065	580,672	60,910	3,564,654
Less current portion	(129,400)	-	-	(129,400)	(25,975)	-	-	(155,375)
Total Long-Term Debt	\$ 2,378,460	\$ (6)	\$ 361,153	\$ 2,739,607	\$ 28,090	\$ 580,672	\$ 60,910	\$ 3,409,279

### GENERAL OBLIGATION BONDS

The Burns-Porter Act authorized the issuance of State Water Resources Development System (SWRDS) General Obligation (GO) Bonds in the amount of \$1,750 million for construction of the System. This amount included \$130 million to be set aside for financial assistance to local water agencies as provided in the Davis-Grunsky Act. The Burns-Porter Act also made a continuing appropriation of the California Water Fund, a fund unrelated to the System, to supplement the bond authorization. To the extent California Water Fund money was used for construction of the State water facilities in lieu of bond proceeds, an equal amount of bond authorization was set aside to be used only for the construction of additional facilities of the System that met certain requirements set forth in the Burns-Porter Act.

Under the Burns-Porter Act, revenues of the System, other than revenues attributable to facilities financed with Water System Revenue Bonds, are deposited in the California Water Resources Development Bond Fund and are to be used annually only for the following purposes and in the following order of priority:

1. To pay the maintenance, operation and replacement costs of the System,
2. To pay, or reimburse the General Fund of the State for, the principal of and interest on the SWRDS GO Bonds issued for the System as it becomes due,
3. To reimburse the California Water Fund for funds utilized from said fund for construction of the System (complete reimbursement has been made), and
4. To pay additional costs of the acquisition and construction of the System.

All such revenues are pledged for these uses and purposes for the benefit of the owners of the SWRDS GO Bonds.

As of June 30, 2018, the amount of the revenues pledged to repay the Burns-Porter Act SWRDS GO Bonds debt service is \$58.5 million with payments through 2025. Principal and interest paid for the current year was \$38 million and Burns-Porter Act water supply operating revenues were \$840.7 million. As of June 30, 2017, the amount of the revenues pledged to repay the Burns-Porter Act SWRDS GO Bonds debt service was \$96.5 million. Principal and interest paid for 2017 was \$52.4 million and Burns-Porter Act SWRDS water supply operating revenues were \$841.5 million.

SWRDS GO Bonds of \$168 million are authorized but un-issued as of June 30, 2018 and 2017, and may only be used for additional facilities, meeting certain requirements of the Burns-Porter Act.

Outstanding SWRDS GO Bonds include Series L through Series S, which may be called at any time for early redemption. SWRDS GO Bonds Series X and Y do not have early redemption provisions.

SWRDS GO Bonds consist of the following at June 30, 2018:

**General Obligation Bonds**

Fiscal Year of Issue	Series	Fixed Rates	Fiscal Year of Final Maturity	Amounts Outstanding	
				2018	2017
1968	J	3.5%	2018	\$ -	\$ 4,500
1968	K	4.0%	2018	-	4,500
1969	L	4.5%	2019	4,500	8,900
1969	M	4.0%	2019	4,500	8,900
1970	N	5.0%	2020	8,900	13,200
1970	P	5.0%	2020	8,900	13,200
1971	Q	4.8%	2021	13,200	17,300
1971	R	4.8%	2021	6,600	8,650
1972	S	5.3%	2022	6,920	8,520
1994	X	4.8%	2024	300	350
1995	Y	7.0-7.1%	2025	245	280
Total General Obligation bond debt outstanding at par				54,065	88,300
Less current portion				(25,975)	(34,235)
Total Long-term General Obligation bond debt outstanding				\$ 28,090	\$ 54,065

**REVENUE BONDS**

The Water System Revenue Bonds have been issued for the acquisition or construction of projects to provide water and power for the SWP. Under the statute pursuant to which Water System Revenue Bonds are issued, principal and interest on the bonds are secured by and payable solely from revenues attributable to the facilities financed by the bonds. These are primarily payments under the Water Supply Contracts between the System and Water Contractors.

As of June 30, 2018, the amount of the revenues pledged to repay the Water System Revenue Bonds debt service is \$3,452.2 million with payments through fiscal 2036. Principal and interest paid for the current year was \$240.9 million and CVP water supply operating revenues were \$235.5 million. As of June 30, 2017, the amount of the revenues pledged to repay the Water System Revenue Bonds debt service were \$3,726.7 million with payments through 2036. Principal and interest paid for the previous year was \$242.6 million and CVP water supply operating revenues were \$241.1 million.

On December 19, 2017, the System issued tax-exempt fixed-rate Water System Revenue bonds (Series AX), and federally taxable fixed-rate Water System Revenue bonds (Series AY), with par amounts of \$350.7 million and \$140.8 million, respectively, to current refund Series AO, and partially advance refund Series AE, AF, AG, AH, AI, AK, AN, AP, AQ,

and AR. Series AX was issued with a premium of \$71.5 million and Series AY was issued at par. DWR took advantage of low interest rates and achieved an economic gain of \$27.6 million, representing 5.2% of the refunded bonds. Bond proceeds were also used to pay the costs of issuance and fund the reserve account.

On August 3, 2017, the System remarketed its variable rate Water System Revenue bonds (Series AT and Series AU) with par amounts of \$149.2 million and \$109.3 million respectively. The variable rate bonds were remarketed in advance of upcoming mandatory tender dates resulting in the System's election to adjust the interest rate period for each bond series. Series AT was originally issued on November 6, 2014, and had a mandatory tender date of December 1, 2017. Series AU was originally issued on September 2, 2015 and had a mandatory tender date of September 1, 2017. As a result of this remarketing transaction, the weighted average interest rate for both series decreased 0.13% from 0.44% to 0.31%, and the weighted average remarketing term increased from 2.6 years to 4.5 years. DWR retained the Securities Industry and Financial Markets Association (SIFMA) index for calculating interest payments.

On October 20, 2016, the System issued tax-exempt Water System Revenue bonds (Series AW) with a par amount of \$428.1 million and a Premium of \$93.5 million. The proceeds from the Series AW were used to (1) provide \$267 million of advance funds for the construction of certain Water System Projects, (2) pay off \$96 million outstanding Water Revenue Commercial Paper Notes Series 1, and (3) refund certain of the outstanding Water System Revenue Bonds with par value of \$97.4 million. Series AW was issued with fixed coupon rates at 3.0% and 5.0%, and maturities ranging from 2018 to 2035. Series AW bonds maturing on or after December 1, 2026 will be subject to redemption prior to their stated maturities, at a redemption price equal to the bonds being redeemed, plus accrued interest, without premium.

The System is subject to certain bond covenants, the most restrictive of which requires that the revenues in each year shall be at least equal to 1.25 times the debt service payable from revenues on all bonds outstanding in such year, plus operating costs, and the required funding of the debt service reserve account. The bonds are limited special obligations of the System; neither the principal nor any interest thereon constitutes a debt of the State. Certain bonds are redeemable prior to maturity at a redemption price of 100%.

Water System Revenue Bonds consist of the following at June 30, 2018:

**CVP Revenue Bonds**

Fiscal Year of Issue	Series	Fixed Rates	Fiscal Year of Final Maturity	Fiscal Year of First Call Date	Amounts Outstanding	
					2018	2017
Devil Canyon-Castaic Facilities:						
1973	A&B	5.3%	2023	1983	\$ 38,955	\$ 45,475
CVP Water System:						
1999	V	6.3%	2025	None	18,050	18,050
2002	X	5.5%	2018	None	-	16,135
2008	AE	3.7-5.0%	2019	2018	5,700	54,910
2009	AF	4.0-5.0%	2021	2019	13,355	93,855
2010	AG	4.0%	2020	None	785	20,505
2011	AH	3.8-5.0%	2023	2021	18,385	31,930
2012	AI	5.0%	2026	2022	45,590	62,845
2012	AJ	4.0-5.0%	2030	2022	79,885	101,230
2012	AK	3.0-5.0%	2030	2022	9,745	11,965
2013	AL	5.0%	2030	2023	56,605	62,375
2013	AM	5.0%	2026	2023	134,235	145,830
2013	AN	4.0-5.0%	2030	2023	16,535	28,500
2013	AO	1.3-3.5%	2018	None	-	259,975
2013	AP	3.0-4.0%	2036	2023	14,265	31,040
2013	AQ	4.0-5.0%	2036	2023	44,510	115,445
2014	AR	4.0-5.0%	2036	2024	84,725	151,085
2015	AS	2.0-5.0%	2033	2025	641,860	641,860
2015	AT	Variable	2036	2017	149,245	149,245
2016	AU	Variable	2036	2017	109,275	109,275
2016	AV	4.0-5.0%	2036	2026	106,530	106,530
2017	AW	3.0-5.0%	2036	2027	428,130	428,130
2018	AX	5.0%	2036	2028	350,670	-
2018	AY	2.1-3.1%	2030	2028	140,825	-
Total CVP Water System Revenue Bonds					2,468,905	2,640,715
<b>Total revenue bond debt outstanding at par</b>					2,507,860	2,686,190
Unamortized bond issuance premiums					361,153	340,184
Unamortized bond issuance discounts					(6)	(6)
Less current portion					(129,400)	(138,570)
<b>Total long-term bond debt outstanding</b>					<b>\$ 2,739,607</b>	<b>\$ 2,887,798</b>

### FUTURE DEBT SERVICE REQUIREMENTS

Future principal and interest payment requirements on the bonds are as follows at June 30, 2018:

Future Debt Service Requirements							
Year	Revenue Bonds			General Obligation Bonds			All Bonds
	Principal	Interest	Total	Principal	Interest	Total	Total
2019	\$ 129,400	\$ 110,397	\$ 239,797	\$ 25,975	\$ 2,414	\$ 28,389	\$ 268,186
2020	149,360	105,157	254,517	17,405	1,386	18,791	273,308
2021	151,685	97,426	249,111	8,595	527	9,122	258,233
2022	154,695	90,238	244,933	1,885	109	1,994	246,927
2023	161,270	82,692	243,962	85	10	95	244,057
2024-2028	750,930	303,780	1,054,710	120	6	126	1,054,836
2029-2033	641,200	133,568	774,768	-	-	-	774,768
2034-2036	369,320	21,057	390,377	-	-	-	390,377
	<u>\$ 2,507,860</u>	<u>\$ 944,315</u>	<u>\$ 3,452,175</u>	<u>\$ 54,065</u>	<u>\$ 4,452</u>	<u>\$ 58,517</u>	<u>\$ 3,510,692</u>

\*Includes variable rate bonds for Series AT and Series AU, which bear interest at a weekly rate. An assumed rate of 3.0% for Series AT and 2.85% for Series AU was used to project the variable portion of interest payments in this table. The interest rate still in effect was determined at issuance date using the Securities Industry and Financial Markets Association (SIFMA) Swap 10 year average Index, plus an applicable basis point spread.

### SURPLUS MONEY INVESTMENT FUND LOAN

On July 10, 2017, the California Senate Bill 84 was enacted, an act to amend Sections 16475 and 16480.6 of, and to add Section 20825 to, the Government Code, relating to state employees' retirement. This bill would require the State Controller's Office (SCO) to transfer up to \$6 billion from the Surplus Money Investment Fund and other funds in the Pooled Money Investment Account to the General Fund as a cash loan, the proceeds of which would supplement the state's employer contributions for the fiscal year 2017-2018. This bill would also require that repayment of the loan principal and the payment of interest be made from the General Fund and other funds and accounts that are required by law to fund the state's employer contribution to the Public Employees' Retirement Fund. The loan is to be fully repaid by June 30, 2030. The amount allocated to the System was \$60.9 million and the repayment schedule is currently under review.

### COMMERCIAL PAPER NOTES

In March 1993, the System launched its commercial paper (CP) program to pay for Water System Capital costs relating to State Water System Projects. Pursuant to the original Resolution No. DWR-CP-1, adopted as of March 1, 1993, the Department authorized the issuance of CP Notes Series 1 in an aggregate amount not to exceed \$150 million, limited to \$139.7 million in principal and \$10.3 million of accrued interest. To provide liquidity for the program, the Department entered into two separate credit agreements with two commercial banks on May 3, 2017. Pursuant to Resolution No.

DWR-CP-5, adopted on May 1, 2017, the Department authorized the increase of the issuance of CP Notes Series 1 (Series 1) in an amount not to exceed \$300 million in principal and \$22.2 million in accrued interest. On the same date, pursuant to Resolution DWR-CP-Series 2-1, the Department authorized the issuance of new CP Notes Series 2 (Series 2), with a limit not to exceed \$500 million in principal and \$37 million in accrued interest. On February 1, 2018, pursuant to Resolution No. DWR-CP-Series 2-2, the Department authorized an additional increase of the issuance of Series 2 in an amount not to exceed \$800 million in principal and \$59.2 million in accrued interest, to expand its total CP capacity to \$1.1 billion in principal and \$81.4 million in accrued interest. The Series 2 program was established to pay for costs relating to the Oroville Dam Spillway Recovery and Restoration Project.

The Department has two revolving credit agreements supporting its \$1.1 billion CP program. The Department entered into two credit agreements with two banks on May 4, 2017 and February 1, 2018, respectively. Series 1 expires on May 1, 2020 and Series 2 expires on February 25, 2021, but both can be extended for up to three years upon written request and approval of the banks. They require quarterly commitment fee payments on the first business day of each July, October, January and April. As of June 30, 2018, there were no borrowings with the banks under the current revolving credit agreements.

The Series 1 is supported by a credit agreement with Bank of America, N.A. The Series 1 program, which was originally supported by a \$150 million, credit agreement with Bank of Montreal, was scheduled to expire on October 24, 2017, but was terminated early on May 4, 2017. Under the old credit agreement, Bank of Montreal was obligated to provide \$150 million, with principal limited to \$139.7 million and \$10.3 million of accrued interest. There were no borrowings with Bank of Montreal under this revolving credit agreement before it was terminated. Under the new credit agreement effective on May 4, 2017, Bank of America N.A. is obligated to provide up to \$300 million in principal at any one time and \$22.2 million of accrued interest. For sizing purposes, accrued interest is calculated at 10% per annum for 270 days on a maximum principal commitment of \$300 million.

The Series 2 is supported by a credit agreement with Wells Fargo Bank, National Association. Under the original agreement dated May 4, 2017, the bank was obligated to provide up to \$500 million in principal at any one time and up to \$37 million of accrued interest. Under the new agreement dated February 26, 2018, the bank is obligated to provide up to \$800 million of principal at any one time and \$59.2 million of accrued interest. For sizing purposes, interest is calculated at 10% per annum for 270 days on a maximum principal commitment of \$800 million.

As of June 30, 2018, the amount of CP notes outstanding was \$24.6 million for the Series 1, and \$556.1 million for the Series 2. As of June 30, 2017, there were no CP notes outstanding for the Series 1, and the amount outstanding for the Series 2 was \$147.2 million. The weighted average rate for interest expense for the Series 1 Notes approximated 1.27% for the year ended June 30, 2018 and 0.63% for the year ended June 30, 2017. The weighted average rate for interest expense for the Series 2 Notes approximated 1.16% for the year ended June 30, 2018 and 0.86% for the year ended June 30, 2017. The System expects a significant portion of Series 2 Notes to be paid with proceeds from the federal government as reimbursement for costs relating to the Oroville Dam Spillway Recovery and Restoration Project. During fiscal 2018, the Department received approximately \$69 million in federal reimbursement. Any CP outstanding remaining after all reimbursements have been received will be refunded with Revenue Bonds.

Proceeds from the sale of CP notes are used to finance Water System Projects prior to permanent financing from the sale of Water System Revenue Bonds. Proceeds from the Series 2 Notes are restricted to be used to provide funds for costs related to the Oroville Dam Spillway Recovery and Restoration Project (Oroville) and proceeds from the Series 1 Notes are restricted to be used to provide funds for costs related to all Water System projects, including Oroville. The liability has been classified as long-term as it is the System's policy to redeem the Commercial Paper outstanding with the issuance of Water System Revenue Bonds. The System's obligation to make debt service payments on Commercial Paper Notes is subordinate to its payment obligations with respect to the Water System Revenue Bonds and SWRDS GO Bonds.

The Water Supply Contracts, in their original form, provide for two charges to the Water Contractors: (a) a Delta Water Charge and (b) a Transportation Charge. These charges are computed to return to the State the costs of the facilities necessary to deliver water to the Water Contractors, including capital costs (with interest) and operation and maintenance costs, and expressly including in the case of the facilities to be financed with commercial paper and the related Water System Revenue Bonds, debt service and 1.25 debt service coverage requirements to be satisfied from revenues.

## 7. Bond Refundings and Defeasances

During the current fiscal year, the System issued CVP Water System Revenue Bonds Series AX and AY to advance refund portions of previous issuances. In prior years, the System has also defeased various bond issuances by depositing bonds proceeds in escrows and creating irrevocable trusts. The net proceeds from these advance refundings were used to purchase State and Local Government Securities (SLGS) and U.S. Treasury Securities to meet the requirements of the refunded debt. Those securities were deposited in irrevocable escrow trust accounts with the State Treasurer acting as escrow agent to provide for all future debt service on the bonds being refunded. As a result, those bonds are considered to be defeased, and the related liabilities have been excluded from the System's basic financial statements. At June 30, 2018 and 2017, outstanding Water System Revenue Bonds of \$653.8 million and \$817.1 million, respectively, are considered to be defeased.

In addition to GASB Statement No. 86, the System is required to disclose any remaining balance of previously defeased bonds that were defeased using its own existing resources. As of June 30, 2018 and 2017, the outstanding balance of bonds that were defeased using the System's own existing resources was \$22.3 million and \$29.3 million, respectively. The cash deposited to the escrow shall be deposited in Government Obligations, which prohibits investments in mutual funds or unit investment trusts.

On December 19, 2017, the System issued CVP Water System Revenue Bonds Series AX (tax-exempt) and Series AY (federally taxable) with an average yield of 5.2% to advance refund portions of previous issues. The bond proceeds with a par of \$491.5 million and premium of \$71.5 million, along with System funds on-hand in the amount of \$1.9 million were used to refund bonds with a par amount of \$531.2 million, fund \$32 million of future interest on the defeased bonds, and cover costs of issuance of \$1.5 million. The par amounts of the refunded bonds are as follows:



**Bonds Refunded by Series AX & AY**

<u>Bond Series</u>	<u>Refunded By</u>	<u>Tax Basis</u>	<u>Refunding Type</u>	<u>Refunded Par</u>
Series AE	Series AY	Federally Taxable	Advance	\$ 29,050
Series AF	Series AY	Federally Taxable	Advance	72,630
Series AG	Series AY	Federally Taxable	Advance	19,350
Series AH	Series AY	Federally Taxable	Advance	10,210
Series AI	Series AY	Federally Taxable	Advance	4,865
Series AK	Series AX	Tax-Exempt	Advance	1,325
Series AN	Series AX	Tax-Exempt	Advance	9,890
Series AO	Series AX	Tax-Exempt	Current	238,290
Series AP	Series AX	Tax-Exempt	Advance	15,255
Series AQ	Series AX	Tax-Exempt	Advance	69,605
Series AR	Series AX	Tax-Exempt	Advance	60,785
Total				<u>\$ 531,255</u>

Series AX & AY were issued to take advantage of lower interest rates. These transactions resulted in cash flow savings of \$34.7 million and economic gains (difference between the present values of the debt service payments on the old debt and new debt) of \$27.6 million. The refunding resulted in a difference between the book value of the old debt and the amount required to retire the debt of \$4.2 million. This difference is considered to be a deferred loss on the refunding and is being amortized over the original remaining life of the old debt or the life of the new debt, whichever is less, using the straight-line method.

Amortization of all deferred refunding costs was approximately \$10.1 million in fiscal 2018 and \$11.1 million in fiscal 2017.

## 8. Retirement Plan

The State is a member of the California Public Employees' Retirement System (CalPERS), an agent multiple-employer defined benefit pension plan. As an enterprise fund, the System is required under GASB 68 to report results pertaining to liability and asset information as of specific dates and within certain time frames. For this report, the following time frames apply:

- Valuation Date            June 30, 2016
- Measurement Date        June 30, 2017
- Measurement Period      July 1, 2016 to June 30, 2017

### PLAN DESCRIPTION

As a participant in the State of California's defined benefit pension plan, the System reports an allocated share of the total net pension liability reported by the State. Departments and agencies within the State of California, including the System, are in a cost-sharing arrangement in which all risks and costs are shared proportionately by participating State agencies. The System, for the most part has all its employees enrolled in the State Miscellaneous Plan. CalPERS functions as a common investment and administrative agent for participating public agencies within the State of California using the accrual basis of accounting. All state agencies are considered collectively to be a single employer, and the actuarial present value of vested and non-vested accumulated plan benefits attributable to the System's employees is determined as the System's percentage of the State as a single employer. Fiduciary net position available for benefits of the System's employees are also determined as the System's percentage of the State.

CalPERS issues a publicly available Comprehensive Annual Financial Report that includes financial statements and required supplementary information for CalPERS. CalPERS also issues the GASB 68 Accounting Valuation Report. Copies of these reports may be obtained by logging onto the CalPERS website at [www.calpers.ca.gov](http://www.calpers.ca.gov).

### BENEFITS PROVIDED AND EMPLOYEES COVERED

CalPERS provides retirement benefits, survivor benefits, and death and disability benefits based upon employee's years of credited service, age, and final compensation. Vesting occurs after five years of credited service except for second tier benefits, which require ten years of credited service. Most employees who retire at or after age 50 with five or more years of service are entitled to a retirement benefit. New members with service credit beginning on or after January 1, 2013 must be at least age 52. Benefits are payable monthly for the remainder of their lives. Health care and dental benefits, described in Note 9, may be provided to members depending on the date hired and the years of credited service of a member. Several survivor benefit options that reduce a retiree's unmodified benefit are available. Benefit provisions and all other requirements are established by State statute.

### CONTRIBUTIONS

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by CalPERS. Section 20814(c) of the California Public Employees' Retirement

Law (PERL) requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through the CalPERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of the plan members or employees. These rates reflect PERL Section 20683.2, which mandates that certain employees contribute more as of July 1, 2013. Furthermore, any reduction in employer contributions due to the increase in the employee contributions must be paid by the employer toward the unfunded liability. The System's total employer contributions were \$58.3 million and \$51.6 million for the fiscal years ended June 30, 2018 and 2017, respectively.

The following table shows the average active employee and the employer contribution rates for the State Miscellaneous and State Industrial plans applicable to the System as a percentage of annual pay for the measurement period ended June 30, 2017 and 2016.

#### Contribution Rates

	June 30, 2017		June 30, 2016	
	State Miscellaneous	State Industrial	State Miscellaneous	State Industrial
Average active employee rate	6.737%	7.858%	6.669%	7.807%
Employer rate of annual payroll	26.734%	19.246%	25.153%	18.656%
Total	33.471%	27.104%	31.822%	26.463%

#### ACTUARIAL METHODS AND ASSUMPTIONS

The net pension liability at June 30, 2018 and 2017 was measured as of June 30, 2017 and 2016, respectively, by rolling forward the total pension liability using an annual actuarial valuation as of June 30, 2016 and 2015, respectively.

The total pension liabilities for the measurement dates of June 30, 2017 and 2016 were based on the following actuarial methods and assumptions:

### Actuarial Methods and Assumptions

Actuarial Cost Method: Entry Age Normal in accordance with the requirements of GASB Statement No. 68

Actuarial Assumptions:

Discount Rate	7.15% in 2017 and 7.65% in 2016
Inflation	2.75%
Salary Increases	Varies by Entry Age and Service
Investment Rate of Return:	7.15% net of pension plan investment expense but without reduction for administrative expenses; include inflation
Mortality Rate Table	Mortality rates are based on the 2014 CalPERS Experience Study adopted by the CalPERS Board and include 20 years of mortality improvements using Scale BB published by the Society of Actuaries
Post Retirement Benefit Increase	Contract COLA up to 2.75% until the Purchasing Power Protection Allowance floor on purchasing power applies, 2.75% thereafter

All other actuarial assumptions used in the June 30, 2016 and 2015 valuations were based on the results of an actuarial experience study for the period from 1997 to 2011, including updates to salary increase, mortality, and retirement rates. The Experience Study report may be accessed on the CalPERS' website under Forms and Publications.

#### CHANGE OF ASSUMPTIONS

For the measurement date of June 30, 2017, the discount rate decreased from 7.65% to 7.15%. There was no change of assumption for the measurement date June 30, 2016.

