



EAST BAY MUNICIPAL UTILITY DISTRICT

SUMMARY FINANCIAL INFORMATION STATEMENT

FISCAL YEAR 2011

The date of this information statement is as of June 30, 2011

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# EAST BAY MUNICIPAL UTILITY DISTRICT

## SUMMARY FINANCIAL INFORMATION STATEMENT

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The purpose of this document is to provide information about the East Bay Municipal Utility District (the "District"). The information presented below has been collected by the District from sources believed to be accurate. The District, however, makes no assurances about the accuracy or reliability of this information. The District does not intend that the enclosed information be relied on as a specific offering of information in connection with any issuance of bonds by the District.

Investors may request further documentation about the District by requesting a copy of their most recent official statement from the Municipal Securities Rulemaking Board or a National Municipal Securities Information Repository. Requests may also be directed to:

Treasury Manager  
East Bay Municipal Utility District  
375 Eleventh Street  
Oakland, California 94607-4240  
Phone: 510-287-0231  
Fax: 510-287-0293(fax)

This information statement provides information about the East Bay Municipal Utility District. Generally, this document relates to debt issued under three security structures:

- **General Obligations Bonds**
- **Water System Revenue Bonds**
- **Wastewater System Revenue Bonds**

As of September 15, 2010, the District covenanted and agreed that it will not issue any Senior Water and Wastewater Bonds pursuant to the Senior Water Bond Resolution and the Senior Wastewater Bond Resolution respectively. Bonds that were once designated as Subordinated Water Revenue Bonds and Subordinated Wastewater Revenue Bonds are now referred to as the Water Revenue Bonds and Wastewater Revenue Bonds respectively. There are no outstanding bonds under the Senior Indenture.

**The District reserves the right to discontinue, amend or withdraw this information at anytime. This document is not intended to create disclosure requirements or a legal obligation to provide any or all items of information.**

## Bonds Outstanding

The following tables summarize the District's Water and Wastewater System outstanding long-term bonds. All information is presented as of July 1, 2011.

**Table 1: Summary of Bonds Outstanding\***  
**Water System**

Series	Year Issued	Final Maturity	Par Amount Outstanding
<b>WATER SYSTEM REVENUE BONDS</b>			
Series 2001	2001	6/1/2012	\$2,880,000
Series 2002	2002	6/1/2025	170,320,000
Series 2003	2003	6/1/2021	60,820,000
Series 2005A	2005	6/1/2035	300,000,000
Series 2007A	2007	6/1/2037	450,000,000
Series 2007B	2007	6/1/2019	45,605,000
Series 2008A	2008	6/1/2038	317,125,000
Series 2008B	2008	6/1/2035	58,800,000
Series 2009A	2009	6/1/2026	316,045,000
Series 2010A	2010	6/1/2031	192,830,000
Series 2010B	2010	6/1/2040	400,000,000
<b>TOTAL WATER SYSTEM BONDS OUTSTANDING</b>			<b>\$2,314,425,000</b>

## Wastewater System

Series	Year Issued	Final Maturity	Par Amount Outstanding
<b>GENERAL OBLIGATIONS BONDS</b>			
Series F	2003	4/1/2018	\$24,545,000
<b>WASTEWATER SYSTEM REVENUE BONDS</b>			
Series 2007A	2007	6/1/2037	80,630,000
Series 2007B	2007	6/1/2024	40,425,000
Series 2008C	2008	6/1/2027	56,440,000
Series 2010A	2010	6/1/2029	57,935,000
Series 2010B	2010	6/1/2040	150,000,000
Series 2011A	2011	6/1/2038	64,250,000
<b>TOTAL WASTEWATER SYSTEM BONDS OUTSTANDING</b>			<b>\$474,225,000</b>

\* Debt outstanding does not include State low interest loans, commercial paper or outstanding refunded but not yet called debt. As of September 15, 2010, the District covenanted and agreed that it will not issue any Senior Water and Wastewater Bonds pursuant to the Senior Water Bond Resolution and the Senior Wastewater Bond Resolution respectively.

## Extendable Commercial Paper Program

The District has authorized a short-term extendable commercial paper borrowing program of up to the lesser of either (1) the annual average of the total revenue for the three preceding years or, (2) 25% of the District's outstanding bonds. Under this program, the Water System or the Wastewater System may issue commercial paper and bank notes at prevailing interest rates for periods of not more than 120 days from the date of issuance with the option by the District to extend the maturity for another 150 days. The program is not supported by any liquidity or revolving credit agreement.

The Water System and the Wastewater System Commercial Paper Notes are payable from and secured by a pledge of the respective System's revenues on a basis subordinate to outstanding senior and subordinate lien bonds.

On June 30, 2011, \$327,900,000 of commercial paper notes was outstanding under the program, with an average weighted remaining life to maturity of 56 days. The proceeds from the issuance of commercial paper are restricted for construction purposes only. There were no unused proceeds on June 30, 2011.

## Investment Policy

The District's investment policy can be summarized as follows:

Funds of the District are invested in accordance with the Government Code of the State of California, the Municipal Utility District Act and the District's Investment Policy. Investments shall be in securities with a range of maturities to provide a high rate of return on investments while providing adequate security and liquidity to pay demands when due. Criteria for selecting investments, in order of priority, are:

1. *Safety* - The District's ability to recover principal and interest. Investments shall be made that will seek to insure the preservation of principal and interest and minimize the risk to the greatest extent possible. It is the primary duty of the Treasurer to protect, preserve and maintain cash on behalf of the District.
2. *Liquidity* - The District's ability to have cash available when needed to support expenditure cycles and budgetary objectives. The average maturity of the portfolio shall not exceed 720 days in order to balance liquidity and yields. No single investment can have a maturity of more than 5 years.
3. *Yield* - Ability to provide maximum return on the District's investments while conforming to the safety and liquidity criteria above.
4. *Diversity* - Ability to maintain a broad investment portfolio for the District. In order to accomplish this, no more than 40% of the total cash portfolio shall be invested in any one type of security. Other than federally backed securities, no more than 10% of the total cash portfolio will be invested in any one investment issue, and no more than 10% with any one issuer.