#### DISCOUNT RATE

The discount rate used to measure the total pension liability at June 30, 2017 and 2016 measurement dates was 7.15% and 7.65%, respectively. To determine whether the municipal bond rate should be used in the calculation of a discount rate for each plan, CalPERS stress tested plans that would most likely result in a discount rate that would be different from the actuarially assumed discount rate. Based on the testing of the plans, the tests revealed the assets would not run out. Therefore, the discount rate used at June 30, 2017 and 2016 measurement dates was appropriate, and the use of the municipal bond rate calculation was not deemed necessary. The long-term expected discount rate of 7.15% and 7.65% at June 30, 2017 and 2016 measurement dates, respectively, was applied to all plans in the Public Employees Retirement Fund. The stress test results are presented in a detailed report "GASB Crossover Testing Report" that can be obtained at the CalPERS' website.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term rate of return, CalPERS took into account both short-term and long-term market return

expectations, as well as the expected pension fund cash flows. Such cash flows were developed assuming that both members and employers will make their required contributions on time and as scheduled in all future years. Using historical returns of all the fund's asset classes, expected compound (geometric) returns were calculated over the short-term (first 10 years) and the long-term (11-60 years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for each fund. The expected rate of return was set by calculating the single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equivalent to the single equivalent rate calculated above and rounded down to the nearest ¼ of 1%.

The table below reflects long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation.

**Long-Term Expected Rate of Return by Asset Class**

Asset Class	Current Target Allocation		Real Return Years 1-10 <sup>1</sup>		Real Return Years 11+ <sup>2</sup>	
	2017	2016	2017	2016	2017	2016
Global Equity	47.0%	47.0%	4.90%	5.25%	5.38%	5.71%
Global Fixed Income	19.0%	19.0%	0.80%	0.99%	2.27%	2.43%
Inflation Sensitive	6.0%	6.0%	0.60%	0.45%	1.39%	3.36%
Private Equity	12.0%	12.0%	6.60%	6.83%	6.63%	6.95%
Real Estate	11.0%	11.0%	2.80%	4.50%	5.21%	5.13%
Infrastructure and Forestland	3.0%	3.0%	3.90%	4.50%	5.36%	5.09%
Liquidity	2.0%	2.0%	-0.40%	-0.55%	-0.90%	-1.05%
	100.0%	100.0%				

<sup>1</sup>An expected inflation of 2.5% used for this period

<sup>2</sup>An expected inflation of 3.0% used for this period

**SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE**

The following presents the net pension liability of the System's proportionate share of the Plan as of the June 30, 2017 and 2016 measurement dates, calculated using the discount rate of 7.15% and 7.65%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher than the current rate:

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

	2017	2016
Discount Rate -1%	6.15%	6.65%
Net Pension Liability	\$ 816,154	\$ 757,948
Current Discount Rate	7.15%	7.65%
Net Pension Liability	\$ 630,912	\$ 556,748
Discount Rate +1%	8.15%	8.65%
Net Pension Liability	\$ 436,546	\$ 387,836

**PENSION PLANS FIDUCIARY NET POSITION**

Detailed information about the pension plan’s fiduciary net position is available in the separately issued CalPERS financial report and the State of California financial report.

**PENSION LIABILITIES, PENSION EXPENSE AND DEFERRED OUTFLOWS AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS**

As of June 30, 2018 and 2017, the System reported a net pension liability of \$630.9 million and \$556.7 million, respectively, for its proportionate share.

The net pension liability at June 30, 2018 and 2017 was measured as of June 30, 2017 and 2016, respectively, by rolling forward the total pension liability using an annual actuarial valuation as of June 30, 2016 and 2015, respectively. The System’s proportion of the net pension liability was based on the System’s pensionable compensation relative to the pensionable compensation of the State Miscellaneous plan members, as calculated by the State Controller’s Office (SCO). The System’s proportionate share of the net pension liability as of June 30, 2017 and 2016 was 1.7268% and 1.6813%, respectively.

For the year ended June 30, 2018 and 2017, the System recognized pension expense of \$92.5 million and \$64.7 million, respectively.

At June 30, 2018 and 2017, the System has deferred outflows and deferred inflows of resources related to pensions as follows:

**Deferred Outflows of Resources and Deferred Inflows of Resources**

	2018		2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
System contribution subsequent to the measurement date	\$ 119,175	\$ -	\$ 51,594	\$ -
Change in proportion	17,155	(7,584)	8,723	(10,113)
Changes of assumptions	73,403	-	-	-
Difference between expected and actual experience	2,764	(5,888)	5,682	(1,278)
Net difference between projected and actual earnings on pension plan investments	17,896	-	61,503	-
Total	<u>\$ 230,393</u>	<u>\$ (13,472)</u>	<u>\$ 127,502</u>	<u>\$ (11,391)</u>

The System reported \$119.2 million and \$51.6 million as deferred outflows of resources related to contributions subsequent to the measurement date of June 30, 2017 and 2016, respectively, will be/was recognized as a reduction of the net pension liability in the fiscal years ended June 30, 2019 and 2018, respectively. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized as pension expense as follows:

**Amortization of Deferred Outflows/(Inflows)**

Year Ended June 30:	Deferred Outflows/(Inflows) of Resources
2019	\$ 28,124
2020	45,358
2021	30,526
2022	(6,262)
Total	<u>\$ 97,746</u>

## 9. Postemployment Benefits Other Than Pensions

### **PLAN DESCRIPTION AND BENEFITS PROVIDED**

As a participant in the State of California's defined benefit other postemployment benefits plan, the System reports an allocated share of the total net OPEB liability reported by the State. Departments and agencies within the State, including the System, are in a cost-sharing arrangement in which all risks and costs are shared proportionately by participating State agencies. The State of California provides medical benefits to retired state employees and dependents through the California Public Employees' Retirement System (CalPERS) under the Public Employees' Medical and Hospital Care Act, and dental benefits under the State Employees' Dental Care Act. The State, and certain bargaining units and judicial employees (valuation groups) have agreed to prefund healthcare benefits. Assets are held in separate accounts by valuation group within the California Employers' Retiree Benefit Trust (CERBT), an agent multiple-employer defined benefit other postemployment benefits plan administered by CalPERS. Assets within each valuation group benefit retirees and dependents associated with that valuation group. CalPERS issues a publicly available comprehensive annual financial report that includes financial statements for its CERBT Fund. Copies of these reports may be obtained by visiting the CalPERS website at [www.calpers.ca.gov](http://www.calpers.ca.gov).

To be eligible for these benefits, employees must retire after attaining certain age and length of service requirements. In accordance with the California Government Code, the State generally pays 100% of the health insurance premium cost for retirees, plus 90% of the additional premium required for dependents. The State generally pays all or a portion of the dental insurance premium cost for retirees, depending upon the completed years of credited state service at retirement and the coverage selected by the retiree.

As a participant in the State of California's defined benefit other postemployment plan, the System reports an allocated share of the total net OPEB liability reported by the State.

### **CONTRIBUTIONS**

The contribution requirements of plan members and the State are established and may be amended by the Legislature. The annual contribution is based on the actuarially determined contribution. The System's allocated share of the contribution was \$21.0 million for fiscal year 2018.



## ACTUARIAL METHODS AND ASSUMPTIONS

For the measurement period ended June 30, 2017, the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation dated June 30, 2017, based on the following actuarial methods and assumptions:

### Actuarial Methods and Assumptions

Actuarial Cost Method:	Entry age normal in accordance with the requirements of GASB Statement No. 75	
Actuarial Assumptions:		
	Discount Rate	Blended rate for each valuation group, consisting of 7.28% when assets are available to pay benefits, otherwise 20-year Municipal G.O. Bond AA Index rate of 3.56%
	Inflation	2.75%
	Salary Increases	Varies by entry age and service
	Investment Rate of Return:	7.28% net of OPEB plan investment expenses
	Healthcare Cost Trend Rates	Pre-Medicare coverage: 8.00% for 2019 decreasing to 4.50% for 2026 and later Post-Medicare coverage: 8.5% for 2019 decreasing 4.50% for 2027 and later Dental coverage: 4.50% thereafter
	Mortality Rate Table	Mortality rates are based on the 2014 CalPERS Experience Study adopted by the CalPERS Board and include 20 years of mortality improvements using Scale BB published by the Society of Actuaries

The mortality table used was developed based on CalPERS' specific data. The table includes 20 years of mortality improvements using the Society of Actuaries Scale BB. For more details on this table, refer to the 2014 CalPERS Experience Study and Review of Actuarial Assumptions report (Experience Study) for the period from 1997 to 2011. Other demographic assumptions used in the June 30, 2017 valuation were based on the results of the Experience Study, including updates to termination, disability, mortality assumptions, and retirement rates. The Experience Study report can be obtained from CalPERS' website, at [www.CalPERS.ca.gov](http://www.CalPERS.ca.gov).

Healthcare related assumptions such as plan participation, aging factors, adjustments for disabled members, and adjustments for children of current retirees and survivors are based on the 2015 experience study performed by Gabriel, Roeder, Smith and Company (GRS) for the period from 2007 to 2014. Other healthcare assumptions such as member healthcare plan selection, coverage and continuance, select and ultimate healthcare cost trend rates, and per capita claim costs and expenses, are based on the most current information available. To obtain a copy of the GRS experience study please email the State Controller's Office, State Accounting and Reporting Division, at [StateGovReports@sco.ca.gov](mailto:StateGovReports@sco.ca.gov).

### DISCOUNT RATE

The discount rate used to measure the total OPEB liability was based on a blended rate for each valuation group. The blended rate used to measure the June 30, 2017 total OPEB liability consists of the 20-year Municipal G.O. Bond AA Index rate of 3.56% as of June 30, 2017, as reported by Fidelity Index, when prefunding assets are not available to pay

benefits, and 7.28% when prefunding assets are available to pay benefits. The cash flow projections used to calculate the blended discount rate were developed assuming that prefunding agreements in which actuarially determined normal costs are shared between employees and the State will continue and that the required contributions will be made on time and as scheduled in future years. The prefunding agreements are subject to collective bargaining and legislative approval. Detailed information on the blended discount rates by valuation group is available in the State of California Retiree Health Benefits Program GASB Nos. 74 and 75 Actuarial Valuation Report as of June 30, 2017, on the State Controller's Office website, at [www.SCO.ca.gov](http://www.SCO.ca.gov).

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. Expected compound (geometric) returns were calculated over a closed period. Based on separate expected nominal returns for the short-term (first 10 years) and the long-term (11-60 years), a single expected return rate of 7.28% was calculated for years 1-60. If applied to expected cash flows during that period, the resulting present value of benefits is expected to be consistent with the present value of benefits that would be determined by applying the short and long-term expected rates to the same cash flows.

The following table reflects the long-term expected real rate of return by asset class.

Long-Term Expected Rate of Return by Asset Class			
Asset Class	Target Asset Allocation	Real Return Years 1 - 10 <sup>1</sup>	Real Return Years 11 - 60 <sup>2</sup>
Global Equity	57.0%	5.25%	5.71%
Global Fixed Income	27.0%	1.79%	2.40%
Inflation Sensitive	5.0%	1.00%	2.25%
Real Estate	8.0%	3.25%	7.88%
Commodities	3.0%	0.34%	4.95%
	100%		

<sup>1</sup>An expected inflation of 2.5% used for this period

<sup>2</sup>An expected inflation of 3.0% used for this period

**SENSITIVITY OF THE NET OPEB LIABILITY TO CHANGES IN THE DISCOUNT RATE**

The following presents the net OPEB liability of the System's proportionate share of the Plan as of the June 30, 2017 measurement date, calculated using a blended discount rate that is one percentage point lower or one percentage point higher than the current rate:

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate			
	Blended Discount Rate -1%	Current Blended Discount Rate	Blended Discount Rate +1%
Net OPEB Liability	\$ 1,076,245	\$ 912,912	\$ 782,607

**SENSITIVITY OF THE NET OPEB LIABILITY TO CHANGES IN THE HEALTHCARE COST TREND RATES**

The following presents the net OPEB liability of the System's proportionate share of the Plan if it were calculated using a healthcare trend rate that is one percentage point lower or one percentage point higher than the current rate, for measurement period ended June 30, 2017:

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates			
	Healthcare Cost Trend Rates -1%	Current Healthcare Cost Trend Rates	Healthcare Cost Trend Rates +1%
Net OPEB Liability	\$ 774,022	\$ 912,912	\$ 1,090,087

**OPEB PLAN FIDUCIARY NET POSITION**

Detailed information about the OPEB plan's fiduciary net position is available in the separately issued California Employer's Retiree Benefit Trust (CERBT) Fund financial reports.

**OPEB LIABILITIES, OPEB EXPENSE AND DEFERRED OUTFLOWS AND DEFERRED INFLOWS OF RESOURCES RELATED TO OPEB**

As of June 30, 2018, the System reported a net OPEB liability of \$912.9 million for its proportionate share.

For the measurement period ended June 30, 2017, the total OPEB liability was determined using a June 30, 2017 valuation date. The June 30, 2016 beginning total OPEB liability was determined by rolling back the June 30, 2017 total OPEB liability. The System's proportion of the net OPEB liability was based on the System's pensionable compensation relative to the pensionable compensation of all the valuation groups plan members, as calculated by the State Controller's Office.

NOTES TO FINANCIAL STATEMENTS (in thousands)

For the year ended June 30, 2018, the System recognized OPEB expense of \$52.5 million. At June 30, 2018, the System has deferred outflows and deferred inflows of resources related to OPEB as follows:

**Deferred Outflows of Resources and Deferred Inflows of Resources**

	Deferred Outflows of Resources	Deferred Inflows of Resources
System contribution subsequent to the measurement date	\$ 21,016	\$ -
Net differences between actual and expected contributions	237	-
Changes in assumptions	-	(81,622)
Net differences between projected and actual earnings on OPEB plan investments	-	(111)
Total	<u>\$ 21,253</u>	<u>\$ (81,733)</u>

The \$21 million reported as deferred outflows of resources related to contributions subsequent to the June 30, 2017 measurement date will be recognized as a reduction of the net OPEB liability during the fiscal year ending June 30, 2019. Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized as expense as follows:

**Amortization of Deferred Outflows/(Inflows)**

Year Ended June 30:	Deferred Outflows/(Inflows) of Resources
2019	\$ (15,627)
2020	(15,616)
2021	(15,598)
2022	(15,506)
2023	(13,550)
Thereafter	(5,599)
Total	<u>\$ (81,496)</u>

## 10. Commitments and Contingencies

### COMMITMENTS

#### Construction

The System has entered into long-term construction contract commitments for the State Water Project facilities. The remaining value of contracts in process as of June 30, 2018 and 2017, were approximately \$38.4 million and \$57.5 million, respectively.

#### Power Transmission and Purchases

The System enters into contracts to purchase power as well as transmission service contracts to transmit power. Additionally, the System has expanded the power purchase portfolio to include solar energy and is exploring other potential renewable energies.

The System has long-term transmission service contracts with anticipated future payments of approximately \$91.9 million over periods ranging from one to 24 years. Payments made under these contracts approximated \$5 million and \$3.8 million for the years ended June 30, 2018 and 2017, respectively.

The System has long-term power purchase contracts with anticipated future payments of approximately \$580 million, which includes operation and maintenance expense, over periods ranging from one to 49 years. The remaining amounts of fixed obligations under the long-term power contracts as of June 30, 2018, are as follows:

#### Fixed Obligations

Year	Transmission	Power	Total
2019	\$ 4,989	\$ 39,335	\$ 44,324
2020	4,989	30,446	35,435
2021	4,989	29,185	34,174
2022	4,989	29,185	34,174
2023	4,989	29,185	34,174
2023-2067	66,952	422,635	489,587
Total	\$ 91,897	\$ 579,971	\$ 671,868

The System has a contract with the Kings River Conservation District (the District) which provides the System all power generated by the Pine Flat Power Plant Project (the Project). Under the contract, the System is obligated to pay fixed amounts each year to cover the debt service on bonds issued by the District to build the Project, operations and maintenance expenses, and a charge for power supplied. Such payments are to be made until all of the bonds issued by the District to finance the Project have been retired in fiscal 2019. Payments to the District totaled approximately \$14.2 million and \$13.3 million during the years ended June 30, 2018, and 2017, respectively.

The amounts of the System's fixed obligations related to future principal and interest payments of the District's bonds as of June 30, 2018 are as follows:

**Fixed Obligations**

Year	Total
2019	\$ 4,257

DWR entered into a Power Agreement with the Northern California Power Agency (NCPA) and other project participants in fiscal 2014 to participate in the Lodi Energy Center Project (LEC Project). The terms of the agreement provide that DWR pay for 33.5% of the construction and operating costs in exchange for receiving 33.5% of the power output of the LEC Project on a long-term basis. Participation in the LEC Project assists DWR in meeting SWP energy requirements, including the replacement of a portion of the energy previously provided by the Reid Gardner Project. NCPA issued revenue bonds for DWR's share of the costs to construct the power plant in Lodi, California in fiscal 2011. The Lodi Energy Center is one of the most efficient thermal-generating units in California, and will be economically dispatched before other older gas-fired units, resulting in power revenues that are sufficient to cover the operational costs and a portion of DWR's debt service on the bonds.

The amounts of the System's fixed obligations related to future principal and interest payments of the LEC Project's bonds as of June 30, 2018 are as follows:

**LEC Bonds Fixed Obligations**

Year	Total
2019	\$ 9,207
2020	9,209
2021	9,207
2022	9,209
2023	9,209
2024-2028	46,042
2029-2033	46,038
2034-2035	18,417
	<u>\$ 156,538</u>

Market value information for certain power purchases, sales, and exchange contracts are disclosed at June 30, 2018 using forward market prices discounted at the prevailing risk-free interest rate. There are six purchase contracts expiring in fiscal 2019. The long-term energy purchase contracts involving energy delivered from Hoover Dam will expire in fiscal 2067; the Pine Flat Power Plants, Solar Star California XLIV and Solverde Solar energy purchase contracts will expire in

fiscal 2037; Dominion Solar Holdings purchase contract will expire in fiscal 2035; and two purchase contracts with the Water Contractor, Metropolitan Water District of Southern California (Metropolitan), will expire in fiscal 2020 and 2021. An exchange agreement with the NCPA, operator of the Lodi Energy Center Project, commits DWR to purchase power on a long-term basis subject to the agreement, but has no explicit termination date.

Power purchase commitments extending beyond June 30, 2018 are as follows:

#### Energy Commitments 2018

	Number of Contracts	Total Capacity (MWh)	Value at June 30, 2018
Energy purchases	6	225	\$ (422)
Long-term energy purchases	8	488	(248,025)
Total			<u>\$ (248,447)</u>

Power purchase commitments extending beyond June 30, 2017 are as follows:

#### Energy Commitments 2017

	Number of Contracts	Total Capacity (MWh)	Value at June 30, 2017
Energy purchases	18	525	\$ (7,724)
Long-term energy purchases	7	443	(351,732)
Total			<u>\$ (359,456)</u>

## CONTINGENCIES

### *Litigation and Claims*

#### Monterey Amendment

In 1994, the System and certain Water Contractors adopted a set of principles pursuant to which additional amendments to the long-term water supply contracts have since been negotiated (Monterey Amendment). The Monterey Amendment includes provisions related to the transfer of land and related assets, known as the Kern Water Bank, to the Kern County Water Agency (KCWA) (one of the Water Contractors), the operation of certain System reservoirs, transfers of water allocations between Water Contractors, establishment of certain operating reserves, and the revision of calculating certain Water Contractor billings. The Monterey Amendment has been executed by the System and 27 of the 29 Water Contractors, who receive approximately 99% of water delivered annually and who pay approximately 99% of annual water supply revenues. Certain parties have disputed the Monterey Amendment by challenging the validity of the related Environmental Impact Report (EIR). While the courts have allowed the System to

proceed with the implementation of the Monterey Amendment, the System was required to prepare a new EIR. DWR completed the new Final EIR in February 2010 and filed its Notice of Determination in May 2010. In June 2010, two Delta water agencies and several environmental organizations and individuals filed a lawsuit in Sacramento Superior Court challenging DWR's California Environmental Quality Act (CEQA) compliance and the validity of the Monterey Amendment, including DWR's transfer of the Kern Fan Element to the KCWA. In July 2010, the same plaintiffs in the Sacramento Superior Court case filed a lawsuit in Kern County Superior Court challenging the transfer of the Kern Fan Element from KCWA to the Kern Water Bank Authority, a local joint powers agency which now has responsibility for the management of the Kern Fan Element and Kern Water Bank. In addition, in June 2010, two water districts in Kern County filed a separate lawsuit in Kern County Superior Court, primarily challenging DWR's CEQA compliance with respect to the Kern Fan Element transfer from DWR to KCWA. The two lawsuits filed in Kern County Superior Court were transferred to the Sacramento Superior Court. In December 2012, DWR prevailed on its challenge to the plaintiffs' validation causes of action (including the validity of the Kern Fan Element transfer) on the grounds that they were not filed timely. This left only the plaintiffs' CEQA compliance challenge. After holding a hearing on the CEQA challenges in the remaining two cases, the trial court ruled that most of the EIR was adequate under CEQA, but that the EIR's discussion of impacts on continued use and operation of the Kern Water Bank was deficient.

In October 2014, the Court ordered DWR, as the remedy for the deficiency, to provide additional environmental analysis on the impacts of the continued use and operation of the Kern Water Bank in a revised EIR and upon completion of the revised EIR, to determine whether to continue the use and operation of the Kern Water Bank by the Kern Water Bank Authority. The court limited its decision to the Kern Water Bank by ruling that only those portions of the revised EIR that are new or changed shall be subject to challenge under CEQA. In December 2014, one set of plaintiffs filed an appeal with the Court of Appeal regarding the trial court's final CEQA and validation decisions. In September 2016, the Department issued the revised EIR in compliance with the trial court's decision. Shortly thereafter, one set of plaintiffs, as well as a new party, filed a new action challenging the revised EIR. The new action challenges the Department's certification of the revised EIR and approval of the "Kern Water Bank Development and Continued Use and Operation" project. In October 2017, the trial court ruled in favor of the System and in December 2017, the plaintiffs appealed that ruling. The System, however, does not believe that there will be any material adverse impact on the System's financial position or results from operations, even if these lawsuits are successful.

#### **Other Claims by Water Contractors, Including Claims Concerning Charges for Recreation and Fish and Wildlife Enhancement**

In accordance with the long-term water supply contracts, in December 2005, 27 Water Contractors and entities representing Water Contractors filed "Notices of Contest" with the System challenging the accuracy of various charges in the System's billings. One Water Contractor also filed a claim based on its Notice of Contest with the Victim Compensation and Government Claims Board. The System has been reviewing these Notices of Contest and investigating the items raised.

One item that has been determined to have merit, contested the System's practice of charging the Water Contractors for certain financing costs of the recreation and fish and wildlife enhancement portion of facilities financed with Water System Revenue Bonds. The System rectified the situation by restating past bills to provide appropriate credits back to the Water Contractors for the contested charges and taking other actions to pay for the costs of the recreation and fish and wildlife



enhancement portion of System facilities with sources other than charges to the Water Contractors. Such actions included DWR entering into Tolling and Waiver Agreements in 2007 and 2008 with the 27 Contractors who signed the Monterey Amendment, which included certain waivers allowing DWR to resume issuing revenue bonds in May 2008.

In addition to waivers included in the 2007 and 2008 Tolling and Waiver Agreements, which helped to facilitate the resumption of the sale of System Revenue Bonds, the Tolling and Waiver Agreements, as amended, also tolled (i.e. suspended) until December 31, 2019 the running of the time period and statute of limitations for filing by the Water Contractors of (1) protests regarding the System's bills to the Water Contractors for the years 2007 through 2020, (2) claims arising from the System's revisions to prior year invoices that were made to adjust for improper charges to the Water Contractors for recreation and fish and wildlife enhancement costs, and (3) certain other specified claims. The Tolling and Waiver Agreements also tolled the running of the time period for bringing an action on the Victim Compensation and Government Claims Board claim regarding the 2006 invoice that was filed by one of the Water Contractors. In the meantime, the System and Water Contractors are continuing their efforts to resolve issues that are covered by the Tolling and Waiver Agreement. However, no assurance can be given that the Water Contractors will not file additional Notices of Contest, claims and/or lawsuits with respect to the issues under discussion once the Tolling and Waiver Agreements expire.

#### **Federal Energy Regulatory Commission Proceedings**

There are a number of proceedings pending before the Federal Energy Regulatory Commission (FERC) that may impact the cost of System operations. Some of these proceedings address requests from the California Independent System Operator (CAISO), investor-owned utilities, and others to increase or adjust rates or allocate responsibility for costs for transmission and other services provided to the System and other entities in California. The System is participating in these proceedings, since the outcome of these proceedings has the potential to increase the System's annual power costs. However, the System does not believe that any increased charges arising from these proceedings will materially impact the System's financial position or changes in financial position. Any increased charges will be passed through to the Water Contractors under the long-term water supply contracts in the form of higher operations charges.

#### **2017 - Oroville Dam Spillway Emergency and Feather River Flooding**

As described in Note 15, "Significant Events," historical amounts of rainfall occurred in January and February 2017 causing widespread flooding throughout California, including in the Oroville and Feather River area. As further described in Note 15, during the storms and rainfall, significant damage occurred to both the control spillway and emergency spillway at Oroville Dam. As a result, DWR operated the control spillway and Dam facilities to address this situation. In addition, because of a concern about the potential failure of the emergency spillway, the Butte County Sheriff issued an evacuation order for Oroville and the surrounding communities on February 12, 2017. The evacuation order was lifted on February 14, 2017. A number of claims and lawsuits have been filed as a result of these events.

Approximately 400 claims were filed with the Government Claims Program in the Department of General Services. This program was formerly a program within the Victims Compensation and Government Claims Board. Most of the claims were filed by individuals and businesses claiming damages resulting from their compliance with the February 12, 2017, Butte County Sheriff's evacuation order. The Government Claims Program has been rejecting these claims, which requires the

claimants to file a lawsuit within six months of the rejection to pursue their claims in court.

A lawsuit has been filed as a class action on behalf of approximately 188,000 potential class members residing in areas along the Feather River, including Oroville, Marysville, and Yuba City. This suit alleges, among other things, that property values have decreased due to the proximity to the Oroville Dam and that other costs were incurred in complying with the emergency evacuation order. The City of Oroville and the County of Butte have each filed separate lawsuits seeking damages to reimburse each such public entity for costs and losses they claim they suffered as a result of the response and evacuation at Oroville. Other lawsuits have been filed by agricultural land owners and other land owners whose property adjacent to the Feather River was flooded. These lawsuits allege, among other things, that DWR's operation of the Oroville Dam facilities caused damages to their property and agricultural crops. All of the above lawsuits have been or are expected to be coordinated for purposes of pre-trial activities and the coordinated cases have been transferred to the Sacramento County Superior Court.

In addition, Pacific Gas and Electric Company filed a lawsuit seeking reimbursement and damages for costs it incurred to relocate electric facilities and to engineer and construct temporary electric facilities in the vicinity of Oroville Dam during the emergency. The County of Butte also filed a lawsuit seeking civil penalties of up to \$51 billion for an alleged violation of the Fish and Game Code arising from the release of sediment into the Feather River during the emergency, which lawsuit will be vigorously contested by the Department. The eventual outcome of these lawsuits is uncertain. The Department, however, believes that these claims and lawsuits will not have a material adverse effect on its ability to continue to operate and maintain the System.

### **General**

The System, during the ordinary course of its operations, has been named in a number of additional suits and claims, several of which are still pending.

In the opinions of management and the System's Legal Counsel, such legal actions will not have a material effect on the System's financial position or changes in financial position. If incurred, such costs would be recoverable from project beneficiaries under the long-term water supply contracts.

### **California WaterFix**

In 2006, the DWR, the U. S. Bureau of Reclamation (USBR), Department of Fish and Wildlife (DFW), federal and state fish and wildlife agencies, and the agencies that purchase water from DWR and the USBR began a planning process to promote and improve the overall ecological health of the Delta and the species that inhabit the Delta. This resulted in the proposed Bay Delta Conservation Plan (BDCP). The BDCP eventually transitioned to the California WaterFix.

In April 2015, DWR and State and federal agencies decided to consider additional alternatives to the BDCP and announced a change in the proposed project to accomplish the dual goals of improving the ecological health of the Delta and securing reliable water supplies. Under the new proposed project, referred to as California WaterFix, implementation of new water conveyance facilities would be authorized under the different provisions of the Endangered Species Act (ESA) and California Endangered Species Act (CESA). California WaterFix consists of an underground conveyance facility, three northern Delta intakes, and mitigation measures and environmental

commitments to meet the requirements of California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Section 7 of ESA, and Section 2081 of CESA and other environmental requirements.

DWR and USBR issued a final Environmental Impact Report (EIR) and Environmental Impact Statement, respectively, in December 2016. On July 21, 2017, DWR certified the final EIR, adopted findings and a statement of overriding considerations, adopted the Mitigation, Monitoring and Reporting Program for the Bay Delta Conservation Plan/ California WaterFix, and approved the California WaterFix. The Notice of Determination (NOD) was filed with the Office of Planning and Research on July 21, 2017, as well.

Eighteen separate lawsuits were filed challenging the Department's decision under CEQA. Several of these lawsuits included causes of action against DFW regarding issuance of an incidental take permit to the Department under CESA. DWR has conducted settlement meetings with these plaintiffs, with one lawsuit being settled, and is now addressing the preparation of the administrative record for the CEQA litigation process. On the same day as the filing of the NOD, DWR filed a validation action in Sacramento County Superior Court to confirm the validity of a proposed financing approach for the California WaterFix, which may involve the Department issuing bonds that are not issued under the Resolution or secured by Revenues but instead are issued under a separate authorizing resolution and are secured by a separate payment stream paid by the Water Contractors. Numerous entities and organizations supporting and opposing the California WaterFix have filed answers to this action. The validation action has been coordinated with the previously described CEQA and CESA lawsuits in Sacramento County Superior Court.

In August 2015, DWR and USBR filed a joint petition with the State Water Resources Control Board (SWRCB) to add three new points of diversion and rediversion under existing water right permits. Changes to the Department's water rights are required for the construction of new intakes for the proposed California WaterFix. The hearing is being conducted in two parts, the first addressing potential effects of the change on agricultural, municipal and industrial uses of water and the second focusing on fish and wildlife, recreational uses and the consideration of appropriate Delta flow criteria. The hearing on part one began in July 2016. Numerous entities/parties opposing the proposed project filed protests with the SWRCB and are participating in the hearing. DWR and the USBR are discussing settlements with some of the entities/parties, which will reduce the number of issues in, and time expected for, the hearing. Part one was completed in July 2017, while part two of the hearing began in February 2018 and concluded in August 2018.

In his first State of the State Address, delivered on February 12, 2019, Governor Newsom laid out a new direction for delta conveyance and expressed support for a revised conveyance project consisting of a single tunnel. DWR is assessing the nature and extent of any new permit and planning work that may be necessary as a result of the Governor's statements. On March 1, 2019, DWR filed a request for continuance and stay of the water rights proceeding. The lawsuits and other matters described above in regard to the California WaterFix may also be impacted as a result of the Governor's statements, however, the specific effect on any particular matter is unknown at this time.

### **Pollution Remediation**

Pollution remediation obligations are recorded by the System when an obligating event occurs, as defined in GASB Statement No. 49, and if a reasonable estimate of the remediation costs can be made. These liabilities are measured using either actual contract costs, where no change in cost is expected, or the estimated remediation costs, offset by

estimated recoveries from other responsible parties and expenditures incurred to date. Estimated remediation costs are subject to change over time. Estimated costs are revised for updated technology, changes in potential responsible parties, results of environmental studies, changes in statutes or regulations, price fluctuations and other factors.

Six different locations require pollution remediation, including previously-owned Reid Gardner Unit 4 in Nevada, Methyl Mercury Control programs in the Delta, and landfill sites at Banks Pumping Plant, Pearblossom O&M Center, Oroville Wildlife Area southwest of Oroville, and Del Valle Pumping Plant. In addition, the liability for pollution remediation includes the GHG emissions credits to be surrendered to California Air Resources Board (CARB). The following table presents the pollution remediation liability for the years ended June 30, 2018 and 2017:

Pollution Remediation Liabilities		
	2018	2017
Reid Gardner Power Plant	\$ 22,520	\$ 23,800
Delta Mercury Control Program	6,316	7,198
Green House Gas Emissions Credits	10,859	11,118
Banks Pumping Plant	6,100	-
Pearblossom O&M Center	2,318	-
Oroville Wildlife Area	1,284	-
Del Valle Pumping Plant	471	-
Total Liabilities	49,868	42,116
Less current portion	(8,557)	(4,207)
Total Long-term liabilities	\$ 41,311	\$ 37,909

#### Reid Gardner Power Plant

The Reid Gardner Power Plant ("RG"), located near Moapa, Nevada, was operated by Nevada Energy ("NVE") and consisted of four coal-powered generators—Units 1 through 4. DWR's ownership interest in Unit 4 of the Reid Gardner coal plant terminated in 2013, but the plant continued to generate electricity until early 2017. The remediation costs described below are being shared under an Environmental Agreement in proportion to DWR's ownership interest, executed along with the Termination Agreement between NVE and DWR, in 2013.

In February 2008, NVE entered into an Administrative Order on Consent ("AOC") with the Nevada Division of Environmental Protection ("NDEP"). Pursuant to the AOC, NVE agreed to undertake investigatory activities into various potential areas of contamination at RG and also to ultimately remediate groundwater, soils and other contamination at the RG facility, or mitigate adverse impacts. Groundwater and soils have been affected by certain constituents of concern associated with flue gas desulfurization effluent settlement in evaporation ponds. Since some of this contamination can be associated with the Unit No. 4 generation related facilities (such as the Unit 4 evaporation ponds) DWR has agreed to share the cost of NVE's investigatory activities, which may ultimately lead to the remediation measures prescribed by NDEP to NVE. These activities are projected to continue through at least 2032.

The System expended approximately \$1.3 million in fiscal 2018 and \$2.5 million in fiscal 2017. DWR expects to pay \$3.2 million of the total estimated financial liability during fiscal 2019.

**Delta Mercury Control Program**

In June 2011, the State Water Resources Control Board ("SWRCB") adopted an amendment to the Sacramento-San Joaquin Delta Basin Plan regarding the control of methyl mercury in the Delta. The amendment, among other provisions, assigns certain responsibilities jointly to DWR (with regard to both the System and DWR's flood management programs), the Central Valley Flood Protection Board and the State Lands Commission to reduce methyl mercury in the open waters of the Delta. In addition, DWR and others are assigned certain responsibilities regarding the discharge of methyl mercury from wetland and other aquatic restoration and enhancement projects. The System has expended approximately \$1.2 million for both years ended June 30, 2018 and 2017.

The State Water Resources Control Board ("SWRCB") is currently developing a statewide mercury regulation applicable to inland waters, including reservoirs. Once finalized, DWR will be responsible for meeting fish tissue and or water quality objectives statewide in DWR reservoirs identified by the regulation. Currently, nine DWR reservoirs have been identified by the SWRCB for regulation. However, there is insufficient information currently available to enable DWR to estimate the timing and magnitude or the System's share of potential compliance costs, if any, at this time.

**Green House Gas Emissions Credits**

The System is required to report and recognize the liability related to certain vintage years of the LEC Project under AB32. Each year the GHG allowances held in UPIS as an Intangible Asset, are evaluated and reported by the Power and Risk Analysis Office to CARB to be charged as pollution remediation expenses and a liability is recognized. The System's market analysis value of total compliance instruments to be surrendered is \$10.9 million. The System surrendered \$259,000 and \$883,000 of compliance instruments under this program during fiscal 2018 and 2017, respectively.

**Other Construction Sites**

During the construction of the System, DWR created at least three landfill sites for construction debris and waste, including the Harvey O. Banks Pumping Plant and Intake Channel, Pearblossom Pumping Plant Enlargement, and Oroville Wildlife Area. The landfill sites are closed and monitored by DWR. Two of the sites are routinely inspected by county officials. Remediation activities have not formally commenced at any of the three sites, however, DWR expects such activities to occur in the future. DWR will continue to refine estimated remediation liabilities associated with these three sites.

During the 1990s, DWR noted waste and debris at a fourth site, the Del Valle Pumping Plant, to be eroding from the bank of Arroyo Valle Creek and into the channel. Initial clean-up of surface debris was conducted in the spring of 1996 followed by slope stability, waste removal, and erosion control construction in July 1996. The site is listed as a closed landfill subject to periodic inspection by the Alameda County Department of Public Health, and DWR was identified as the responsible party for maintenance. Recent communication between Alameda County and Delta FD indicates potential regulatory action could occur soon. DWR will continue to refine the estimated remediation liability associated with this site.

## 11. Self-Insurance

The System is self-insured for all completed facilities of the SWP. The System is also self-insured for workers' compensation, general liability and other risks. All workers' compensation claims and other losses are on a pay-as-you-go basis. The Water Supply Contracts provide for recovery of such losses from the Water Contractors. Additionally, the CVP act and the related bond resolutions authorize the issuance of additional bonds, payable from available revenues or federal reimbursements under the National Disaster Act, for the purpose of providing funds for emergency repairs to power projects or water system projects necessitated by natural disasters, provided that certain conditions are met.

DWR has purchased automobile insurance for its fleet of vehicles through the California Department of General Services, Office of Risk & Insurance Management, and certain amounts are assessed to the System while some amounts may be directly charged for those vehicles owned specifically by the System.

## 12. Economic Dependency

The System's water supply revenue is generally derived from the 29 Water Contractors. The highest percentage of water supply revenues came from the Metropolitan Water District of Southern California. The following table shows total water supply revenues billed to Water Contractors including cover, refunds, and adjustments which exceeded 5% of the total water supply revenues sold by the System.

### Water Supply Revenues

	2018	% Total	2017	% Total
The Metropolitan Water District	\$ 563,746	50.30%	\$ 609,453	52.87%
Kern County Water Agency	131,042	11.69%	131,484	11.41%
Coachella Valley Water District	65,006	5.80%	-	-
San Bernardino Valley MWD	-	-	58,102	5.04%

The System sold power to 7 and 8 power entities during the years ended June 30, 2018 and 2017, respectively. The highest percentage of power revenues came from the CAISO. The following table shows power sales to entities which exceeded 5% of the total power sold by the System.

### Power Sales

	2018	% Total	2017	% Total
California Independent System Operator	\$ 63,644	72.20%	\$ 67,669	79.50%
Northern California Power Agency	17,638	20.01%	7,775	9.14%
Western Area Power Administration	6,209	7.04%	-	-
Exelon Generation Company LLC	-	-	5,764	6.77%

Similarly, the System purchased power from 19 and 17 power entities during the years ended June 30, 2018 and 2017, respectively. The highest percentage of power provided to the System came from the CAISO. The following table shows power purchases from entities which exceeded 5% of the total power purchased by the System.

### Power Purchases

	2018	% Total	2017	% Total
California Independent System Operator	\$ 236,195	69.04%	\$ 219,633	64.60%
Northern California Power Agency	25,805	7.54%	23,458	6.90%

## 13. Segment Information

The table below presents the condensed statements of net position, the statements of revenues, expenses and changes in net position and the statements of cash flows for the System's two segments, as of and for the years ended June 30, 2018 and 2017.



Segment	2018			2017		
	Activities Allowed Under			Activities Allowed Under		
	Burns-Porter Act	Central Valley Project Act	Total	Burns-Porter Act	Central Valley Project Act	Total
Condensed Statements of Net Position:						
Assets						
Current Assets	\$ 507,261	\$ 384,563	\$ 891,824	\$ 457,380	\$ 500,881	\$ 958,261
Other Assets	1,930,872	231,212	2,162,084	1,192,052	326,775	1,518,827
Capital Assets	775,429	3,934,573	4,710,002	792,169	3,281,493	4,073,662
Total Assets	<u>3,213,562</u>	<u>4,550,348</u>	<u>7,763,910</u>	<u>2,441,601</u>	<u>4,109,149</u>	<u>6,550,750</u>
Deferred outflows of resources	251,646	149,380	401,026	107,571	175,114	282,685
Total assets and deferred outflows of resources	<u>\$ 3,465,208</u>	<u>\$ 4,699,728</u>	<u>\$ 8,164,936</u>	<u>\$ 2,549,172</u>	<u>\$ 4,284,263</u>	<u>\$ 6,833,435</u>
Liabilities						
Current liabilities	\$ 140,507	\$ 406,630	\$ 547,137	\$ 129,088	\$ 370,298	\$ 499,386
Noncurrent liabilities	1,720,685	3,356,660	5,077,345	864,327	3,161,444	4,025,771
Total liabilities	<u>1,861,192</u>	<u>3,763,290</u>	<u>5,624,482</u>	<u>993,415</u>	<u>3,531,742</u>	<u>4,525,157</u>
Deferred inflows of resources	394,760	940,266	1,335,026	346,501	756,349	1,102,850
Total liabilities and deferred inflows of resources	<u>2,255,952</u>	<u>4,703,556</u>	<u>6,959,508</u>	<u>1,339,916</u>	<u>4,288,091</u>	<u>5,628,007</u>
Net position						
Net investment in capital assets	1,130,157	(303,286)	826,871	1,148,262	(483,729)	664,533
Restricted	79,099	299,458	378,557	60,994	479,901	540,895
Total net position	<u>1,209,256</u>	<u>(3,828)</u>	<u>1,205,428</u>	<u>1,209,256</u>	<u>(3,828)</u>	<u>1,205,428</u>
Total liabilities, deferred inflows of resources, and net position	<u>\$ 3,465,208</u>	<u>\$ 4,699,728</u>	<u>\$ 8,164,936</u>	<u>\$ 2,549,172</u>	<u>\$ 4,284,263</u>	<u>\$ 6,833,435</u>
Condensed Statements of Revenues, Expenses, and Changes in Net Position:						
Operating revenues						
Water supply	\$ 840,698	\$ 235,540	\$ 1,076,238	\$ 841,470	\$ 241,117	\$ 1,082,587
Power sales	88,112	36	88,148	85,053	36	85,089
Federal and state reimbursements	21,081	21,046	42,127	22,430	33,234	55,664
Total operating revenue	<u>949,891</u>	<u>256,622</u>	<u>1,206,513</u>	<u>948,953</u>	<u>274,387</u>	<u>1,223,340</u>
Depreciation and amortization	(20,987)	(59,114)	(80,101)	(20,376)	(56,889)	(77,265)
Other operating expense	<u>(784,006)</u>	<u>(36,157)</u>	<u>(820,163)</u>	<u>(841,938)</u>	<u>(100,046)</u>	<u>(941,984)</u>
Income from operations	144,898	161,351	306,249	86,639	117,452	204,091
Nonoperating revenues/expenses						
Capital revenues recovered (deferred), net	(84,466)	(191,280)	(275,746)	(67,956)	(62,191)	(130,147)
Interest expense	(3,404)	(102,025)	(105,429)	(5,149)	(100,619)	(105,768)
Transfers In/(Out)	(62,864)	62,864	-	(16,336)	16,336	-
Investment income (loss), net	5,836	9,517	15,353	2,802	6,210	9,012
Other revenues (expenses), net	-	59,573	59,573	-	22,812	22,812
Total nonoperating revenues/expenses	<u>(144,898)</u>	<u>(161,351)</u>	<u>(306,249)</u>	<u>(86,639)</u>	<u>(117,452)</u>	<u>(204,091)</u>
Increase (decrease) in net position	-	-	-	-	-	-
Net position, beginning of year	1,209,256	(3,828)	1,205,428	1,209,256	(3,828)	1,205,428
Net position, end of year	<u>\$ 1,209,256</u>	<u>\$ (3,828)</u>	<u>\$ 1,205,428</u>	<u>\$ 1,209,256</u>	<u>\$ (3,828)</u>	<u>\$ 1,205,428</u>
Condensed Statement of Cash Flows:						
Net cash provided by (used in)						
Operating activities	\$ 157,354	\$ 328,515	\$ 485,869	\$ 169,447	\$ 297,234	\$ 466,681
Capital and related financing activities	(105,137)	(469,823)	(574,960)	(88,905)	(113,941)	(202,846)
Investing activities	5,830	19,194	25,024	3,368	8,914	12,282
Net (decrease) increase in cash and cash equivalents	<u>58,047</u>	<u>(122,114)</u>	<u>(64,067)</u>	<u>83,910</u>	<u>192,207</u>	<u>276,117</u>
Cash and equivalents, beginning of year	396,632	546,114	942,746	312,722	353,907	666,629
Cash and equivalents, end of year	<u>\$ 454,679</u>	<u>\$ 424,000</u>	<u>\$ 878,679</u>	<u>\$ 396,632</u>	<u>\$ 546,114</u>	<u>\$ 942,746</u>

## 14. New Governmental Accounting Standards

### GASB Statement No. 75

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pension*. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. The requirements of GASB No. 75 are effective for fiscal year 2018 and thereafter. The financial statement items in connection with GASB No. 75 are presented in this fiscal year financial statements. A summary of the July 1, 2017 beginning balance item restated in connection with GASB Statement No. 75 is shown in the following table:

GSAB Implementations			
Statements of Net Position	Balance before GASB 75 adjustment at July 1, 2017	GASB 75 adjustment	July 1, 2017 adjusted beginning balance
<b>Total long-term assets</b>			
Amounts recoverable through future billings under long-term water supply contracts:			
Operations and maintenance expense	\$ 202,725	\$ 679,545	\$ 882,270
<b>Deferred outflows of resources</b>			
Employer contributions - OPEB	-	23,110	23,110
<b>Total long-term liabilities</b>			
Postemployment benefits other than pension obligations	(262,390)	262,390	-
Long-term liability - net OPEB	-	(965,045)	(965,045)
<b>Net position</b>			
Net investment in capital assets	664,533	-	664,533
Restricted	540,895	-	540,895

### GASB Statement No. 81

In March 2016, the GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. The objective of this Statement is to improve accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. The requirements of GASB No. 81 are effective for fiscal year 2018 and thereafter. It has been determined that GASB No. 81 did not impact the System.

### GASB Statement No. 83

In November 2016, the GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. This Statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. The requirements of GASB No. 83 are effective for fiscal 2019 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

GASB Statement No. 84

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*. This objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of GASB No. 84 are effective for fiscal 2020 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

GASB Statement No. 85

In March 2017, the GASB issued Statement No. 85, *Omnibus 2017*. The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and applications, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The requirements of GASB No. 85 are effective for fiscal year 2018 and thereafter. The financial statement items in connection with GASB No. 85 are presented in this fiscal year financial statements.

GASB Statement No. 86

In May 2017, the GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. The primary objective of this Statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources—resources other than the proceeds of refunding debt—are placed in an irrevocable trust for the sole purpose of extinguishing debt. The requirements of GASB No. 86 are effective for fiscal year 2018 and thereafter. The financial statement items in connection with GASB No. 86 are presented in this fiscal year financial statements.

GASB Statement No. 87

In June 2017, the GASB issued Statement No. 87, *Leases*. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. The requirements of GASB No. 87 are effective for fiscal year 2021 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

GASB Statement No. 88

In March 2018, the GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. The primary objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. The requirements of GASB No. 88 are effective for fiscal year 2019 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

GASB Statement No. 89

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*. The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before

the end of a construction period. The requirements of GASB No. 89 are effective for fiscal year 2021 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

#### GASB Statement No. 90

In August 2018, the GASB issued Statement No. 90, *Majority Equity Interests*. The objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. The requirements of GASB No. 90 are effective for fiscal year 2019 and thereafter. The System is currently evaluating the impact this Statement will have on its financial statements.

## 15. Significant Events

After historical amounts of rainfall occurred in January and February 2017 causing widespread flooding throughout California, including in the Oroville and Feather River area, California Governor Edmund G. Brown issued four Proclamations of a State of Emergency between, January 23, 2017 and March 7, 2017, addressing areas of flooding and potential flooding throughout the State, including at Oroville Dam. In February 2017, after a particularly significant amount of rainfall, erosion was discovered on the lower chute of the control spillway at Lake Oroville and in the areas on the hillside beneath the emergency spillway.

Over the next several months of winter storms, the Department of Water Resources (the Department) successfully managed outflow and Lake Oroville levels while actively working to return both the control spillway and the emergency spillway to original design capacity. On November 1, 2017, the Department met its first milestone of repairing and reconstructing of the control spillway to handle the release of outflows up to 100,000 cubic feet per second. The control spillway is expected to reach its overall outflow capacity (based on its original design) by November 2018.

While the Oroville Dam itself has not shown any signs of adverse effects from the spillway incident and remains structurally sound, costs associated with the recovery and restoration efforts of the Oroville Dam spillways totaling approximately \$683.2 million as of June 30, 2018, are recorded in construction work in progress (CWIP).

In April 2017, President Donald J. Trump issued a Federal Major Disaster Declaration for areas in California affected by the severe storms and flooding, which will provide for, among other things, a federal contribution to the costs of the Department's emergency response activities and to the repair and replacement work at Oroville Dam. The Department received approximately \$69 million of approved Federal Emergency Management Agency (FEMA) Disaster Grant funds during fiscal 2018. This non-exchange disaster grant was used to mitigate response and recovery costs of the Oroville Spillway Emergency by paying-off commercial paper borrowings related to the ongoing emergency Oroville Spillway recovery and restoration capital costs. Additional FEMA disaster grants are anticipated to be received in subsequent years. The Department will continue to submit expenditures to FEMA for reimbursement. Adverse financial impact is not anticipated as any remaining Oroville Emergency Spillway short-term commercial paper liability amounts not reimbursed by FEMA, will be financed with long-term Revenue Bonds and be recovered through the capital charge to the State Water Project Contractors.

## 16. Subsequent Events

On September 5, 2018, the Department updated its cost estimates for the Oroville Dam Spillway Recovery and Restoration Project. The current estimate for emergency response and reconstruction of the control and emergency spillways is \$1.1 billion. Cost estimates were based on actual and projected work and may be adjusted further as work continues through completion of the project in 2019.

On October 18, 2018, the System issued tax-exempt, fixed rate CVP Revenue Bond, Series AZ, with a par amount of \$215.3 million and a premium of \$34.2 million. This was achieved through a negotiated sale to redeem \$129.7 million of commercial paper notes and to refund Series AF and AY. The System achieved a net present value savings of \$2.5 million, representing 2.26% savings of the refunded bonds. The final maturity of the Series AZ bonds will be 2035.

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# REQUIRED SUPPLEMENTARY INFORMATION

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## REQUIRED SUPPLEMENTARY INFORMATION

### Schedule of the System's Proportionate Share of the Net Pension Liability

Last 10 Years\* (in thousands)

Fiscal Year	2018	2017	2016	2015
The System's proportion of the net pension liability	1.7268%	1.6813%	1.7191%	1.6927%
The System's proportionate share of the net pension liability	\$ 630,912	\$ 556,748	\$ 485,502	\$ 426,935
The System's covered payroll	\$ 194,340	\$ 188,680	\$ 181,151	\$ 164,571
The System's proportionate share of the net pension liability as a percentage of their covered payroll	324.64%	295.08%	268.01%	259.42%
Plan fiduciary net position as a percentage of the total pension liability	66.42%	66.81%	70.68%	73.05%
Measurement date:	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014

\* - Fiscal year 2015 was the 1st year of implementation, therefore only four years are shown.

### Schedule of the System's Pension Contributions

Last 10 Years\* (in thousands)

Fiscal Year	2018	2017	2016	2015
Contractually required contribution	\$ 58,265	\$ 51,594	\$ 47,978	\$ 44,393
Contributions in relation to the contractually required contribution	119,175	51,594	47,978	44,393
Contribution deficiency (excess)	\$ (60,910)	\$ -	\$ -	\$ -
System's covered payroll	\$ 206,175	\$ 194,340	\$ 188,680	\$ 181,151
Contributions as a percentage of covered payroll	57.80%	26.55%	25.43%	24.51%

\* - Fiscal year 2015 was the 1st year of implementation, therefore only four years are shown.



**Schedule of the System's Proportionate Share of the Net OPEB Liability**

Last 10 Years\* (in thousands)

Fiscal Year	2018
The System's proportion of the net OPEB liability	1.0031%
The System's proportionate share of the net OPEB liability	\$ 912,912
The System's covered payroll	\$ 194,340
The System's proportionate share of the net OPEB liability as a percentage of their covered payroll	469.75%
Plan fiduciary net position as a percentage of the total OPEB liability	0.546%
Measurement date:	June 30, 2017

\* - Fiscal year 2018 was the 1st year of implementation, therefore only one year is shown.

**Schedule of the System's OPEB Contributions**

Last 10 Years\* (in thousands)

Fiscal Year	2018
Actuarially determined contribution	\$ 44,788
Contributions in relation to the actuarially determined contribution	21,016
Contribution deficiency (excess)	\$ 23,772
System's covered payroll	\$ 206,175
Contributions as a percentage of covered payroll	10.19%

\* - Fiscal year 2018 was the 1st year of implementation, therefore only one year is shown.

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# SUPPLEMENTARY INFORMATION

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## Calculation of Adequacy of Debt Service Coverage for the Central Valley Project Revenue Bonds

### Debt Service Coverage

(amounts in thousands)

	2018	2017
Water supply revenues, Central Valley Project Act	\$ 235,540	\$ 241,117
Add: Cover Collected as Proceeds Due to Water Contractors	56,305	56,321
Less: Devil Canyon Castaic Revenues	(21,451)	(20,392)
Revenues not available for Debt Service	(5,230)	(5,856)
Net CVP revenues available for debt service	265,164	271,190
Principal and interest for revenue bonds	\$ 207,341	\$ 199,619
Debt service coverage	127.9%	135.9%

Note: Section 805 of the general bond resolution for the Central Valley Project (CVP) Water System Revenue Bonds states, "The total amount of Revenues receivable under all Water Supply Contracts in any Year shall be the sum of (A) 1.36 times the Annual Debt Service for such Year to be paid from the Revenue Fund, plus (B) the amount estimated by DWR, pursuant to Section 605, to be required from the Revenue Fund in such Year to provide for Water System Operating Expenses ..."

The Supplementary Information, Calculation of Adequacy of Debt Service Coverage, for the Central Valley Project (CVP) Revenue Bonds is based on \$235.6 million in fiscal 2018 and \$241.1 million in fiscal 2017, respectively in Water Supply Revenues of the System's (CVP) segment.

In fiscal 2018, the revenues include: an increase of \$56.3 million in refundable proceeds, a decrease of \$21.5 million for principal and interest payments for the Devil Canyon Castaic Facilities Bonds (DCC) since the DCC General Bond resolution does not require cover to be collected for these bonds, and a decrease of \$5.2 million in miscellaneous revenue not available for debt service.

In fiscal 2017, the revenues include: an increase of \$56.3 million in refundable proceeds, a decrease of \$20.4 million for principal and interest payments for the Devil Canyon Castaic Facilities Bonds (DCC) since the DCC General Bond resolution does not require cover to be collected for these bonds, and a decrease of \$5.9 million in miscellaneous revenue not available for debt service.

# STATISTICAL SECTION

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*This aerial view looks south toward Pyramid Lake and Pyramid Dam located on Piru Creek in Los Angeles County, photographed May, 2014.*  
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# STATISTICAL SECTION

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This part of the California State Water Resources Development System's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements and note disclosures say about the government's overall financial health.

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STATISTICAL SECTION

**Schedule of Changes in Net Position (Unaudited)**

Last Ten Fiscal Years (in thousands)

	2009	2010	2011	2012
<b>OPERATING REVENUES:</b>				
Water supply	\$ 721,253	\$ 853,158	\$ 874,748	\$ 860,891
Power sales	175,318	165,664	193,154	148,360
Federal and State reimbursements	18,266	24,021	28,294	36,561
Total operating revenues	<u>914,837</u>	<u>1,042,843</u>	<u>1,096,196</u>	<u>1,045,812</u>
<b>OPERATING EXPENSES:</b>				
Operations and maintenance	466,708	435,801	428,559	526,402
Purchased power	206,632	212,658	342,446	271,377
Depreciation and amortization expense	79,632	80,813	100,257	87,400
Operating expenses recovered (deferred), net	21,257	189,000	118,325	67,063
Total operating expense	<u>774,229</u>	<u>918,272</u>	<u>989,587</u>	<u>952,242</u>
<b>NET OPERATING INCOME (LOSS)</b>	<u>140,608</u>	<u>124,571</u>	<u>106,609</u>	<u>93,570</u>
<b>NONOPERATING REVENUES (EXPENSES):</b>				
Capital revenues recorded (deferred), net	44,344	19,823	22,812	43,834
Interest expense	(131,481)	(151,390)	(134,996)	(107,770)
Other revenues (expenses), net	(53,471)	6,996	5,575	(29,634)
Total nonoperating revenues (expenses)	<u>(140,608)</u>	<u>(124,571)</u>	<u>(106,609)</u>	<u>(93,570)</u>
<b>CHANGE IN NET POSITION</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Source: State Water Resources Development System

**Schedule of Changes in Net Position (Unaudited)**

Last Ten Fiscal Years (in thousands)

2013	2014	2015	2016	2017	2018
\$ 931,808	\$ 789,370	\$ 883,538	\$ 948,105	\$ 1,082,587	\$ 1,076,238
146,277	131,952	91,780	71,236	85,089	88,148
52,397	52,186	44,060	67,309	55,664	42,127
<u>1,130,482</u>	<u>973,508</u>	<u>1,019,378</u>	<u>1,086,650</u>	<u>1,223,340</u>	<u>1,206,513</u>
545,413	557,209	404,627	511,926	544,925	566,620
258,899	241,444	202,780	219,661	339,993	342,115
85,236	68,896	81,495	77,170	77,265	80,101
22,261	-	-	65,004	57,066	(88,572)
<u>911,809</u>	<u>867,549</u>	<u>688,902</u>	<u>873,761</u>	<u>1,019,249</u>	<u>900,264</u>
<u>218,673</u>	<u>105,959</u>	<u>330,476</u>	<u>212,889</u>	<u>204,091</u>	<u>306,249</u>
(174,356)	(42,934)	(243,945)	(118,510)	(130,147)	(275,746)
(53,492)	(115,499)	(96,082)	(106,978)	(105,768)	(105,429)
9,175	52,474	9,551	12,599	31,824	74,926
<u>(218,673)</u>	<u>(105,959)</u>	<u>(330,476)</u>	<u>(212,889)</u>	<u>(204,091)</u>	<u>(306,249)</u>
<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

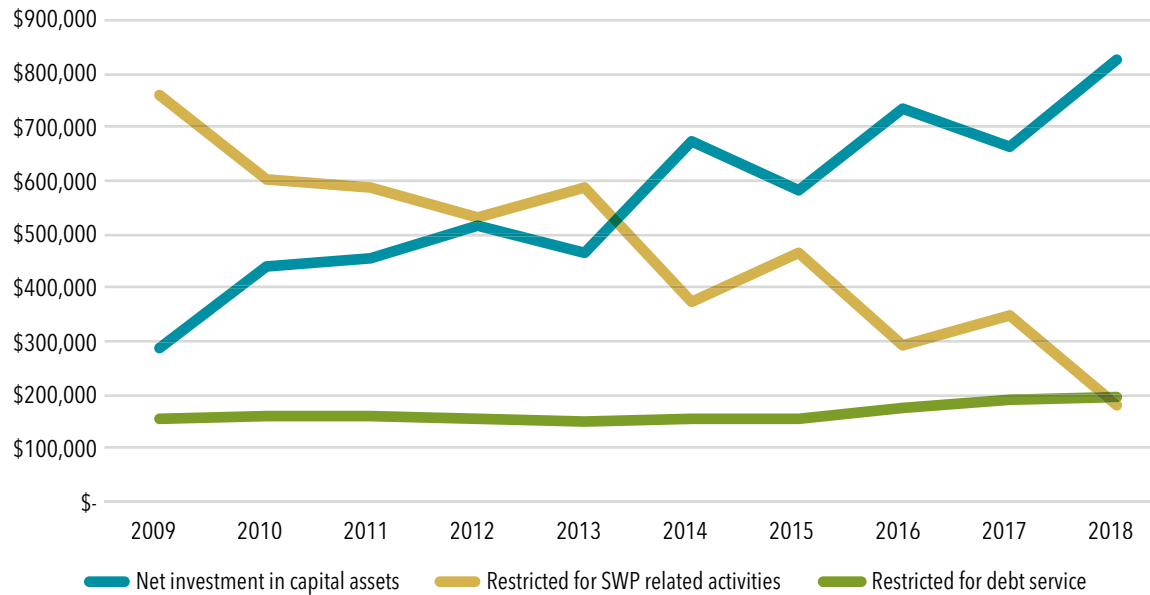
Source: State Water Resources Development System

Schedule of Net Position by Component (Unaudited)

Last Ten Fiscal Years (in thousands)

	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>NET POSITION</b>										
Net investment in capital assets	\$ 286,318	\$ 441,809	\$ 455,265	\$ 516,670	\$ 466,348	\$ 674,336	\$ 585,309	\$ 736,203	\$ 664,533	\$ 826,871
Restricted for:										
Debt service and plant replacements	156,802	159,508	162,056	156,913	150,825	155,116	155,857	177,330	193,889	197,363
SWP related activities	762,311	604,114	588,107	531,845	588,255	375,976	464,262	291,895	347,006	181,194
<b>TOTAL NET POSITION</b>	<u>\$ 1,205,431</u>	<u>\$ 1,205,431</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>	<u>\$ 1,205,428</u>

a) For fiscal years 2009 through 2017, certain amounts previously classified as net investment in capital assets were reclassified to restricted.

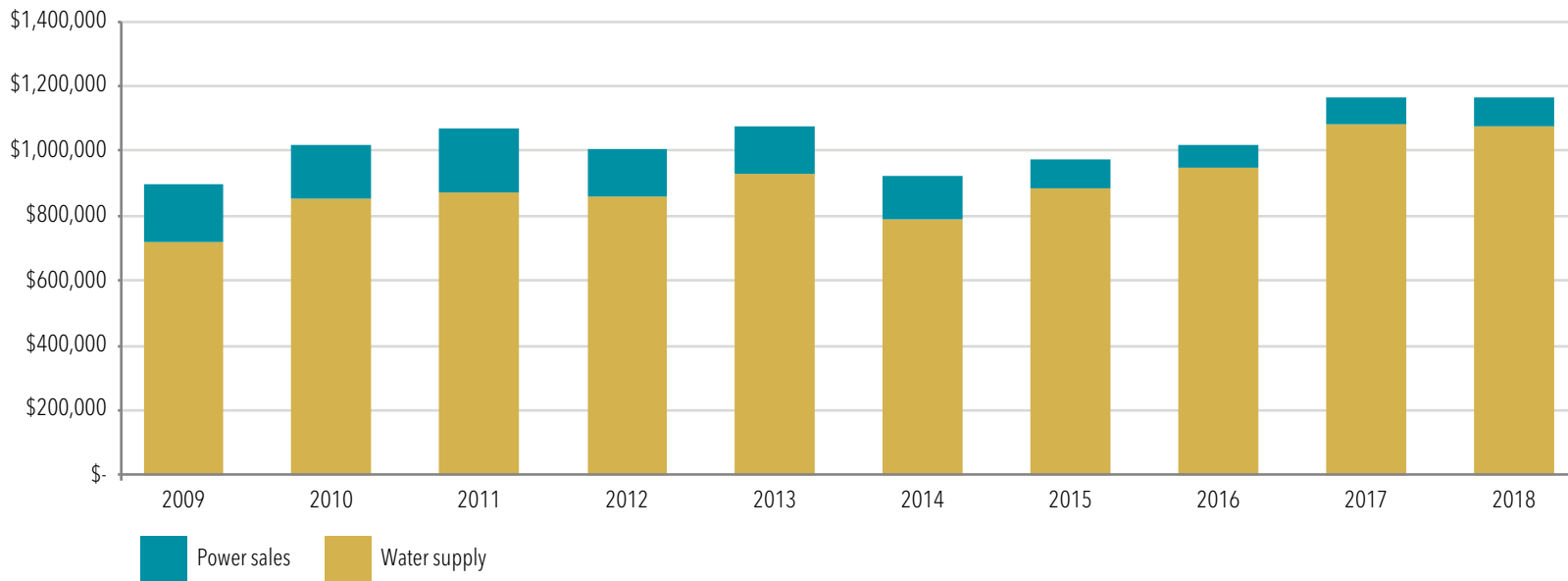


Source: State Water Resources Development System

### Schedule of Significant Revenues by Source (Unaudited)

Last Ten Fiscal Years (in thousands)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Operating Revenues by Source										
Water supply	\$ 721,253	\$ 853,158	\$ 874,748	\$ 860,891	\$ 931,808	\$ 789,370	\$ 883,538	\$ 948,105	\$ 1,082,587	\$ 1,076,238
Power sales	175,318	165,664	193,154	148,360	146,277	131,952	91,780	71,236	85,089	88,148
<b>TOTAL</b>	<b>\$ 896,571</b>	<b>\$ 1,018,822</b>	<b>\$ 1,067,902</b>	<b>\$ 1,009,251</b>	<b>\$ 1,078,085</b>	<b>\$ 921,322</b>	<b>\$ 975,318</b>	<b>\$ 1,019,341</b>	<b>\$ 1,167,676</b>	<b>\$ 1,164,386</b>



STATISTICAL SECTION

Source: State Water Resources Development System

Summary of Schedule of Water and Power Sales Rates (Unaudited)

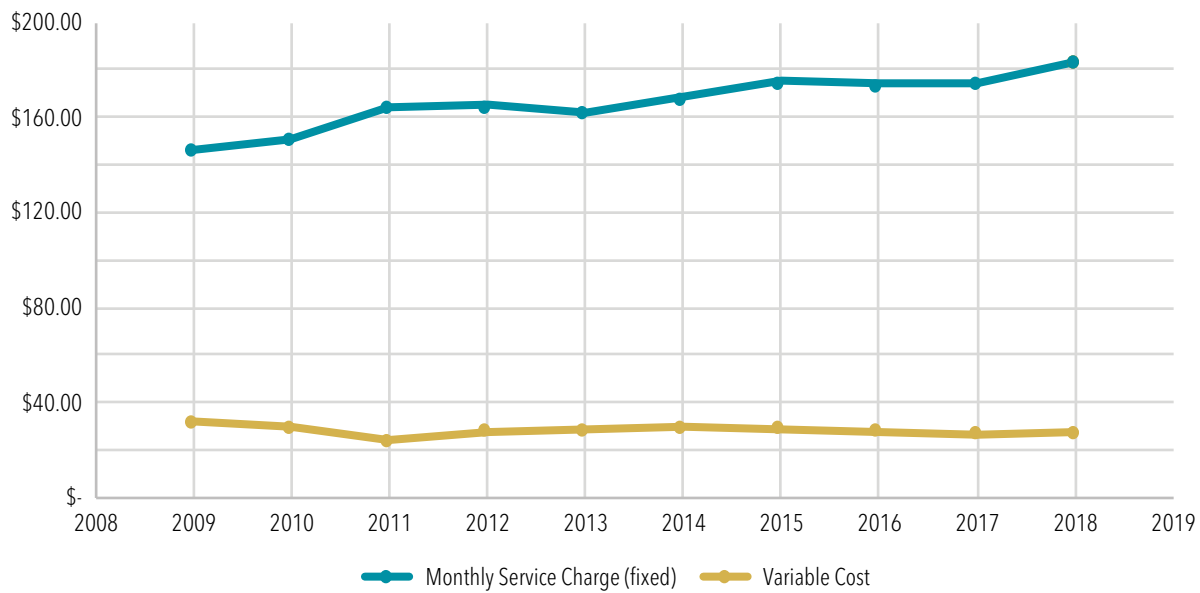
Last Ten Years

Financial Statement Year	Calendar Year	Water Supply <sup>a</sup>	
		Monthly Service Charge (fixed) <sup>b</sup>	Variable Cost <sup>b</sup>
2009	2008	\$ 144.41	\$ 30.53
2010	2009	148.49	28.33
2011	2010	162.20	22.45
2012	2011	162.64	26.36
2013	2012	159.89	26.79
2014	2013	166.37	28.21
2015	2014	172.81	27.52
2016	2015	171.99	26.34
2017	2016 <sup>c</sup>	172.07	25.33
2018	2017 <sup>c</sup>	181.06	25.78

a) Hypothetical charges, which, if assessed on all Table A of Bulletin 132 water delivered to date, all surplus water delivered prior to May 1, 1973, and all Table A water estimated to be delivered during the remainder of the project repayment period (Table B-5B of Bulletin 132), would provide a sum at the end of the period financially equivalent to all Transportation Charge and Delta Water Charge payments required under a water supply contract, considering interest at the Project Interest Rate, 4.610 percent per annum.

b) Numbers reflect amounts on a Calendar Year basis

c) Amounts for these years are preliminary and subject to change



Source: State Water Project Analysis Office Bulletin 132-xx Table B-24

## Largest Distribution Water Revenue Accounts (Unaudited)

Current Year and Nine Years Prior

Customer	FY 2018			Customer	FY 2009		
	Annual Water Sales	Rank	Percentage of Total <sup>a</sup>		Annual Water Sales	Rank	Percentage of Total <sup>a</sup>
THE METROPOLITAN WATER DISTRICT	\$ 563,745,764	1	50%	THE METROPOLITAN WATER DISTRICT	\$ 418,326,644	1	58%
KERN COUNTY WATER AGENCY	131,042,241	2	12%	KERN COUNTY WATER AGENCY	72,125,283	2	10%
Subtotal	<u>\$ 694,788,005</u>		<u>62%</u>	Subtotal	<u>\$ 490,451,927</u>		<u>68%</u>
Total Water Consumption	<u>\$ 1,076,237,998</u>			Total Water Consumption	<u>\$ 721,252,834</u>		

a) Percentage of total is based on total revenues billed under the water supply contracts

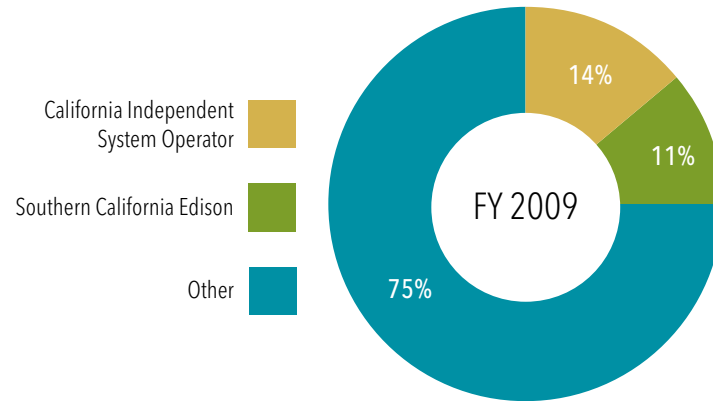
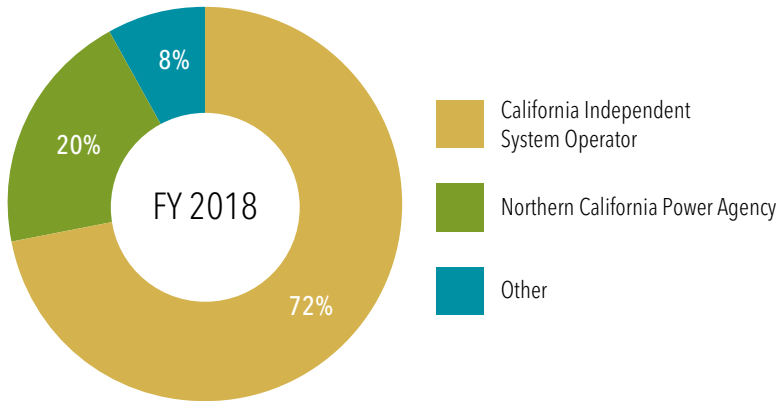


Source: State Water Resources Development System

Largest Distribution Power Sales Revenue Accounts (Unaudited)

Current Year and Nine Years Prior

Customer	FY 2018			Customer	FY 2009		
	Annual Revenues	Rank	Percentage of Total		Annual Revenues	Rank	Percentage of Total
CALIFORNIA INDEPENDENT SYSTEM OPERATOR	\$ 63,643,934	1	72%	CALIFORNIA INDEPENDENT SYSTEM OPERATOR	\$ 24,544,571	1	14%
NORTHERN CALIFORNIA POWER AGENCY	17,638,403	2	20%	SOUTHERN CALIFORNIA EDISON	19,285,020	2	11%
Subtotal	<u>\$ 81,282,337</u>		<u>92%</u>	Subtotal	<u>\$ 43,829,592</u>		<u>25%</u>
Total Power Sales	<u>\$ 88,148,372</u>			Total Power Sales	<u>\$ 175,318,367</u>		



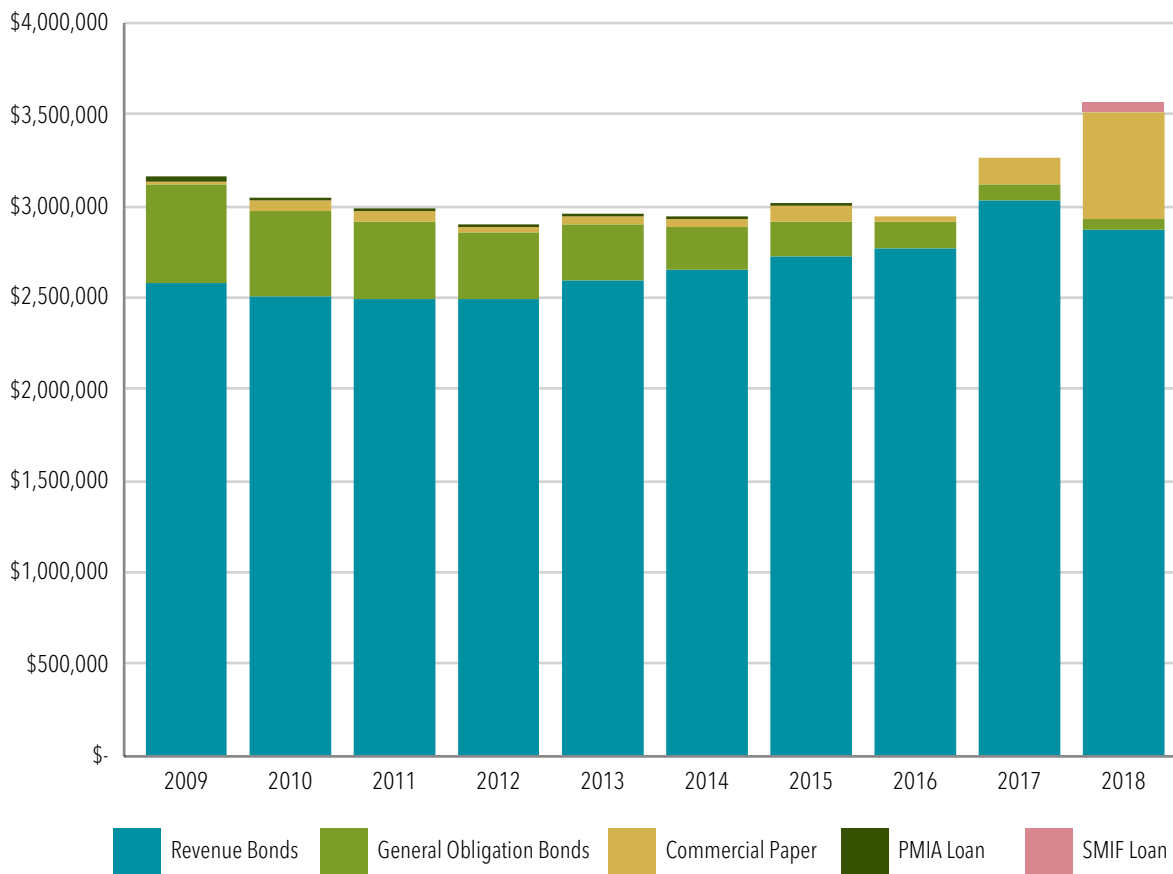
Source: State Water Resources Development System



**Schedule of Ratios of Outstanding Debt by Type (Unaudited)**

Last Ten Fiscal Years (in thousands)

Fiscal Year	Revenue Bonds	General Obligation Bonds	Commercial Paper	PMIA Loan	SMIF Loan	Total
2009	\$ 2,579,158	\$ 531,700	\$ 9,897	\$ 27,288	\$ -	\$ 3,148,043
2010	2,500,049	476,915	46,473	23,912	-	3,047,349
2011	2,491,854	420,540	54,578	21,055	-	2,988,027
2012	2,487,737	362,375	28,783	18,052	-	2,896,947
2013	2,594,459	302,920	50,505	14,896	-	2,962,780
2014	2,647,814	241,835	36,136	11,579	-	2,937,364
2015	2,724,008	184,960	87,900	8,094	-	3,004,962
2016	2,770,888	135,045	42,776	-	-	2,948,709
2017	3,026,368	88,300	147,165	-	-	3,261,833
2018	2,869,007	54,065	580,672	-	60,910	3,564,654



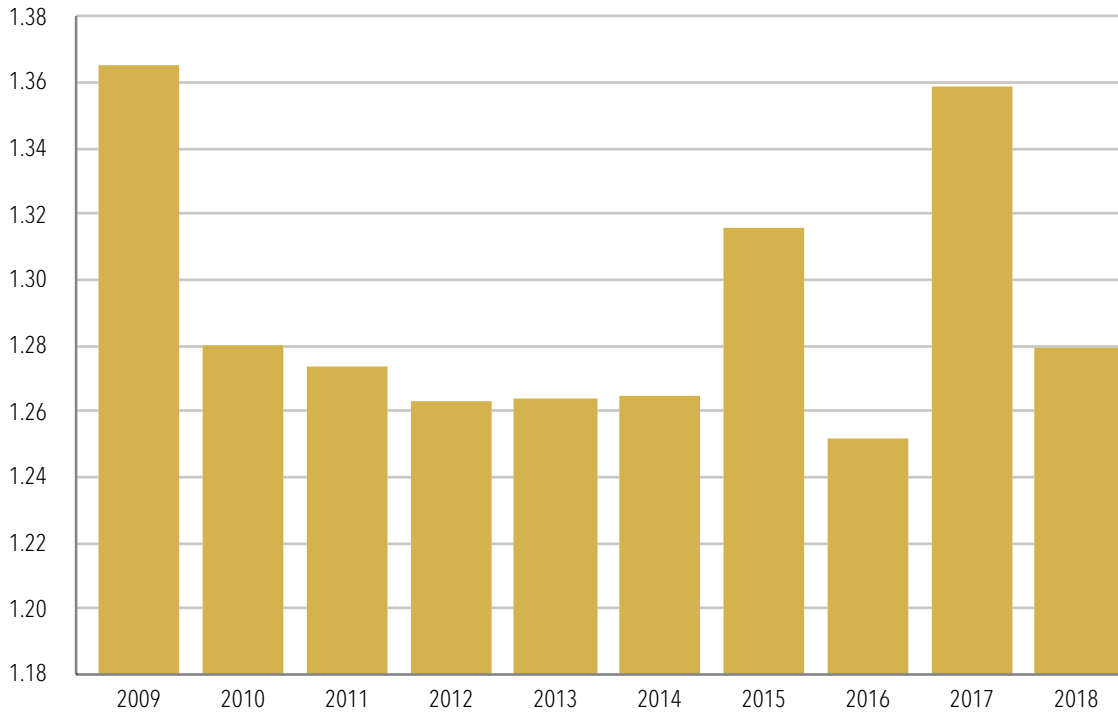
Source: State Water Resources Development System

STATISTICAL SECTION

Schedule of Debt Service Coverage (Unaudited)

Last Ten Fiscal Years (in thousands)

Fiscal Year	Water Supply Revenues	Cover Collected for Debt Service	Revenues Not Available for Debt Service	Net Revenue Available for Debt Service	Debt Service Requirements			Coverage
					Principal	Interest	Total	
2009	\$ 279,059	\$ 48,985	\$ 64,522	\$ 263,522	\$ 74,175	\$ 118,798	\$ 192,973	1.37
2010	279,660	54,086	62,579	271,167	93,270	118,516	211,786	1.28
2011	320,631	55,542	96,016	280,157	104,535	115,439	219,974	1.27
2012	307,438	56,385	85,448	278,375	111,555	108,900	220,455	1.26
2013	372,748	54,677	156,404	271,021	119,280	95,098	214,378	1.26
2014	281,461	51,786	72,829	260,418	109,610	96,313	205,923	1.26
2015	225,899	54,316	26,405	253,810	110,105	82,819	192,924	1.32
2016	255,106	57,779	28,325	284,560	130,095	97,255	227,350	1.25
2017	241,117	56,321	26,248	271,190	128,035	71,584	199,619	1.36
2018	235,540	56,305	26,681	265,164	132,050	75,291	207,341	1.28



Source: State Water Resources Development System

Schedule of Demographic and Economic Indicators (Unaudited)

Last Ten Years

Year	Population (in thousands)	Personal Income (in millions)	Per Capita Personal Income	Unemployment Rate
2008	36,856	\$ 1,602,749	\$ 43,786	7.2%
2009	37,077	1,537,136	41,588	11.3%
2010	37,339	1,583,447	42,399	12.1%
2011	37,679	1,691,003	44,844	11.7%
2012	38,044	1,812,315	47,600	10.4%
2013	38,375	1,849,505	48,115	8.9%
2014	38,737	1,939,528	49,976	7.5%
2015	39,093	2,061,149	52,644	6.2%
2016	39,250	2,197,492	55,987	5.4%
2017	39,537	2,303,870	58,272	4.8%

1 - Source: Economic Research Unit, California Department of Finance

2 - Note: 2018 information is not available and therefore not presented

**Schedule of California Number of Employees by Industry (Unaudited)**

	2008	2009	2010	2011	2012
Agriculture, Forestry, Fishing, Hunting	459,723	434,275	440,265	449,614	463,476
Mining	26,698	23,244	25,011	27,016	28,475
Utilities	58,575	60,288	57,175	58,199	59,160
Construction	782,432	601,982	562,922	580,550	609,365
Manufacturing	1,425,225	1,261,582	1,250,589	1,257,097	1,264,017
Wholesale Trade	705,036	636,330	647,193	661,757	679,339
Retail Trade	1,615,574	1,495,711	1,496,821	1,522,619	1,553,812
Transportation and Warehousing	432,622	396,512	397,932	404,582	415,488
Information	472,152	436,865	429,065	425,193	426,056
Finance and Insurance	563,136	528,813	509,852	512,160	522,529
Real Estate and Rental and Leasing	274,778	250,908	248,452	247,476	253,154
Services	6,232,695	5,947,240	6,063,638	6,216,242	6,519,084
Nonclassifiable Establishments	73,151	72,563	44,336	58,663	59,443
Federal, State and Local Government	2,405,547	2,352,014	2,302,160	2,276,153	2,260,320
<b>Total for all Industries</b>	<b>15,527,344</b>	<b>14,498,327</b>	<b>14,475,411</b>	<b>14,697,321</b>	<b>15,113,718</b>

	2013	2014	2015	2016	2017
Agriculture, Forestry, Fishing, Hunting	463,169	467,923	471,566	474,766	473,554
Mining	27,986	29,142	25,668	21,218	20,130
Utilities	58,240	57,829	57,577	58,008	57,766
Construction	656,000	691,811	748,872	789,841	830,446
Manufacturing	1,265,860	1,283,779	1,303,651	1,304,915	1,318,709
Wholesale Trade	702,319	713,642	719,576	718,853	723,984
Retail Trade	1,587,467	1,615,557	1,645,332	1,654,247	1,670,450
Transportation and Warehousing	433,112	455,070	488,428	517,790	553,571
Information	445,121	459,781	486,838	517,275	526,390
Finance and Insurance	520,579	514,826	523,933	540,844	544,423
Real Estate and Rental and Leasing	260,584	265,335	271,617	278,001	285,957
Services	6,809,757	7,056,066	7,247,138	7,442,898	7,630,490
Nonclassifiable Establishments	36,808	63,478	102,851	119,680	82,201
Federal, State and Local Government	2,276,164	2,317,813	2,388,336	2,434,565	2,346,343
<b>Total for all Industries</b>	<b>15,543,166</b>	<b>15,992,052</b>	<b>16,481,383</b>	<b>16,872,901</b>	<b>17,064,414</b>

- (1) Source: California Employment Development Department
- (2) The industry data provided are intended to provide similar alternative information regarding the concentration of employment in various sectors of the California Economy. Due to confidentiality issues, the names of the top individual employers are not available.
- (3) Note: 2018 information is not available and therefore not presented.

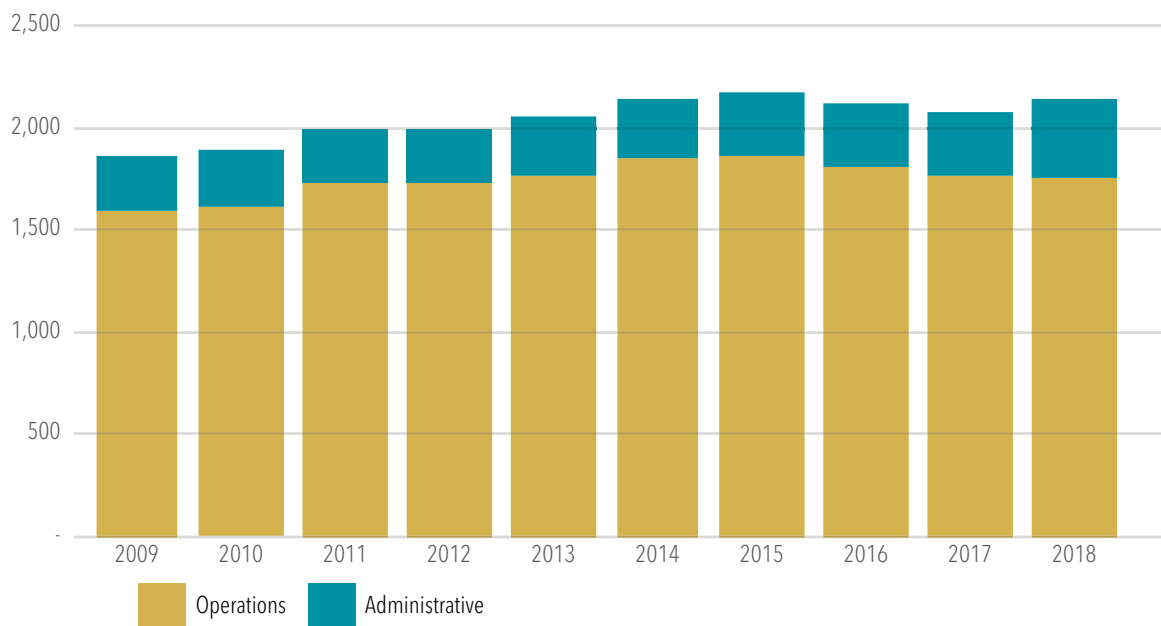
Definitions of Terms and Source Notes: [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov)

**Schedule of Full-Time Equivalent Employees by Function (Unaudited)**

Last Ten Fiscal Years

Function	Full-Time Equivalents by Function as of June 30, <sup>1</sup>									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Field Operations	965	964	862	872	863	920	934	899	904	910
Engineering	208	206	328	329	337	330	324	280	283	286
Operations and Maintenance	312	321	318	295	338	348	355	388	381	390
Environmental Services	94	102	123	128	129	135	132	129	127	126
Flood Management	10	10	62	68	65	65	67	60	10	10
Safety of Dams	1	2	2	2	2	2	2	2	2	-
Power Management	-	-	38	38	35	47	52	53	53	35
<b>Operations Total</b>	<b>1,590</b>	<b>1,605</b>	<b>1,733</b>	<b>1,732</b>	<b>1,769</b>	<b>1,847</b>	<b>1,866</b>	<b>1,811</b>	<b>1,760</b>	<b>1,757</b>
Executive	112	120	43	51	56	63	71	77	78	90
Finance and Accounting	69	74	69	72	72	69	75	69	70	74
Technology Services	77	81	93	79	99	104	105	107	110	110
Communications	17	-	27	26	27	24	27	27	29	26
Legal	-	-	28	31	30	30	31	31	33	46
Human Resources	-	-	-	-	-	-	-	-	-	33
<b>Administrative Total</b>	<b>275</b>	<b>275</b>	<b>260</b>	<b>259</b>	<b>284</b>	<b>290</b>	<b>309</b>	<b>311</b>	<b>320</b>	<b>379</b>
<b>Grand Total</b>	<b>1,865</b>	<b>1,880</b>	<b>1,993</b>	<b>1,991</b>	<b>2,053</b>	<b>2,137</b>	<b>2,175</b>	<b>2,122</b>	<b>2,080</b>	<b>2,136</b>

1 - Excludes Retired Annuitants; FTEs calculated using the most recently available allocation factors



Source: California Department of Water Resources

## Operating and Capital Indicators (Unaudited)

	Last Ten Years									
	2008	2009	2010	2011	2012	2013	2014	2015	2016 <sup>a</sup>	2017 <sup>a</sup>
<b>Water</b>										
Water Deliveries (AF)	3,174,228	3,164,327	3,695,808	4,711,558	4,009,663	3,371,000	1,992,157	2,104,264	3,338,083	4,786,635
Percentage of Requested Water Delivered	35%	40%	50%	80%	65%	35%	5%	20%	60%	85%
Gross Area Served (Acres)	25,063,586	25,091,434	25,091,780	25,091,780	23,509,885	23,847,530	23,527,540	23,514,148	23,514,148	23,514,604
Estimated Population Served <sup>3</sup>	26,314,962	26,216,435	21,462,843	26,324,019	26,201,400	26,267,499	26,520,624	26,876,859	26,926,556	27,214,361
Statewide Precipitation (% of Avg) <sup>1</sup>	78%	81%	108%	135%	77%	79%	56%	74%	104%	157%
Statewide Snowpack (% of Apr 1 Avg)	100+%	88%	n/a	165%	54%	47%	33%	5%	86%	163%
Statewide River Runoff (% of Avg) <sup>1</sup>	60%	65%	91%	146%	62%	60%	35%	45%	97%	217%
Total Storage (% of Maximum) <sup>2</sup>	38%	39%	52%	85%	56%	41%	43%	30%	82%	120%
Total Miles of Aqueducts	705	705	705	705	705	705	705	705	705	705
Number of Storage Facilities	20	20	20	20	20	20	20	20	20	21
Gross Storage Capacity (AF)	6,761,600	6,761,600	6,761,600	6,761,600	6,761,600	6,761,600	6,761,600	6,761,600	6,761,700	6,761,700
Number of Pumping Plants	23	23	23	23	23	23	23	23	23	23
Number of Pumps	162	162	162	162	162	162	162	162	162	162
<b>Power</b>										
Energy Generated (Mwh)	3,541,000	3,650,000	3,920,000	4,846,000	4,198,000	3,068,539	1,132,659	1,274,706	3,075,218	4,519,141
Energy Purchased (Mwh)	4,603,000	3,970,000	5,081,000	4,895,000	3,741,000	3,604,135	1,691,424	2,780,643	4,108,601	5,378,979
Energy Sold (Mwh)	2,399,000	1,530,000	1,814,000	1,192,000	533,000	936,975	33,000	566,891	579,934	243,590
Net Power Consumption (Mwh)	5,745,000	6,090,000	7,187,000	8,549,000	7,406,000	5,735,699	2,791,083	3,488,458	6,603,883	9,654,529
Number of Power Plants	10	10	10	10	10	10	9	9	9	9
Number of Power Generating Units	37	37	37	37	37	37	36	36	36	36

Note: Unless otherwise noted, amounts are reported on a calendar year basis

Source: State Water Project Analysis Office Annual Bulletin 132

1 - Measured in Water Years, which run from October of the prior year to September of the reported year

2 - Measured at the end of the Water Year

3 - Contains duplicate values. Some areas that are in two or more Contractor areas are included in each Contractor's total.







a - Amounts for these years are preliminary and subject to change

**Legend**

AF - Acre Feet

Mwh - Megawatt Hours

## Key Performance Indicators (Unaudited)

	2016	2017	
	<b>WATER DELIVERIES (AF)</b>		
	Delivered	3,338,083	4,786,635
	% of Requested	60%	85%
	<b>PRECIPITATION (% OF AVG)</b>		
	Precipitation	104%	157%
	Snowpack	86%	163%
	<b>ENERGY (MWH)</b>		
	Energy Generated	3,075,218	4,519,141
	Net Consumption	6,603,883	9,654,529
	# of Plants	9	9
	<b>NUMBER SERVED</b>		
	Population	26,926,556	27,214,361
	Area	23,514,148	23,514,148
	<b>STORAGE (AF)</b>		
	Max Capacity	6,761,700	6,761,700
	% of Max	82%	120%
	# of Storage Facilities	20	21
	<b>FACILITIES</b>		
	Aqueducts	705 miles	705 miles
	# of Pumping Plants	23	23
	# of Pumps	162	162

Note: Refer to Operating and Capital Indicators for details.

STATISTICAL SECTION

**Capital Assets, Net (Unaudited)**

Last Ten Fiscal Years (in thousands)

	2009	2010	2011	2012	2013
<b>Nondepreciable Utility Plant</b>					
Land	\$ 138,156	\$ 136,129	\$ 136,129	\$ 136,129	\$ 136,797
Construction work in progress	461,208	400,229	366,975	408,072	528,836
Land use rights	10,925	10,925	11,005	11,250	11,549
Other intangible assets	80,659	81,976	81,976	88,930	100,064
<b>Total Nondepreciable Utility Plant</b>	<b>690,948</b>	<b>629,259</b>	<b>596,085</b>	<b>644,381</b>	<b>777,246</b>
<b>Depreciable Utility Plant</b>					
Aqueducts	1,949,071	2,029,898	2,057,437	2,064,208	2,071,255
Dams & reservoirs	765,246	765,246	781,110	781,202	781,408
Power plants	845,977	909,904	910,100	906,554	911,703
Pumping plants	784,247	784,247	787,008	829,344	836,655
Environmental preservation and mitigation	67,797	67,797	67,797	67,797	67,797
Fish protection	33,934	33,934	33,934	33,934	33,934
Facilities	-	-	64,810	65,820	66,230
Equipment	62,487	65,580	67,996	70,593	71,819
Computer software	23,629	23,629	23,629	24,162	24,501
Land use rights	-	-	-	272	272
Other intangible assets	-	-	-	-	11,995
General	-	-	5,964	6,491	39,579
<b>Total Depreciable Utility Plant</b>	<b>4,532,388</b>	<b>4,680,235</b>	<b>4,799,785</b>	<b>4,850,377</b>	<b>4,917,148</b>
Less Accumulated Depreciation/ Amortization	(2,015,610)	(2,094,306)	(2,194,406)	(2,281,806)	(2,366,429)
<b>Total Utility Plant, Net</b>	<b>\$ 3,207,726</b>	<b>\$ 3,215,188</b>	<b>\$ 3,201,464</b>	<b>\$ 3,212,952</b>	<b>\$ 3,327,965</b>

Source: State Water Resources Development System



**Capital Assets, Net (Unaudited)**

Last Ten Fiscal Years (in thousands)

	2014	2015	2016	2017	2018
<b>Nondepreciable Utility Plant</b>					
Land	\$ 137,033	\$ 141,874	\$ 147,681	\$ 156,934	\$ 162,457
Construction work in progress	438,244	611,900	769,871	1,095,997	1,396,750
Land use rights	11,583	11,630	11,760	11,767	12,458
Other intangible assets	103,740	103,445	100,123	99,240	98,981
<b>Total Nondepreciable Utility Plant</b>	<b>690,600</b>	<b>868,849</b>	<b>1,029,435</b>	<b>1,363,938</b>	<b>1,670,646</b>
<b>Depreciable Utility Plant</b>					
Aqueducts	2,167,237	2,169,352	2,171,981	2,126,713	2,183,839
Dams & reservoirs	781,408	708,303	708,303	729,521	817,041
Power plants	466,358	441,202	470,818	477,044	523,529
Pumping plants	836,814	826,704	838,880	850,475	1,018,627
Environmental preservation and mitigation	67,797	67,797	67,797	67,797	67,797
Fish protection	33,934	33,934	35,544	35,544	35,544
Facilities	246,397	254,741	271,965	298,295	301,157
Equipment	75,705	77,384	79,229	82,526	75,214
Computer software	24,529	24,531	24,717	27,108	27,206
Land use rights	272	272	272	272	272
Other intangible assets	11,995	12,005	12,005	12,005	12,005
General	61,310	62,262	73,053	119,562	162,619
<b>Total Depreciable Utility Plant</b>	<b>4,773,756</b>	<b>4,678,487</b>	<b>4,754,564</b>	<b>4,826,862</b>	<b>5,224,850</b>
<b>Less Accumulated Depreciation/ Amortization</b>	<b>(1,994,695)</b>	<b>(2,014,654)</b>	<b>(2,084,676)</b>	<b>(2,117,138)</b>	<b>(2,185,494)</b>
<b>Total Utility Plant, Net</b>	<b>\$ 3,469,661</b>	<b>\$ 3,532,682</b>	<b>\$ 3,699,323</b>	<b>\$ 4,073,662</b>	<b>\$ 4,710,002</b>

Source: State Water Resources Development System

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## APPENDIX C

### SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

#### General Authority

The Bonds are authorized by the provisions of the CVP Act. The Department's authority to issue bonds under the CVP Act was confirmed by a decision of the Supreme Court of California in *Warne v. Harkness*, 60 Cal.2d 579 (1963). The CVP Act and such decision authorize the Department to pledge revenues for the security of CVP Act bonds, free and clear of the pledge of revenues of the State Water Project to the general obligation bonds of the State issued pursuant to the Burns-Porter Act. Under the CVP Act the payment of bond debt service has priority over the payment of operating expenses.

#### Issuance of Bonds

Additional Bonds may be issued on a parity with outstanding Bonds and secured by an equal lien on the Revenues, to finance or refinance the costs of construction or acquisition of facilities for water conservation or transportation, including facilities to generate or transmit electric power, for the State Water Project ("Water System Projects"), the costs of study or planning of any potential Water System Project ("Project Planning Costs"), and to make deposits to the Debt Service Reserve Account. The issuance of additional Bonds is authorized by the adoption of a supplemental resolution and is subject to certain requirements, including the following:

*General Requirements for Additional Bonds.* In order to issue a series of additional Bonds, the Department must certify that (a) after the issuance of such series, estimated Revenues in each year will not be less than the sum of 1.25 times debt service to be paid from the Revenue Fund plus estimated Water System Operating Expenses and (b) the Debt Service Reserve Account is projected to contain on the first interest payment date on which interest for such series is payable from Revenues, an amount equal to, for any date of calculation, for all series of Bonds outstanding for which interest is then payable in whole or in part from Revenues, one-half of the maximum Annual Debt Service for the then current Year or any Year after such date of calculation. In addition, the Treasurer must have received evidence that the issuance of the additional Bonds will not result in the lowering of any rating then assigned to any then outstanding Bonds by any nationally recognized rating agency.

*Additional Requirements for New Money Bonds.* In order to issue a series of Bonds for new money purposes, the Department must (in addition to the foregoing general requirements) also certify that the Water System Project for which such series is being issued can be beneficially used by the Department to assist in the conservation or transportation of water under Water Supply Contracts, that the Water System Project is technically and economically feasible and that moneys, if any, for Project Planning Costs are then required (including an estimate of the amount of moneys required for Project Planning Costs).

#### Disposition of Revenues

Revenues as defined under the Resolution include:

(a) moneys to be received under the Water Supply Contracts resulting from the construction, acquisition or operation of Water System Projects (but only in the amounts required to meet the rate covenant of the Resolution);

(b) moneys received from any other legally available source that the Department in its discretion determines to be Revenues and so designates in a certificate filed with the Treasurer; and

(c) income from the investment of moneys held in the Revenue Fund pursuant to the Resolution.

Revenues do not include any other income or receipts resulting from the construction, acquisition or operation of a Water System Project other than the income and receipts specified in the immediately preceding clauses (a), (b) and (c).

The Resolution requires the State Controller to establish and maintain the following accounts in the Revenue Fund: the Interest Account, the Principal Retirement Account, the Operating Account, the Debt Service Reserve Account, and the Surplus Account. The State Controller is to allocate to the Operating Account during each Year an amount equal to the amount previously estimated by the Department to be required in such Year for Water System Operating Expenses.

The Resolution requires the State Controller to allocate all Revenues, when received, to these accounts. The allocation is required to be in the following priority: Interest Account, Principal Retirement Account, Operating Account, Debt Service Reserve Account and Surplus Account. The State Controller is to allocate to the Interest Account on or before each interest payment date an amount equal to the interest due on such interest payment date (less amounts then in the Interest Account or the Construction Fund available to pay such interest). The State Controller is to allocate to the Principal Retirement Account on or before each maturity date and sinking fund installment date the sum of (a) the principal amount of any serial Bonds becoming due on such date, plus (b) any sinking fund installments that become due on such date. The State Controller is to maintain separate subaccounts in the Principal Retirement Account for the serial Bonds of each series and for the sinking fund installments of each series of Bonds.

Moneys in the Surplus Account may be applied to any lawful purpose, including transfer to funds not subject to the lien of the Resolution.

### **Debt Service Reserve Account**

A Debt Service Reserve Account is required to be maintained in the State Treasury. On the issuance of each series of Bonds, provision must be made for placing moneys in the Debt Service Reserve Account so that on the first interest payment date when interest on the Bonds of that series is to be paid from Revenues, the Debt Service Reserve Account will contain an amount at least equal to, for any date of calculation, for all series of Bonds outstanding for which interest is then payable in whole or in part from Revenues, one-half of the maximum Annual Debt Service for the then current Year or any Year after such date of calculation (the "Reserve Account Requirement"). Revenues will be allocated to the Debt Service Reserve Account to the extent necessary, under the priority described under "Disposition of Revenues," so that the amount in the Debt Service Reserve Account will be at least equal to such amount.

The Department, at its option and notwithstanding any contrary provision in the Resolution, may withdraw, in whole or in part, amounts required to be held in the Debt Service Reserve Account upon the deposit of a Reserve Fund Instrument with the Treasurer, as trustee, in a stated amount equal to the amounts so withdrawn. Upon request of the Department or as may be provided in a supplemental resolution, Revenues deposited in the Debt Service Reserve Account shall be used to reimburse draws on any Reserve Fund Instruments therein, but only to the extent that such reimbursement results in a commensurate increase in the amount of available coverage provided under the respective Reserve Fund Instrument. The amount available to be drawn under any Reserve Fund Instrument on deposit in the Debt Service Reserve Account shall be included in calculating the amount credited to such Account. A Reserve Fund Instrument is a letter of credit, surety bond or other credit facility issued by a provider the unsecured obligations of which, at the time of initial deposit of such facility, are rated not lower than "Aa" by Moody's and "AA" by S&P, and the deposit of which does result in a withdrawal or downgrading of any rating of the Bonds then in effect.

Moneys in the Debt Service Reserve Account are to be applied, upon the claim of the Treasurer, to make good any deficiency in the Interest Account or the Principal Retirement Account, in that priority.

Any amount in the Debt Service Reserve Account in excess of its requirement may be transferred to any legally permissible fund or account designated by the Department.

### **Security for Payment of Bonds**

Payment of the principal and redemption price of, and interest on, the Bonds is secured by a first and direct charge and lien upon the Revenues and all moneys and securities held and accounts established (except amounts, if any, in any Rebate Account) under the Resolution, by the Department, the State Controller, the Treasurer, or the Paying Agent, subject only to the provisions of the Resolution permitting the payment or the use thereof for the purpose, in the manner, and upon the terms and conditions set forth in the Resolution.

The Department must perform and observe all the obligations and conditions required to be performed and observed by it under the Water Supply Contracts at the times, and in the manner therein prescribed. The Department must diligently enforce its rights under the Water Supply Contracts and must not agree to any amendment to the Water Supply Contracts that would materially adversely affect the security of the Bonds.

The Department must at all times use its best efforts to maintain the Revenues in each year at an amount at least equal to 1.25 times the annual debt service for such year to be paid from the Revenue Fund plus the amount required from the Revenue Fund for Water System Operating Expenses in such year, plus certain amounts required to fund initially the Debt Service Reserve Account.

### **Investment of Moneys Held Under the Resolution**

Moneys held in all accounts other than the Debt Service Reserve Account will be invested under the laws governing the investment of moneys in the State Treasury. Moneys held in the Debt Service Reserve Account shall be invested in obligations of the United States (including trust receipts or certificates evidencing ownership of payments on such obligations), in obligations for which the faith and credit of the United States are pledged for the payment of principal and interest, in certain federal agency securities, in certain state or local government obligations secured by obligations of or guaranteed by the United States or in the Surplus Money Investment Fund operated by the Treasurer.

### **Certain Covenants**

The covenants of the Department contained in the Resolution include the following:

*Punctual Payment.* The Department will pay or cause to be paid the principal or redemption price of and interest to become due in respect of all Bonds, in strict conformity with the terms of the Bonds and of the Resolution, and it will faithfully observe and perform all of the conditions, covenants, and requirements of the Resolution and all supplemental resolutions and of the Bonds.

*Covenant Against Encumbrances, Sale, or Disposition.* The Department shall not create, or permit to be created, any mortgage, lien, or pledge on the Revenues equal or prior to the charge or lien of the Resolution, nor sell or otherwise dispose of all or any part of a Water System Project essential to the maintenance of the Revenues, nor enter into any lease or agreement that would materially adversely affect the rights or security of the Bondholders under the Resolution.

*Tax Covenants.* The Department may include in any supplemental resolution authorizing the issuance of a series of Bonds covenants designed to preserve the tax-exempt status of such series of Bonds, including covenants concerning the rebate of excess investment earnings on moneys held under the Resolution.

### **Events of Default; Remedies of Bondholders**

The Bondholders and the Treasurer, as trustee, acting for the Bondholders shall be entitled to all of the rights and remedies provided in the CVP Act and to all of the rights and remedies otherwise provided or permitted by law.

In the event the Department shall default in the payment of principal or redemption price of any Bond, or in the payment of interest on any Bond, or in the event the Department shall not comply with any of the covenants or agreements contained in the Resolution or the Bonds and such defaults shall have continued for a period of 60 days after written notice thereof shall have been given to the Department by the Treasurer, or to the Department and the Treasurer by the holders of at least 25 percent in principal amount of the outstanding Bonds; then the Treasurer or the holders of at least a majority in principal amount of the outstanding Bonds shall be entitled to declare the principal of all of the outstanding Bonds, and the interest accrued thereon, to be due and payable immediately.

Under any default or other occurrence creating a right in the Treasurer to represent the holders of Bonds, the Treasurer may take such action as he or she may deem appropriate, and shall take such action as shall be specified in a written request of the holders of at least 25 percent in principal amount of the outstanding Bonds and upon the furnishing to the Treasurer of indemnity satisfactory to him or her.

### **Amendment of the Resolution**

The Resolution and the rights and obligations of the Department and the Bondholders may be changed at any time by a supplemental resolution when approved by the holders of 60 percent of the principal amount of the Bonds then outstanding and affected by such change at a meeting of the Bondholders or by the written consent of the Bondholders. Any such consent shall be binding upon the Bondholder giving such consent and on any subsequent Bondholder (whether or not such subsequent Bondholder has notice thereof) unless such consent is revoked in writing by the Bondholder giving such consent or a subsequent Bondholder by filing such revocation with the Treasurer prior to the date the Department mails notice that the consents of the holders of the requisite percentage of Bonds have been obtained.

No change shall be made, without the consent of all Bondholders, (a) in the principal amount or the redemption price of any Bond, the rate of interest thereon, the maturity of the principal thereof or of any installment of interest thereon or (b) in the percentage of the principal amount of Bonds the vote or consent of the holders of which is required to effect any change.

A change may also be made at any time by supplemental resolution, without the consent of any Bondholders, for any one or more of the following:

- (a) To add to the covenants of the Department, other covenants, or to surrender any right reserved to the Department;
- (b) To cure any ambiguity, defect or inconsistent provision in the Resolution or to make provisions in regard to questions arising under the Resolution as the Department deems



necessary and not inconsistent with the Resolution, and which shall not materially adversely affect the interests of the Bondholders;

(c) To provide for the issuance of an additional series of Bonds;

(d) To provide for the issuance of Bonds in coupon form rather than or in addition to registered form. No such change may be materially adverse to the interests of the holders of outstanding Bonds; or

(e) To add such provisions as may be necessary to accommodate such banking, insurance, remarketing and other financial arrangements as may be necessary or desirable to provide additional security for the payment of principal and interest on any one or more series of Bonds or to provide the holders of any one or more series of Bonds the right to tender such Bonds to the Department or to another party for purchase at the times, on the notice and on such other terms as the Department may determine. These arrangements may provide for the reimbursement by the Department, with interest, of moneys advanced by the provider of additional security, the provider of a tender right, the provider of moneys to fund a tender right or anyone performing a related function from the sources available for the payment of Bonds. No such change may be materially adverse to the interests of the holders of outstanding Bonds.

#### **Discharge of Obligations Under the Resolution**

The obligations of the Department and the pledge, lien, covenants and agreements of the Department made or provided for in the Resolution will be fully discharged and satisfied as to any Bond and such Bond shall no longer be deemed to be outstanding thereunder, when payments of the principal of and the applicable redemption price, if any, on such Bond, plus interest thereon to the due date thereof, (i) has been made or caused to be made in accordance with the terms thereof or (ii) has been provided for by depositing with the Treasurer in trust for such payment (a) moneys sufficient to make such payments or (b) specified governmental obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys to make such payments, and, except for the purposes of such payment, such Bond will no longer be secured by or entitled to the benefits of the Resolution; provided that, with respect to Bonds that are to be redeemed or otherwise prepaid prior to the stated maturities thereof, no such deposit will constitute such discharge and satisfaction unless such Bonds have been called or designated for redemption or prepayment in accordance with the provisions thereof and notice of such redemption or prepayment has been given or irrevocable provision has been made for the giving of such notice.

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## APPENDIX D

### FORM OF CONTINUING DISCLOSURE CERTIFICATE

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed as of April \_\_, 2019 and is being delivered and executed by the Department of Water Resources (the “Department”) in connection with the issuance of its \$299,590,000 Central Valley Project Water System Revenue Bonds, Series BA (the “Bonds”). The Bonds are being issued pursuant to the Central Valley Project Water System Revenue Bonds, General Bond Resolution, No. DWR-WS-1 of the State of California Department of Water Resources, adopted as of July 1, 1986, as supplemented to date and as supplemented by, with respect to the Bonds, Resolution No. DWR-WS-111 of the Department, adopted as of April 16, 2019 (as supplemented, the “Resolution”). This Disclosure Certificate is being delivered to satisfy the obligations of the Department under Section 21202 of the Resolution, and the Department hereby acknowledges that references to “Continuing Disclosure Certificate” in such Section 21202 shall mean this Disclosure Certificate. Accordingly, pursuant to Section 21202, the Department covenants and agrees as follows:

**SECTION 1. Nature of the Disclosure Certificate.** This Disclosure Certificate is executed for the benefit of the Bondholders and Beneficial Owners (as defined below) of the Bonds from time to time, but shall not be deemed to create any monetary liability on the part of the Department to any persons, including Bondholders or Beneficial Owners of the Bonds based on the Rule (as defined below). The sole remedy in the event of any failure of the Department to comply with this Disclosure Certificate shall be an action to compel performance of any act required hereunder.

**SECTION 2. Definitions.** In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean the Annual Report filed by the Department pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“Beneficial Owner” shall mean any person who has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Bonds to which the Disclosure Certificate is applicable (including persons holding Bonds through nominees, depositories or other intermediaries).

“Dissemination Agent” shall mean any Dissemination Agent designated in writing by the Department.

“Financial Obligation” shall mean, for purposes of the Listed Events set out in Section 5(a)(15) and Section (5)(a)(16), a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term “Financial Obligation” shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“Listed Event” shall mean any of the events listed in Section 5(a) of this Disclosure Certificate.

“MSRB” shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the SEC to receive reports or notices pursuant to the Rule. Until otherwise designated by the MSRB or the SEC, 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>.

“Obligated Person” shall mean any person, including the Department, who is either generally or through an enterprise, fund, or account of such person committed by contract or other arrangement to support payment of all, or part of the Bonds to which the Disclosure Certificate is applicable (other than providers of municipal bond insurance, letters of credit, or other liquidity facilities).

“Official Statement” shall mean the Official Statement, dated April 16, 2019, related to the Bonds.

“Related Official Statement” shall mean any Official Statement delivered in connection with a future issue of bonds by the Department to which this Disclosure Certificate is made applicable by the Department.

“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” means the Securities Exchange Commission.

“State” shall mean the State of California.

**SECTION 3. Provision of Annual Reports.**

(a) The Department shall, or shall cause the Dissemination Agent to, not later than nine months after the end of the Department’s fiscal year (which shall be March 31 of each year, so long as the Department’s fiscal year ends on June 30), commencing with the report for the 2018-19 fiscal year (which is due not later than March 31, 2020), provide to the MSRB an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Certificate. The Annual Report may cross-reference other information as provided in Section 4 of this Disclosure Certificate; provided, that the audited financial statements of the Department may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the Department’s fiscal year changes, it shall give notice of such change in a filing with the MSRB. The Annual Report shall be submitted on a standard form in use by industry participants or other appropriate form and shall identify the Bonds by name and CUSIP number.

(b) If in any year the Department does not provide, or cause the Dissemination Agent to provide, the Annual Report to the MSRB by the date required in subsection (a), the Department shall, in a timely manner, file a notice in substantially the form attached as Exhibit A to the MSRB, in a format prescribed by the MSRB.

(c) If one or more entities other than the MSRB have been designated by the SEC to receive reports or notices pursuant to the Rule, the Department shall or shall cause the Dissemination Agent to determine prior to the date for providing the Annual Report the name, address and method of filing applicable to each such entity.

(d) The Dissemination Agent (if any) shall file a report with the Department certifying that the Annual Report has been filed pursuant to this Disclosure Certificate, stating the date(s) it was filed (and if one or more entities other than the MSRB have been designated by the SEC to receive reports or notices pursuant to the Rule, specifying the name, address and method of filing applicable to each such entity).

**SECTION 4. Content of Annual Reports.** The Department’s Annual Report shall contain or include by reference the following:

(a) The audited financial statements of the Department 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 such 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) To the extent not included in the audited financial statement of the Department, the Annual Report shall also include an update of the following information contained in the Official Statement:

1. The amount on deposit in the Debt Service Reserve Account.
2. The information under the heading “THE DEPARTMENT – Investments of Department Moneys.”
3. The information relating to the prior year’s water deliveries under the heading “STATE WATER PROJECT WATER SUPPLY– Annual Water Deliveries.”
4. The information relating to the current year’s water requests under the heading “STATE WATER PROJECT WATER SUPPLY– Annual Water Deliveries.”
5. The information relating to sources of power for the prior year in the table under the heading “POWER OPERATIONS OF THE STATE WATER PROJECT – Historical Sources of Power for State Water Project Operations.”
6. The information relating to water deliveries for the prior year in the table under the heading “THE CONTRACTORS – Water Deliveries and Contractor Payments – Historical Deliveries of Water From the State Water Project to the Contractors.”
7. The information relating to payments for the prior year in the table under the heading “THE CONTRACTORS – Water Deliveries and Contractor Payments – Historical Deliveries of Water From the State Water Project to the Contractors.”
8. The information relating to the Contractors in APPENDIX A for any Contractor whose payments are expected to be five percent (5%) or more of Revenues attributable to the bonds outstanding under the Resolution.

If any of the information identified in this Section 4 by references to headings in the Official Statement is under a different heading in any Related Official Statement, the heading references above shall be read as references to the relevant heading in such Related Official Statement as necessary to insure the same information is updated with respect to all bonds subject to the terms of this Continuing Disclosure Certificate, by supplement or otherwise.

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Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues with respect to which the Department is an “obligated person” (as defined by the Rule), which have been filed with the MSRB or the SEC. If the document included by

reference is a final Official Statement, it must be available from the MSRB. The Department 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 5, the Department shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Outstanding Bonds:

1. principal and interest payment delinquencies;
2. non-payment related defaults, if material;
3. unscheduled draws on the debt service reserves reflecting financial difficulties;
4. unscheduled draws on the credit enhancements reflecting financial difficulties;
5. substitution of the credit or liquidity providers or their failure to perform;
6. adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds to which the Disclosure Certificate is applicable;
7. modifications to rights of Bondholders, if material;
8. bond calls, if material, and tender offers;
9. defeasances;
10. release, substitution or sale of property securing repayment of the Bonds, if material;
11. rating changes;
12. bankruptcy, insolvency, receivership, or similar event of the Department;
13. the consummation of a merger, consolidation, or acquisition involving an Obligated Person or the sale of all or substantially all of the assets of an Obligated Person, other than 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;
14. the appointment of a successor or additional trustee, or the change in the name of a trustee, if material;
15. incurrence of a Financial Obligation of the Department, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Department, any of which affect security holders; and

16. default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Department, any of which reflect financial difficulties.

(b) Whenever the Department obtains knowledge of the occurrence of a Listed Event, the Department shall as soon as possible, if such Listed Event requires such a determination as set forth in the preceding clause (a), determine if such event would be material under applicable federal securities laws.

(c) The Department shall promptly file a notice electronically to the MSRB, in an electronic format prescribed by the MSRB in a timely manner, but not in excess of 10 Business Days after the occurrence of a Listed Event, subject to a determination of its materiality, as applicable. Reference is hereby made to the Rule for a discussion of when the Listed Event enumerated in subsection (a)(12) is deemed to have “occurred.”

**SECTION 6. Termination of Reporting Obligation.** The Department’s obligations under this Disclosure Certificate shall terminate upon the legal defeasance (or in the event a portion of the Bonds is legally defeased, with respect to such defeased Bonds), prior redemption or payment in full of all of the Bonds. If the Department’s obligations under the Resolution are assumed in full by some other entity, such person shall be responsible for compliance with this Disclosure Certificate in the same manner as if it were the Department and the Department shall have no further responsibility hereunder. If such termination or substitution occurs prior to the final maturity of the Bonds, the Department shall give notice of such termination or substitution in the same manner as for a Listed Event under Section 5(c).

**SECTION 7. Dissemination Agent.** The Department may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Department pursuant to this Disclosure Certificate.

**SECTION 8. Amendment; Waiver.** Notwithstanding any other provision of this Disclosure Certificate, the Department may amend or waive any provision of this Disclosure Certificate, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 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 either (i) is approved by the Bondholders of the Bonds in the same manner as provided in the Resolution for amendments to the Resolution with the consent of Bondholders, or (ii) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Bondholders or Beneficial Owners of the Bonds.

In the event of any amendment or waiver of a provision of this Disclosure Certificate, the Department 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 Department. 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. Additional Information.** Nothing in this Disclosure Certificate shall be deemed to prevent the Department from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate 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 Certificate. If the Department 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 Certificate, the Department shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

**SECTION 10. Beneficiaries.** This Disclosure Certificate shall inure solely to the benefit of the Bondholders and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity (except the right of the Treasurer of the State of California, as trustee for the Bonds, or any Bondholder or Beneficial Owner to enforce the provisions of this Disclosure Certificate on behalf of the Bondholders). This Disclosure Certificate is not intended to create any monetary rights on behalf of any person based upon the Rule.

**SECTION 11. Partial Invalidity.** If any one or more of the agreements or covenants or portions thereof required hereby to be performed by or on the part of the Department shall be contrary to law, then such agreement or agreements, such covenant or covenants or such portions thereof shall be null and void and shall be deemed separable from the remaining agreements and covenants or portions thereof and shall in no way affect the validity hereof and the Bondholders of the Bonds shall retain all the benefits afforded to them hereunder. The Department hereby declares that it would have executed this Disclosure Certificate and each and every other section, paragraph, subdivision, sentence, clause and phrase hereof regardless of the fact that any one or more sections, paragraphs, subdivisions, sentences, clauses or phrases hereof or the application thereof to any person or circumstance may be held to be unconstitutional, unenforceable or invalid.

**SECTION 12. Governing Law.** This Disclosure Certificate, the interpretation hereof and any right or liability arising hereunder shall be governed by the laws of the State of California.

IN WITNESS WHEREOF, the Department has caused this Disclosure Certificate to be executed by its authorized officer as of the date first above written.

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

By \_\_\_\_\_  
Chief, Division of Fiscal Services



**CONTINUING DISCLOSURE EXHIBIT A**

**FORM OF NOTICE TO THE MUNICIPAL SECURITIES RULEMAKING BOARD  
OF FAILURE TO FILE ANNUAL REPORT**

Name of Issuer: State of California Department of Water Resources

Name of Bond Issue: State of California Department of Water Resources Central Valley  
Project Water System Revenue Bonds, Series BA

Date of Issuance: April \_\_, 2019

NOTICE IS HEREBY GIVEN that the State of California Department of Water Resources (the “Department” has not provided an Annual Report with respect to the above-named Bonds as required by Section 4 of the Continuing Disclosure Certificate of the Department, dated the Date of Issuance, and Section 21202 of Resolution No. DWR-WS-111 of the Department, adopted as of April 16, 2019. [The Department anticipates that the Annual Report will be filed by \_\_\_\_\_.]

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

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

By \_\_\_\_\_ [to be signed only if filed]

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## APPENDIX E

### PROPOSED FORM OF OPINION OF ATTORNEY GENERAL

*The following form of opinion is expected to be delivered with respect to the Series BA Bonds on the date of issue thereof.*

[Issue Date]

State of California Department of Water Resources  
Sacramento, California

**\$299,590,000**

**State of California Department of Water Resources  
Central Valley Project Water System Revenue Bonds  
Series BA**

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Ladies and Gentlemen:

We have acted as the Attorney General of the State of California in connection with the issuance by the State of California Department of Water Resources (the “Department”) of its Central Valley Project Water System Revenue Bonds, Series BA (the “Series BA Bonds”) in the aggregate principal amount of \$299,590,000. The Series BA Bonds are issued pursuant to Part 3 of Division 6 of the Water Code of the State of California, and under a general bond resolution of the Department, adopted as of July 1, 1986, and supplemental resolutions of the Department, including the supplemental resolution authorizing the Series BA Bonds, adopted as of April 16, 2019 (the general bond resolution and all resolutions supplemental thereto are herein collectively called the “Resolution”). The Series BA Bonds constitute the fifty-third series of bonds issued under the Resolution (all bonds at any time outstanding under the Resolution being herein collectively called the “Bonds”) and are issued for one or more of the purposes set forth in the Resolution. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution, certifications of the Department, the Treasurer of the State of California and others as to certain factual matters, the opinion of counsel to the Department, and such other documents and matters to the extent we deemed necessary to render the opinions set forth herein. We have assumed, without undertaking to verify, the genuineness of all documents, certifications, opinions and signatures presented to us (whether as originals or as copies); the due and legal execution and delivery thereof by, and validity against, any parties other than the Department; the accuracy of the factual matters represented, warranted or certified in such documents, certificates and opinions; and compliance with all covenants and agreements contained in the Resolution.

Certain agreements, requirements and procedures contained or referred to in the Resolution, the Tax Certificate and other relevant documents may be changed and certain actions (including without limitation, defeasance of Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. No opinion is expressed herein as to any Bond or the interest thereon if any such change occurs or action is taken or omitted upon the advice or approval of counsel other than ourselves.

This opinion is issued as of the date hereof. The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed

by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof and we disclaim any obligation to update this letter. We assume no obligation to update, revise or supplement this opinion to reflect any such action hereafter taken or not taken, or any facts or circumstances, or any changes in law or in interpretations thereof, that may arise or occur, or for any other reason. We call attention to the fact that the rights and obligations under the Series BA Bonds and the Resolution and their enforceability may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to limitations on legal remedies against the State of California. We express no opinion with respect to any indemnification, contribution, choice of law, choice of forum, choice of venue or waiver or severability provisions contained in the foregoing documents. Finally, we express no opinion as to the accuracy, adequacy or sufficiency of any financial or other information that has been or will be supplied to the purchasers of the Series BA Bonds and we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement dated April 16, 2019, or other offering material relating to the Series BA Bonds and express herein no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Series BA Bonds constitute valid and binding limited obligations of the Department, payable only out of the Revenues and moneys and securities held, and accounts established, under the Resolution.

2. The Resolution has been duly and lawfully adopted and is a valid resolution of the Department, enforceable against the Department in accordance with the terms of the Resolution.

3. The Series BA Bonds are secured by a first and direct charge and lien upon the Revenues and all moneys and securities held, and accounts established, under the Resolution (except amounts held in any Rebate Account established under the Resolution), subject only to the provisions of the Resolution permitting the payment or use of such Revenues, moneys, securities and accounts for the purposes, in the manner and upon the terms and conditions set forth in the Resolution. The Series BA Bonds are not secured by any other property or moneys of the Department.

4. The Series BA Bonds do not constitute a debt, liability or obligation of the State of California or of any political subdivision thereof, or a general obligation of the Department. Neither the faith and credit nor the taxing power of the State or any political subdivision thereof is pledged to the payment of the principal of, or premium, if any, or interest on the Series BA Bonds. The Department has no taxing power.

Sincerely,

Deputy Attorney General

For XAVIER BECERRA  
Attorney General

## APPENDIX F

### PROPOSED FORM OF OPINION OF BOND COUNSEL

*The following form of opinion is expected to be delivered with respect to the Series BA Bonds on the date of issue thereof.*

[Issue Date]

**State of California Department of Water Resources  
Central Valley Project Water System Revenue Bonds  
Series BA**

---

#### **(Final Opinion)**

We have acted as bond counsel to the State of California Department of Water Resources in connection with the issuance by the State of California Department of Water Resources (the “Department”) of its Central Valley Project Water System Revenue Bonds, Series BA (the “Series BA Bonds”), in the aggregate principal amount of \$299,590,000. The Series BA Bonds are issued pursuant to Part 3 of Division 6 of the Water Code of the State of California, and under a general bond resolution of the Department, adopted as of July 1, 1986, as amended, and supplemental resolutions of the Department, including the supplemental resolution authorizing the Series BA Bonds, adopted as of April 16, 2019 (the general bond resolution and all resolutions supplemental thereto are herein collectively called the “Resolution”). The Series BA Bonds constitute the fifty-third series of bonds issued under the Resolution (all bonds at any time outstanding under the Resolution being herein collectively called the “Bonds”) and are issued for one or more of the purposes set forth in the Resolution. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In such connection, we have reviewed the Resolution, the Tax Certificate of the Department dated the date hereof and executed in connection with the Series BA Bonds (the “Tax Certificate”), certifications of the Department, the Treasurer of the State of California and others as to certain factual matters and such other documents and matters to the extent we deemed necessary to render the opinions set forth herein. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Department. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents referred to in this paragraph.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters and we disclaim any obligation to update this letter. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution and in the Tax Certificate, including, without limitation, covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Series BA Bonds to be included in gross income for federal income tax purposes. We call attention to the fact that the rights and obligations under the Series BA Bonds, the Resolution and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors’ rights, to the application of equitable principles, to the

exercise of judicial discretion in appropriate cases and to limitations on legal remedies against the State of California. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement dated April 16, 2019, or other offering material relating to the Series BA Bonds and express herein no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. Each of the Series BA Bonds constitute valid and binding limited obligations of the Department, payable only out of the Revenues and moneys and securities held, and accounts established, under the Resolution.
2. The Resolution has been duly and lawfully adopted, is a valid resolution of the Department and is binding upon the Department in accordance with the terms of the Resolution.
3. Each of the Series BA Bonds are secured by a first and direct charge and lien upon the Revenues and all moneys and securities held, and accounts established, under the Resolution (except amounts held in any rebate account established under the Resolution), subject only to the provisions of the Resolution permitting the payment or use of such Revenues, moneys, securities and accounts for the purposes, in the manner and upon the terms and conditions set forth in the Resolution. Each of the Series BA Bonds are not secured by any other property or moneys of the Department.
4. Neither the principal of nor the interest on the Series BA Bonds constitutes a debt, liability or obligation of the State of California or, except as expressly provided in the Resolution, of the Department.
5. Interest on the Series BA Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and interest on the Series BA Bonds is exempt from State of California personal income taxes. Interest on the Series BA Bonds is not a specific preference item for purposes of the federal alternative minimum tax. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Series BA Bonds.

Very truly yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

## APPENDIX G

### DTC AND BOOK-ENTRY

The Depository Trust Company, New York, New York (“DTC”) will act as securities depository for the Series BA Bonds. The Series BA 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 Series BA Bond certificate will be issued for each maturity of Series BA Bonds in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity exceeds \$500 million, one certificate will be issued with respect to each \$500 million of principal amount, and an additional certificate will be issued with respect to any remaining principal amount of such maturity.

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, 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 is rated “AA+” by S&P. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com).

Purchases of Series BA Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series BA Bonds on DTC’s records. The ownership interest of each actual purchaser of Series BA Bonds (“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 BA 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 Series BA Bonds, except in the event that use of the book-entry system for the Series BA Bonds is discontinued.

To facilitate subsequent transfers, all Series BA 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 Series BA 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 BA Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Series BA 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 Series BA Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series BA Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series BA Bond documents. For example, Beneficial Owners of Series BA Bonds may wish to ascertain that the nominee holding the Series BA 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 BA Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series BA Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the issuer 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 Series BA Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series BA 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 Department or the State Treasurer, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, its nominee, the Department or the State Treasurer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Department or the State Treasurer, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series BA Bonds at any time by giving reasonable notice to the Department or the State Treasurer. Under such circumstances, in the event that a successor depository is not obtained, Series BA Bonds certificates are required to be printed and delivered.

The Department and the State Treasurer may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In that event, Series BA Bond certificates will be printed and delivered to DTC.

The information preceding this paragraph in this appendix concerning DTC and DTC's book-entry system has been obtained from sources that the Department and the State Treasurer believe to be reliable, but the Department and the State Treasurer take no responsibility for the accuracy thereof.



THE STATE TREASURER, AS LONG AS A BOOK-ENTRY ONLY SYSTEM IS USED FOR THE SERIES BA BONDS, WILL SEND ANY NOTICE OF REDEMPTION OR OTHER NOTICES TO OWNERS ONLY TO DTC. ANY FAILURE OF DTC TO ADVISE ANY PARTICIPANT, OR OF ANY PARTICIPANT TO NOTIFY ANY BENEFICIAL OWNER, OF ANY NOTICE AND ITS CONTENT OR EFFECT WILL NOT AFFECT THE VALIDITY OR SUFFICIENCY OF THE PROCEEDINGS RELATING TO THE REDEMPTION OF THE SERIES BA BONDS CALLED FOR REDEMPTION OR OF ANY OTHER ACTION PREMISED ON SUCH NOTICE.

The Department and the State Treasurer cannot and do not give any assurances that DTC will distribute to Participants, or that Participants or others will distribute to the Beneficial Owners, payments of principal of and interest and premium, if any, on the Bonds paid or any redemption or other notices or that they will do so on a timely basis or will serve and act in the manner described in this Official Statement. Neither the Department nor the State Treasurer is responsible or liable for the failure of DTC or any Direct Participant or Indirect Participant to make any payments or give any notice to a Beneficial Owner with respect to the Series BA Bonds or any error or delay relating thereto.

The foregoing description of the procedures and record keeping with respect to beneficial ownership interests in the Series BA Bonds, payment of principal of and interest and other payments with respect to the Series BA Bonds to Direct Participants, Indirect Participants or Beneficial Owners, confirmation and transfer of beneficial ownership interest in such Bonds and other related transactions by and between DTC, the Direct Participants, the Indirect Participants and the Beneficial Owners is based solely on information provided by DTC. Accordingly, no representations can be made concerning these matters and neither the Direct Participants, the Indirect Participants nor the Beneficial Owners should rely on the foregoing information with respect to such matters but should instead confirm the same with DTC or the Participants, as the case may be.

SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES BA BONDS, AS NOMINEE OF DTC, REFERENCES IN THIS OFFICIAL STATEMENT TO THE HOLDERS OF SUCH SERIES SHALL MEAN CEDE & CO., AS AFORESAID, AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES BA BONDS.

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## **APPENDIX H**

### **WATER SYSTEM PROJECTS**

Water System Projects consist of the portion of certain State Water Project facilities financed or expected to be financed with Bonds. The Water System Projects are described below. In each case, sources other than Bond Proceeds may have been used to pay certain costs of the facility, particularly those costs allocable to purposes other than water conservation and water transportation.

#### **Capital Expenditures for Water System Projects**

The following table summarizes the capital costs financed by Bonds for the Water System Projects described below, and sets forth the capital costs expected to be financed for such projects from the issuance of additional Bonds as of April 10, 2019.

**ESTIMATED CAPITAL FINANCING FROM  
WATER SYSTEM REVENUE BONDS FOR EXISTING WATER SYSTEM PROJECTS\***  
(in Millions)

Water System Project	Capital Expenditures Series A through BA	Estimated Future Capital Expenditures <sup>(1)</sup>	Total Capital Expenditures <sup>(5)</sup>
Power plants:			
Small Hydro Project	\$ 46.6	\$ 0.0	\$ 46.6
Pyramid Hydroelectric Project	74.4	0.0	74.4
Alamo Project	30.4	0.0	30.4
Bottle Rock Facilities <sup>(2)</sup>	80.2	0.0	80.2
South Geysers Project <sup>(3)</sup>	40.9	0.0	40.9
Reid Gardner Project <sup>(4)</sup>	176.2	0.0	176.2
East Branch Enlargement – Phase I	453.0	0.0	453.0
Additional East Branch Improvements	124.1	0.0	124.1
East Branch Enlargement – Phase II	7.9	0.2	8.1
Delta Pumping Plant Completion	73.6	0.0	73.6
Suisun Marsh Environmental Facilities	37.2	0.0	37.2
San Bernardino Tunnel Intake Structure	29.3	0.0	29.3
San Luis Rock Quarry	4.5	0.0	4.5
Castle Rock–Lakeville Transmission Line	6.9	0.0	6.9
Midway-Wheeler Ridge Transmission Line	10.1	0.0	10.1
Kern Water Bank	37.0	0.0	37.0
Vista del Lago Visitor Center	9.0	0.0	9.0
North Bay Aqueduct–Phase II	87.1	0.0	87.1
North Bay Aqueduct Improvements – Terminal Tanks	7.4	6.1 <sup>(6)</sup>	13.5
North Bay Aqueduct Alternate Intake	0.0	545.0	545.0
Project Monitor and Control System	71.5	0.0	71.5
SWP Communications System Replacement <sup>(5)</sup>	36.2	0.9	37.1
Arroyo Pasajero Program	4.9	0.2	5.1
Hyatt Pump-Turbine Refurbishment	17.9	4.6 <sup>(6)</sup>	22.5
Edmonston Pump Replacement <sup>(5)</sup>	24.2	14.9 <sup>(6)</sup>	39.1
Delta Facilities Program	272.8	502.1	774.9
Tehachapi East Afterbay <sup>(5)</sup>	70.7	11.3	82.0
Perris Dam Remediation <sup>(5)</sup>	124.5	92.6	217.1
Thermalito Powerplant Cleanup and Reconstruction <sup>(7)</sup>	238.0	32.7	270.7
Oroville Dam Spillways Response, Recovery and Restoration <sup>(7)</sup>	273.2	262.6	535.8
Oroville Dam Safety Comprehensive Needs Assessment <sup>(7)</sup>	1.9	23.1	25.0
FERC Relicensing – State Water Project <sup>(7)</sup>	25.7	74.3	100.0
Facilities Reconstruction and Improvement Project	566.7	1,381.9	1,948.5
Project Planning Costs	112.8	36.2	149.0
Coastal Branch – Phase II	491.3	0.0	491.3
East Branch Extension – Phase I	126.0	0.0	126.0
East Branch Extension – Phase I Improvements <sup>(5)</sup>	38.6	0.8 <sup>(6)</sup>	39.4
East Branch Extension – Phase II <sup>(5)</sup>	270.5	0.0	270.5
South Bay Aqueduct Enlargement and Improvement <sup>(5)</sup>	271.9	1.7	273.6
<b>Total Water System Projects <sup>(8)</sup></b>	<b>\$4,375.3</b>	<b>\$2,991.1</b>	<b>\$7,366.2</b>

- \* This table has been revised since the Preliminary Official Statement to reflect updated capital cost allocations to various Water System Projects.
- (1) The projections contained in this table have been prepared by the Department's management for management purposes on the basis of certain assumptions, and consistent with certain requirements of the Water Supply Contracts. The projections are the responsibility of the Department. Vavrinek, Trine, Day & Co., LLP has neither examined nor compiled such projections and, accordingly, Vavrinek, Trine, Day & Co., LLP does not express an opinion or provide any other form of assurance with respect thereto. The audit report included in APPENDIX B of this Official Statement relates to the State Water Project's historical financial information. The report does not extend to the projections set forth above and should not be read to do so. These projections were not prepared with a view toward compliance with the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information.
  - (2) Sold by the Department in 2001. (See "WATER SYSTEM PROJECTS – Project Descriptions – *Bottle Rock Facilities*.")
  - (3) Sold by the Department in 2004. (See "WATER SYSTEM PROJECTS – Project Descriptions – *South Geysers Project*.")
  - (4) The Department's ownership interest terminated in 2013. (See "WATER SYSTEM PROJECTS – Project Descriptions – *Reid Gardner Project*.")
  - (5) The original Bond Anticipation Bonds ("BABs") for East Branch Extension – Phase I Improvements and East Branch Extension – Phase II exceeded the projected expenditures. \$44.5 million of the proceeds of the Series AE refunding of the BABs was redistributed from East Branch Extension – Phase I Improvements and East Branch Extension – Phase II to Communications System Replacement, Edmonston Pump Replacement, Tehachapi East Afterbay, Perris Dam Remediation, and South Bay Aqueduct Enlargement.
  - (6) Projects are completed. Amounts are treated as "Estimated Future Capital Expenditures" pending reallocation.
  - (7) These projects are each a project authorized under the Resolution as part of the Facilities Reconstruction and Improvement Project, the Department has decided to show these projects individually due to the estimated aggregate principal amount.
  - (8) Totals may not sum due to rounding.

The Department may issue additional Bonds in amounts substantially greater than the amounts described in this subsection of APPENDIX H to finance capital costs allocated to existing Water System Projects or to Water System Projects defined by supplemental resolutions to be adopted in the future. (See "SECURITY FOR THE BONDS – Outstanding Bonds: Additional Bonds" and "STATE WATER PROJECT WATER SUPPLY – Long-Term Planning Efforts for the Delta – *Bay Delta Conservation Plan/California WaterFix*".)

## Project Descriptions

### *The following Water System Projects have been completed:*

*Small Hydro Project.* The Small Hydro Project consists of two small hydroelectric power plants, the three 11 megawatt units of Mojave Siphon Powerplant and the 3 megawatt Thermalito Diversion Dam Powerplant. The Mojave Siphon Powerplant is located at the downstream end of the Mojave Siphon of the California Aqueduct, at Silverwood Lake, ten miles north of the City of San Bernardino. The Thermalito Diversion Dam Powerplant is located at the left abutment of the Thermalito Diversion Dam on the Feather River one mile north of the City of Oroville.

*Pyramid Hydroelectric Project.* The Pyramid Hydroelectric Project consists of a portion of the first stage of the William E. Warne Powerplant, formerly known as the Pyramid Powerplant, designated by the Department for electric power generation and transmission, and conveyance facilities between the 75 megawatt William E. Warne Powerplant and Quail Lake, including Lower Quail Canal and the first stage of Peace Valley Pipeline. These facilities are on the West Branch of the California Aqueduct in the vicinity of the town of Gorman in Los Angeles County.

*Alamo Project.* The Alamo Project consists of the portion of the 17 megawatt Unit 1 of the Alamo Powerplant located on the East Branch of the California Aqueduct, approximately one mile below the Tehachapi Afterbay.

*Bottle Rock Facilities.* The Bottle Rock Facilities are located in Lake County, California, about 70 miles north of San Francisco. The Bottle Rock Facilities consist of a geothermal power plant with a 55 megawatt turbine-generator unit, associated electrical, mechanical and control facilities, a heat dissipation system, and a 1.1 mile transmission line. The Department suspended operation of and mothballed the power plant in 1990 because of the lack of an adequate geothermal steam supply and sold the power plant in 2001 for \$1.8 million.

*South Geysers Project.* The South Geysers Project is located in Sonoma County, California, about 70 miles north of San Francisco. The South Geysers Project design included a geothermal generating station with a 55 megawatt turbine-generator unit, associated electrical, mechanical and control facilities, a heat dissipation system, and a 1.8-mile transmission line. The Department suspended construction of the South Geysers Project because of the lack of an adequate geothermal steam supply. In 1990, the Department sold the major equipment components for \$5.5 million and in 2004, the Department sold the plant building and the surrounding property for \$755,000.

*Reid Gardner Project.* The Reid Gardner Power Plant (“RGPP”), located near Moapa, Nevada, is operated by NV Energy (“NVE”) and consists of four coal-powered generators- Units 1 through 4. The Reid Gardner Project consisted of the Department’s ownership interest in Unit 4 of the RGPP. Prior to termination of the Department’s ownership interest in Unit 4 in 2013, capital ownership of Unit 4 was shared between the Department and NVE at 67.8 percent and 32.2 percent, respectively. The Department also had a 29.2 percent share of the RGPP facilities necessary for and common to all four units. The Participation Agreement between the Department and NVE terminated in 2013. In October 2013, NVE paid the Department approximately \$47.6 million for the Department’s share of undepreciated capital improvement costs of Unit 4 as required after termination of the Participation Agreement.

The Department anticipates having a continuing obligation for a yet to be determined share of environmental remediation costs related to past soil and groundwater contamination at the site. (See “POWER OPERATIONS OF THE STATE WATER PROJECT – Reid Gardner Termination, Groundwater Contamination Cleanup and Environmental Lawsuit.”)

*East Branch Enlargement – Phase I.* The East Branch of the California Aqueduct transports water from the aqueduct bifurcation downstream of the A. D. Edmonston Pumping Plant located about 10 miles east of the town of Gorman, across the Antelope Valley and the Mojave Desert, through the San Bernardino Mountains and the cities of San Bernardino and Riverside, to Lake Perris located about 14 miles south of Riverside. The existing facilities along the East Branch include 93 miles of canal, 6.7 miles of inverted siphons, Alamo Powerplant Unit 1, Pearblossom Pumping Plant, Silverwood Lake, San Bernardino Tunnel, Devil Canyon Powerplant Units 1 and 2, Santa Ana Valley Pipeline, and Lake Perris. In 1986, Metropolitan Water District of Southern California and many of the other East Branch contractors agreed to have the Department enlarge the East Branch to an ultimate capacity of 3,149 cubic feet per second at the Alamo Powerplant/Cottonwood Chute Bypass and 2,876 cubic feet per second at Pearblossom Pumping Plant. The Department and the Contractors agreed that the enlargement of the East Branch would be done in two phases, each providing approximately half (750 cubic feet per second) of the planned capacity increase based on a 1,500 cubic feet per second enlargement. This work included an increase to the height of the canal lining, additional siphon conduits, additional pumps at the Pearblossom Pumping Plant, portions of Units 2 and 3 at the Mojave Siphon Powerplant, Units 3 and 4 at the Devil Canyon Powerplant. Construction of Phase I was completed in 1996.

*Additional East Branch Improvements.* Several additional improvements to the East Branch were constructed concurrently with Phase I of the enlargement. The improvements were needed to bring the existing East Branch up to its originally intended design capacity and to improve the reliability of the system. The major improvements include a portion of a four-foot increase in the height of the canal lining between the Alamo Powerplant and the Pearblossom Pumping Plant, and the addition of a spare pump and modification of the forebay at the Pearblossom Pumping Plant. Construction of these additional improvements was completed in 1993.

*Delta Pumping Plant Completion.* This project includes the Harvey O. Banks Delta Pumping Plant and the John E. Skinner Delta Fish Protective Facility. Originally the pumping plant was designed for 11 units, but only seven were installed initially. In 1986, the Department signed an agreement with DFW to

mitigate or offset direct fishery losses caused by State Water Project pumping under which the Department provides funds for projects inside and outside of the Delta. With this agreement in place, the Department has completed the Delta pumping plant by installing an additional four pumps. The fish protective facility was also enlarged to accommodate the increased capacity. Installation of the four units and the enlargement of the fish protective facility was completed in 1992.

*Suisun Marsh Environmental Facilities.* The Suisun Marsh Environmental Facilities are designed to protect the quality of water in the Suisun Marsh on the west side of the Delta. These facilities are designed to mitigate the effects of the CVP, the State Water Project, and a portion of other upstream diversion projects. The work to construct these facilities was completed in 1988.

*San Bernardino Tunnel Intake Structure.* A new intake tower was constructed near the southeastern shore of Silverwood Lake to replace the existing tower, which did not meet current seismic standards. Construction was completed in 1997.

*San Luis Rock Quarry.* The Department and the Bureau have acquired 689 acres of property adjacent to San Luis Dam. The property includes a rock quarry as a source of material for repair and maintenance purposes.

*Castle Rock-Lakeville Transmission Line.* Jointly owned with the Pacific Gas and Electric Company (“PG&E”) and two other utilities, the 38-mile Castle-Rock-Lakeville 230 kv transmission line provides transmission from the Geysers geothermal area where the Bottle Rock and South Geysers Projects are located. The Department has sold the South Geysers Project and the Bottle Rock Project. Currently, neither project is operational. (See “WATER SYSTEM PROJECTS – Project Descriptions – *South Geysers Project*” and “– *Bottle Rock Facilities.*”)

*Midway-Wheeler Ridge Transmission Line.* Jointly owned with PG&E, this 608 megawatt, 230 kilovolt transmission line extends 47 miles from Midway Substation to the Wheeler Ridge Substation and serves the Buena Vista, Wind Gap and Wheeler Ridge pumping plants.

*Kern Water Bank.* The Kern Water Bank was the land acquisition phase of the development of a groundwater recharge and extraction facility in Kern County on the alluvial fan of the Kern River. The Department acquired approximately 20,500 acres of land for the Kern Water Bank. Under the Monterey Amendment, the land and related assets of the Kern Fan Element of the Kern Water Bank have been transferred by the Department to Kern County Water Agency, which in turn transferred such land and related assets to a joint powers authority formed by Kern County Water Agency and other local water suppliers. (See “WATER SUPPLY CONTRACT RELATED LITIGATION – Monterey Amendment Litigation” for a description of certain litigation regarding the validity of the Monterey Amendment and the agreement to transfer the land and related assets of the Kern Fan Element of the Kern Water Bank). The Department will continue to charge Contractors under the Water System Revenue Bond amendment the amounts related to the Water System Revenue Bonds issued to finance the Kern Water Bank.

*Vista del Lago Visitor Center.* The Vista del Lago Visitor Center is located on an overlook above Pyramid Lake along Interstate 5 approximately 60 miles north of Los Angeles. The center includes educational exhibits on the importance of water supply and the development, distribution, conservation and treatment of water.

*North Bay Aqueduct – Phase II.* The North Bay Aqueduct – Phase II project completed the construction of the 27 mile North Bay Aqueduct from the Delta to Napa and Solano Counties at the northern edge of the San Francisco Bay. The project consists of 23 miles of pipeline and two pumping plants between

Barker Slough on the Delta and the existing Phase I facilities at Cordelia. The project became operational in 1988.

*North Bay Aqueduct Improvements – Terminal Tanks.* The 7.2 million gallon Napa Turnout Reservoir was constructed by the Department in 1968 to deliver raw water to the Jamieson Canyon Water Treatment Plant and also served the American Canyon Water Treatment Plant. The Department replaced the then existing tank with two new five million gallon tanks in 2010.

*Project Monitor and Control System.* In July 1990, the Department installed a fiber optics communication system. This system replaced the Department's obsolete copper wire system. This system reduced costs and increased the reliability, efficiency and capacity of the communication system. A major element of the fiber optics system was the installation of a fiber optics cable adjacent to the California Aqueduct for both commercial and State Water Project use. In 1994, the Department upgraded the backup computer for the Project Operations Control Center. The Department relocated the Control Center in 1995. In 1997, the Department installed additional electronic control, instrumentation and communication equipment.

*Hyatt Pump-Turbine Refurbishment.* The Hyatt Powerplant is located on the Feather River near the town of Oroville, in Butte County, California. The power plant is located within Oroville Dam. It is an underground facility with three reversible pump-turbine units and three turbine units. This refurbishment work improved unit availability and reliability, and increased efficiencies to the highest extent possible while reducing potential environmental concerns. The major refurbishment work was completed in September 2007 and consisted of replacing the runners, wicket gates, bushings, shaft sleeves, guide bearings, and refurbishing water passages.

*Edmonston Pump Replacement.* The A.D. Edmonston Pumping Plant has 14 pump units used to pump California Aqueduct water over the Tehachapi Mountains into Southern California. The plant was designed with the capacity to convey 2.5 million acre-feet of Annual Table A Amounts (defined below) to Southern California. In recent years, the plant has been pumping near its maximum capacity; therefore, the units' reliability and availability have become extremely critical to the objectives of the State Water Project. The main objectives of the replacement project are to increase pump reliability, availability, and efficiency while reducing maintenance needs. In August 2001, the design was started to replace the four defective pumps. The first pump was completed in June 2007. The installation and testing of the remaining three pumps was completed in 2012.

*Coastal Branch – Phase II.* The Coastal Branch – Phase II consists of approximately 100 miles of pipeline between the existing Phase I terminus in Kern County near Devil's Den and a terminus located approximately 3.2 miles south of the town of Casmalia, California, on Vandenberg Air Force Base, and includes three pumping plants and related facilities and three water storage tanks. Construction was completed in 1997. This Water System Project is currently operated and maintained for the Department by the Central Coast Water Authority.

*East Branch Extension – Phase I.* The East Branch Extension facilities are being constructed in two phases. Phase I consists of new pipelines, three pump stations, a reservoir, and other appurtenant facilities between the existing Foothill Feeder downstream of Devil Canyon Powerplant and the terminus at the Noble Creek Spreading Grounds near the City of Beaumont in Riverside County. The new facilities join existing conveyance facilities constructed by the San Bernardino Valley Municipal Water District and allow the San Geronio Pass Water Agency to receive deliveries of water. Construction of Phase I facilities was completed in 2003.



Reserve pump units were also added to Greenspot, Crafton Hills and Cherry Valley pump stations to provide increased pumping reliability. The preliminary work for installation of these units began in 2005 and the installation was completed in June 2008.

*East Branch Extension – Phase I Improvements.* The East Branch Extension – Phase I Improvements project includes the enlargement of the Crafton Hills Reservoir and construction of the Yucaipa Connector Pipeline. The existing reservoir will be enlarged from 85 acre-feet to approximately 220 acre-feet to provide operational flexibility, system reliability, and a reduction in energy impacts and costs. Enlargement of the reservoir will allow the Department to fill the reservoir during off-peak periods of the day. Construction of the connector pipeline will allow continued deliveries of water in the East Branch Extension while the reservoir is being enlarged and during future outages of the reservoir. Construction of the pipeline and reservoir began in 2010 and was completed in 2014.

*South Bay Aqueduct Rehabilitation.* The South Bay Aqueduct was constructed in the early 1960's. After nearly 30 years of operation, it was in need of numerous repairs and rehabilitation work. It was also necessary to make improvements to the original system to accommodate environmental and operational requirements. The repairs consisted of work items such as replacement of old, deteriorating valves, repairs to pipe linings at numerous locations, complete replacement of the lining of the two steel discharge lines at South Bay Pumping Plant, and repairs to access structures that had been flooded numerous times due to their proximity to existing drainages. The improvements included adding a guard valve at all blow off structures (to allow for future valve repairs/replacements without dewatering the pipeline), adding a second air valve at all high points in the pipelines, constructing access structures at numerous locations where access manholes were buried (prior to environmental considerations related to access), and raising the tops of access structures to prevent future overtopping during high flows in drainages. The project was completed in 2004.

*South Bay Aqueduct Enlargement and Improvement.* The South Bay Aqueduct Enlargement will provide the additional capacity required to meet projected increases in water demand in the service area of Alameda County Flood Control and Water Conservation District, Zone 7. The South Bay Aqueduct Improvement will increase the existing capacity to provide the original design capacity of the South Bay Aqueduct. The South Bay Aqueduct Enlargement and Improvement work is being incorporated into a combined project to minimize overall costs and impacts. Major features include enlargement of the South Bay Pumping Plant; construction of a third discharge line and surge tank; construction of the 500 acre-foot Dyer Reservoir; seismic improvements to surge tanks 1 and 2, and modifications to the canal. Construction on the pumping plant and the discharge line began August 2006 and in 2007, respectively. Construction of Dyer Reservoir, the canal modifications and a 69 kv transmission line from Banks Pumping Plant to South Bay Pumping Plant began in 2010. Overall project work was completed in 2016.

***The following Water System Projects have not yet been completed:***

*Arroyo Pasajero Program.* The Arroyo Pasajero Program consists of facilities and measures designed to protect the California Aqueduct from flood waters, sedimentation, and asbestos contamination carried by ephemeral streams such as the Arroyo Pasajero Creek. Overall project work in the program, which is located near the town of Coalinga in Fresno County, California, was completed in 2018. The only items remaining are the transfer of easements to the Bureau and a replacement power pole for PG&E.

*East Branch Enlargement – Phase II.* The Phase II enlargement, which will increase the capacity of Pearblossom Pumping Plant from 2010 cfs to 2876 cfs, has been indefinitely suspended at the request of the related Water Contractors. The Phase II enlargement consists of canal embankment and concrete lining; constructing additional siphon barrels; adding bays to check structures; adding two pump/motor units and

a discharge line at Pearblossom Pumping Plant; raising overcrossing structures such as bridges, pipelines, and overchutes and extending underdrains.

*North Bay Aqueduct Alternate Intake Project.* The North Bay Aqueduct Alternate Intake Project will include the construction of a new point of diversion along the Sacramento River or its tributaries, a new pumping plant, an inline storage tank, and up to 30 miles of underground pipeline that will connect to the existing North Bay Aqueduct. The estimated capacity of the new facilities is 240 cfs. The purpose for this project is to enhance the quality, reliability and quantity of water deliveries to State Water Project Contractors while reducing impacts to endangered aquatic species. Solano County Water Agency and Napa County Flood Control and Water Conservation District receive water from the North Bay Aqueduct.

Phase I of this project included work by the Department and environmental consultants to develop required State and federal environmental documentation, acquire temporary entry permits and conduct environmental surveys leading to a Notice of Determination (“NOD”) and Record of Decision (“ROD”), to acquire project environmental permits. Phase II of this project is expected to begin once the NOD and ROD are filed and includes acquisition of the necessary land and right of way, required permits, and the design and construction of this project. In 2018, Phase I was suspended at the request of the Solano County Water Agency. It is not known when the project will be continued.

*SWP Communications System Replacement.* In 2004, the Department began replacing the existing communications system for the State Water Project. The new communications system equipment will be installed at the various area control centers, plants, and check structures along the aqueduct and at other various operation, administration and headquarters facilities. Leased back-up facilities will also be upgraded. This project is anticipated to be completed by the end of 2019.

*Delta Facilities Program.* The Delta Facilities Program consists of projects and measures in the Sacramento-San Joaquin Delta area, and in the vicinity of rivers and tributaries to rivers that flow into the Sacramento-San Joaquin Delta, that are designed to (1) increase water supply by increasing the efficiency of water transfer through the Delta, (2) improve water quality, and (3) reduce or mitigate for fish losses caused by pumping. The projects and measures include dredging, channel improvements, flow control structures, seismic studies and environmental mitigation measures.

*Tehachapi East Afterbay.* The Tehachapi East Afterbay Project (“TEA”) provides additional afterbay storage for the Valley String Pumping Plants (Buena Vista, Teerink, Chrisman, Edmonston). The previous Tehachapi Afterbay (Pool 42) consisted of the canal section from Porter Tunnel, which bifurcates to the West Branch to Oso Pumping Plant and to the East Branch to Alamo Powerplant and Cottonwood Chutes. The TEA located adjacent to the existing Tehachapi Afterbay, provides storage accessible to both the East Branch and to a lesser extent, the West Branch. The additional storage provided by the TEA reduces power costs by shifting on-peak power consumption to off-peak, increasing ancillary services capability, and providing other benefits of increased operational flexibility. Operation of the TEA began in 2006 and construction was completed in 2007. The original Antelope Valley – East Kern Water Agency turnout was removed during construction and the replacement turnout was completed in 2014. The construction of the TEA required a Habitat Conservation Plan to be completed as part of the integration. Completion of the mitigation components is anticipated by the end of 2019.

*Perris Dam Remediation Program.* Perris Dam Remediation Program contains three main project components: dam foundation remediation, outlet tower retrofit/replacement, and an emergency release conveyance facility. Each project component requires examining numerous operational and remedial alternatives, cost analyses, scheduling, cost estimating, selecting the preferred alternative, required environmental permitting and CEQA documentation, preliminary to the final design, construction, and program closeout. This program is required due to a 2005 Department study that concluded that roughly

2,300-feet of the left reach of Perris Dam’s foundation was potentially liquefiable when subjected to a maximum credible earthquake. In late 2005, the Department implemented a reservoir restriction lowering the water level in the reservoir by about 25 feet which reduced the amount of water stored in the reservoir to about 75,000 acre-feet. This restriction will remain in place as the Department evaluates alternatives for repair of the dam. An initial 2006 Department study concluded that the latest seismic loading would also potentially subject the outlet tower to shear failure. Subsequent non-linear analyses performed by a Department consultant, and supported by an independent Division of Safety of Dams’ study, concluded that the tower will indeed sustain damage, but will maintain a level of operational reliability following the current maximum credible earthquake loading; therefore, the scope of the outlet tower retrofit/replacement project is reduced to a tower and outlet works retrofit. Lastly, the construction of thousands of new homes immediately downstream of the Perris Dam requires facility improvements to channel an emergency reservoir release to the Perris Valley Drain in the event of a potential catastrophic dam failure. In December 2006, the Department completed a study identifying various repair options, began additional geologic exploration along the base of Perris Dam and started preliminary design. The dam foundation remediation has been completed with only a few items remaining. The Department announced the completion of the first phase in April 2018. The final design for the tower retrofit project began in fall of 2017, with construction expected to be completed by the end of 2021. The EIR for the Emergency Release Facility (ERF) was released in the fall of 2017. Design for the ERF began in 2018, with construction expected to be completed in 2023. Water stored in Lake Perris is used primarily by Metropolitan. Accordingly, Metropolitan is the majority contributor toward the cost of these project components under its State Water Contract.

*Oroville Dam Spillways Response, Recovery and Restoration Project.* Costs associated with this project are expected to be substantial and are broken into three distinct phases. Phase 1 was the immediate response phase that included the emergency protective measures and debris removal. Phase 2 was the recovery and restoration phase that included restoring the control and emergency spillways to a condition capable of operating through the 2017-2018 flood season. Phase 3 completes the repair of both the control and emergency spillways. The emergency spillway work includes the construction of the roller compacted concrete splash pad and buttress. Phase 1 and phase 2 are completed. Major construction work for phase 3 is anticipated to be complete in 2019, with site rehabilitation and vegetation plantings expected to extend through 2021.

*Oroville Dam Safety Comprehensive Needs Assessment.* A Comprehensive Needs Assessment “(CNA)” of the Oroville Dam facilities will be completed to identify measures to enhance, as necessary, the safety and reliability of Oroville Dam and the appurtenant structures. The CNA will evaluate the needs through completion of the following six task projects (Tasks 1 through 6):

- Task 1 - Evaluate Measures to Enhance Spillway Reliability and Resiliency
- Task 2 - Operations Needs Assessment to Support Development of Measures for Reservoir Flow Enhancements
- Task 3 - Flood Control Outlet (FCO) Enhanced Reliability
- Task 4 - Evaluate Measures for Low-level Outlet Enhancement
- Task 5 - Oroville Dam Embankment Reliability and Improvements
- Task 6 - Instrumentation and Monitoring for the Oroville Dam Complex

A final report with recommendations for future next steps and projects for each of the six task projects is scheduled to be completed by May 31, 2020. This report will combine and prioritize the recommendations at a project by project level.

*Facilities Reconstruction and Improvement Project.* The Facilities Reconstruction and Improvement Project consists of reconstructions, additions and betterments to water conservation or transportation facilities existing as of January 1, 1987, and to all other facilities described in the Water System Revenue Bond Amendment of the Water Supply Contracts. (See “THE WATER SUPPLY CONTRACTS – Amendments Providing Certain Revenues to Pay Water System Revenue Bonds.”)

*Thermalito Powerplant Clean-up and Reconstruction.* The project includes stabilizing the plant structure, providing interim power back into the plant, returning essential plant systems back into service, clean-up of the plant, and decontamination of the plant. The project also includes completing an assessment of plant systems to determine equipment disposition, developing a strategic recovery plan with associated costs, and completing a value engineering study to evaluate alternatives associated with the partial or total rebuild of the Thermalito Powerplant. The preceding described work has all been completed under the Clean-up and Recovery phases. The mechanical refurbishment and reassembly of the generating units continues with the refurbishment and reassembly of Units 2 and 4 is completed, and the refurbishment and reassembly of and reassembly of Unit 1 is at approximately 85 percent, and the refurbishment and assembly of Unit 3 is at 75 percent. The design of the new fire protection and life safety improvements has been completed, as well as the design for the new electrical, protection, controls, and communication systems. The construction contracts for these projects were executed in February and April of 2017. The Department expects the Thermalito Powerplant to return to full service by August 2019. This event has not had, and will not have, a material adverse impact on the Department’s ability to operate and maintain the State Water Project. The costs for rebuilding the Thermalito Powerplant will be financed with Bonds. The second phase of this project is to restore and modernize the facility and has an anticipated completion date of 2019. (See “POWER OPERATIONS OF THE STATE WATER PROJECT – Thermalito Powerplant Fire.”)

*FERC Relicensing - State Water Project*

(a) Oroville Facilities

The Oroville Facilities are operated by the Department under a license issued by FERC. The project’s original license was for 50 years and it expired on January 31, 2007. Since the license expired, the Department has been operating the facilities under an annual license while it works to secure a long term license. The Department anticipates it will receive a new license having a term of 30 to 50 years. (See “POWER OPERATIONS OF THE STATE WATER PROJECT –Oroville Facilities Relicensing Program.”)

(b) South State Water Project Hydropower

Hydroelectric facilities along the East Branch and West Branch of the State Water Project are operated under a separate FERC license (Project No. 2426). The term of the original license was 50 years and the license will expire on January 31, 2022. The expenses related to the initial license were considered part of the original facilities development costs.

The Department has initiated efforts to relicense the facilities and will be seeking new licenses having 30 to 50 year terms. Castaic Powerplant, located at the south end of the West Branch, is owned and operated by the Los Angeles Department of Water and Power (“LADWP”) under a cooperative development agreement with the Department. As such, the Department and LADWP are joint-licensees for this facility under the existing license. Energy generated by this facility, and certain operations and maintenance costs, are shared by the Department and LADWP in accordance with the terms of the cooperative agreement.

The Department and LADWP have executed a relicensing agreement that defines how the cost of relicensing will be divided. The new license will also include new conditions and mitigation measures that the Department and LADWP will be required to comply with, in order to maintain the license in good standing. The magnitude of these mitigation costs will not be known until after the application is filed with FERC in 2020.

*Project Planning Costs.* The Department will be reimbursed for the costs of study or planning of potential Water System Projects. Among the facilities that have been or may be studied are the Coastal Branch of the California Aqueduct; the Arroyo Pasajero Program; the Delta Facilities Program; and additional conservation facilities. When the Department determines the actual facility to be acquired and constructed in any given case and that such facility will be financed with Bonds, such facility is designated as a Water System Project.

*East Branch Extension – Phase II.* Current East Branch Extension Phase I pumping capacity is limited to less than one-half of its total pumping capacity due to the size of the San Bernardino Valley Municipal Water District pipeline. East Branch Extension Phase II will allow 100 percent pumping capacity and will consist of approximately six miles of a new Mentone pipeline, a new Citrus pump station, a new Citrus Reservoir, an enlargement of the Crafton Hills Pump Station, and an additional pump unit for the Cherry Valley Pump Station. East Branch Extension Phase II reconnaissance level planning began in 2002. Work on the EIR and preliminary design started in 2006, final design began in 2008 and construction began in 2012. Completion of the Phase II facilities is anticipated in 2019.

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# State Water Project Facilities

## PUMPING PLANTS

Name	Number of Units	Normal Static Head (feet) (a)	Total Flow at Design Head (cfs)	Total Motor Rating (hp)
Hyatt.....	3	465-694	5,610	519,000
Thermalito.....	3	85-102	9,120	120,000
North Bay Aqueduct.....				
Barker Slough.....	9	95-120	228	4,800
Cordelia.....	11	110-376	138	
South Bay Aqueduct.....				
South Bay.....	9	543-563	510	27,750
Del Valle.....	4	0-38	120	1,000
California Aqueduct.....				
Banks.....	11	236-252	10,670	333,000
Gianelli (SWP SHARE).....	8	99-327	11,000	504,000
Dos Amigos (SWP SHARE).....	6	107-125	15,450	240,000
Buena Vista.....	10 (b)	205	5,405	144,500
Teerink.....	9 (b)	233	5,445	150,000
Chrisman.....	9 (b)	518	4,995	330,000
Edmonston.....	14 (b)	1,926	4,480	1,120,000
Pearblossom.....	9	540	2,575	203,200
West Branch.....				
Oso.....	8	231	3,252	93,800
Coastal Branch.....				
Las Perillas.....	6	55	461	4,050
Badger Hill.....	6	151	454	11,750
Devil's Den.....	6 (b)	521	134	10,500
Bluestone.....	6 (b)	484	134	10,500
Polonio Pass.....	6 (b)	533	134	10,500
East Branch Extension.....				
Greenspot.....	4	382	70	3,900
Crafton Hills.....	3	613	60	4,000
Cherry Valley.....	2	75	32	300

(a) Amount is for plant in pumping mode.  
(b) Includes spare unit.

## POWERPLANTS

Name	Number of Units	Normal Static Head (feet) (a)	Total Flow at Design Head (cfs)	Net Dependable Capacity (MW)	Nameplate Capacity (MW)
Hyatt.....	6	435-694	16,950	645	645
Thermalito.....	4	85-102	17,400	114	114
Thermalito Diversion Dam.....	1	63-77	615	3	3
Gianelli.....					
Total.....	8	99-327	16,960	363	424
SWP Share.....				190	222
Alamo.....	1	115-141	1,740	15	17
Mojave Siphon.....	3	81-136	2,880	29	30
Devil Canyon.....	4	1,406	2,940	235	276
Warne.....	2	719-739	1,564	67	74
Castaic.....					
Total.....	7	900-1,050	20,820	1,128	1,254
SWP Share.....				192	214

(a) Amount is for plant in generating mode.

## PRIMARY RESERVOIRS and DAMS

Name	Reservoirs (a)		Dams	
	Capacity (acre-feet)	Surface Area (acres)	Structural Height (feet)	Crest Length (feet)
Antelope Lake	22,564	930	120	1,320
Frenchman Lake	55,475	1,580	139	720
Lake Davis/ Grizzly Valley Dam	84,371	4,030	132	800
Lake Oroville	3,537,577	15,805	770	6,920
Thermalito Forebay	11,768	630	91	15,900
Thermalito Afterbay	57,042	4,300	39	42,000
Thermalito Diversion Pool	13,353	320	143	1,300
Clifton Court Forebay	31,258	2,180	30	36,500
Bethany	5,070	180	121	3,940
Lake Del Valle	77,100	1,060	235	880
San Luis Reservoir/Sisk Dam SWP Storage (b)	2,089,780 1,062,183	13,000	382	18,600
O'Neill Forebay SWP Storage (c)	56,500 29,500	2,250	87	14,300
Los Banos	34,562	620	167	1,370
Little Panoche	5,580	190	152	1,440
Quail Lake (d)	7,580	290		
Pyramid Lake	171,200	1,300	400	1,090
Elderberry Forebay	32,480	500	200	1,990
Castaic Lake	323,700	2,240	425	4,900
Silverwood Lake/ Cedar Springs Dam	74,970	995	249	2,230
Lake Perris	131,450	2,320	128	11,600
Crafton Hills (e)			95	500

(a) Reservoir data represent design elevation, generally spillway crest level. In most cases, maximum operational levels are set 1 or 2 feet lower.  
(b) SWP share of total storage of 2,027,835 acre-feet.  
(c) SWP share of total storage of 56,433 acre-feet.  
(d) Primary reservoir only.  
(e) Primary dam only.

## AQUEDUCTS

Name	Length (miles)
Grizzly Valley Pipeline	6.0
Thermalito Power Canal and Tail Channel	3.4
North Bay Aqueduct	27.6
South Bay Aqueduct	44.6
<b>Subtotal</b>	<b>81.6</b>
Edmund G. Brown California Aqueduct (main line):	
Delta to O'Neill Forebay	66.7
O'Neill Forebay to Kettleman City (joint use)	105.7
Kettleman City to Edmonston Pumping Plant	121.0
Edmonston Pumping Plant to Tehachapi Afterbay	10.0
Tehachapi Afterbay to Lake Perris	140.0
<b>Subtotal, main line</b>	<b>443.4</b>
California Aqueduct (branches):	
West Branch	31.9
Coastal Branch	115.5
East Branch Extension	
Devil Canyon Powerplant to Greenspot	16.2
Greenspot to Noble Creek Terminus	16.4
<b>Subtotal, branches</b>	<b>180.0</b>
<b>Total</b>	<b>705.0</b>

# State Water Project Facilities

## WATER SUPPLY CONTRACTORS

- Plumas Co. Flood Control & Water Conservation District
- County of Butte
- City of Yuba City
- Napa Co. Flood Control & Water Conservation District
- Solano Co. Water Agency
- Alameda Co. Flood Control & Water Conservation District Zone 7
- Alameda Co. Water District
- Santa Clara Valley Water District
- Oak Flat Water District
- Dudley Ridge Water District
- County of Kings
- Empire West Side Irrigation District
- Tulare Lake Basin Water Storage District
- San Luis Obispo Co. Flood Control & Water Conservation District
- Kern Co. Water Agency
- Santa Barbara Co. Flood Control & Water Conservation District
- Ventura Co. Watershed Protection District
- Castaic Lake Water Agency
- Antelope Valley - East Kern Water Agency
- Palmdale Water District
- Little Rock Creek Irrigation District
- Mojave Water Agency
- Crestline - Lake Arrowhead Water Agency
- San Bernardino Valley Municipal Water District
- San Gabriel Valley Municipal Water District
- The Metropolitan Water District of Southern California
- San Geronio Pass Water Agency
- Desert Water Agency
- Coachella Valley Water District



### AQUEDUCT

- A** Edmund G. Brown California Aqueduct
- B** North Bay Aqueduct
- C** South Bay Aqueduct
- D** Coastal Branch
- E** West Branch
- F** East Branch
- G** East Branch Extension
- H** Locally Owned

indicates SWP/CVP joint use