## Investment Options

The following are investment options for the District under the Government Code of the State of California.

1. US Treasury Notes, Bonds and Bills
2. The State of California Local Agency Investment Fund
3. Obligations issued by Federal Agencies
4. Banker's Acceptances
5. Commercial Paper
6. Medium Term Corporate Notes
7. Collateralized Repurchase Agreements
8. Certificates of Time Deposit
9. Negotiable Certificates of Deposit
10. Money Market Mutual Funds
11. California Municipal Bonds

The District does not enter into reverse repurchase agreements or otherwise borrow for purposes of investing. The District does not invest in highly volatile derivatives and other such securities. Pursuant to the District's investment policy, all securities purchased from dealers and brokers are held in safekeeping by the trust department of a state or national bank on a payment vs. delivery basis. Collateral is delivered or assigned under a tri-party agreement for all repurchase agreements. Trade confirmations are reviewed for conformity to the original transaction by an individual other than the one who originated the transaction.

## **EAST BAY MUNICIPAL UTILITY DISTRICT**

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Transactions are ratified by the General Manager and reported quarterly to the Finance/Administration Committee of the Board of Directors.

## District Population

The District includes a large part of the urban and suburban development in Alameda and Contra Costa Counties. The District is made up of twenty cities and fifteen unincorporated communities located on the eastern shore of San Francisco Bay from the Carquinez Strait on the north to San Lorenzo on the south. To the east, the District extends beyond the Oakland-Berkeley hills to Walnut Creek, and from Walnut Creek south through the San Ramon Valley. The six largest cities in the District are Oakland, Alameda, Berkeley, and San Leandro within Alameda County, and Richmond and Walnut Creek within Contra Costa County. Below is a chart showing population trends for these cities, counties and the State of California.

**Table 2: Population Trends <sup>(1)</sup>**

	2006	2007	2008	2009	2010	2011
<b>SIX LARGEST DISTRICT CITIES</b>						
<b>Alameda</b>	74,581	74,405	75,254	74,015	73,835	74,081
<b>Berkeley</b>	104,534	105,385	106,347	106,697	112,621	114,046
<b>Oakland</b>	412,318	411,755	415,492	419,095	390,757	392,932
<b>San Leandro</b>	81,442	81,074	81,466	81,851	84,977	85,490
<b>Richmond</b>	103,012	103,468	103,828	103,577	103,661	104,220
<b>Walnut Creek</b>	66,501	66,111	65,384	65,306	64,140	64,707
<b>TOTAL SIX CITIES</b>	842,388	842,198	847,771	850,541	829,991	835,476
<b>COUNTIES</b>						
<b>Alameda County</b>	1,507,500	1,509,981	1,537,719	1,557,749	1,509,240	1,521,157
<b>Contra Costa County</b>	1,020,898	1,030,732	1,048,242	1,061,325	1,047,948	1,056,064
<b>Total Counties</b>	2,528,398	2,540,713	2,540,713	2,619,074	2,557,188	2,577,221
<b>STATE</b>						
<b>California</b>	36,271,000	36,810,000	37,172,000	37,883,992	37,223,900	37,510,766

<sup>(1)</sup> As of January 1 of each year.

Source: State of California Demographic Research Unit

## Taxable Property Within The District

The table below summarizes the assessed valuation of taxable property in the District and tax collection records.

**Table 3**  
**Water System Assessed Valuation of Taxable Property**

Fiscal Year	2007	2008	2009	2010	2011
<b>ASSESSED VALUATION FOR TAXATION PURPOSES (\$000s) <sup>(1)</sup></b>					
<b>Alameda County</b>	\$71,515,447	\$74,483,103	\$73,414,082	\$74,215,781	\$74,939,011
<b>Contra Costa County</b>	74,565,486	76,572,779	73,200,404	72,259,673	72,525,239
<b>TOTAL</b>	\$146,080,933	\$151,055,882	\$146,614,486	\$146,475,454	\$147,484,250
Fiscal Year	2007	2008	2009	2010	2011
<b>COUNTY 1% ALLOCATED PROPERTY TAX REVENUES <sup>(2)</sup></b>					
<b>Alameda County</b>	\$10,621,998	\$11,506,460	\$11,862,545	\$11,820,322	\$11,404,014
<b>Contra Costa County</b>	11,071,283	11,224,591	11,554,756	11,068,795	11,831,553
<b>TOTAL</b>	\$21,693,281	\$22,731,052	\$23,417,301	\$22,889,117	\$22,235,567

## Wastewater System Assessed Valuation of Taxable Property

Fiscal Year	2007	2008	2009	2010	2011
<b>ASSESSED VALUATION FOR TAXATION PURPOSES (\$000s) <sup>(1)</sup></b>					
<b>Alameda County</b>	\$53,954,276	\$56,427,675	\$56,060,622	\$55,783,269	\$56,522,667
<b>Contra Costa County</b>	3,696,909	3,808,177	3,732,976	3,866,784	3,840,365
<b>TOTAL</b>	\$57,651,185	\$60,235,852	\$59,793,598	\$59,650,053	\$60,363,032
Fiscal Year	2007	2008	2009	2010	2011
<b>COUNTY 1% ALLOCATED PROPERTY TAX REVENUES <sup>(2)</sup></b>					
<b>Alameda County</b>	\$2,659,210	\$2,997,860	\$3,159,144	\$3,143,225	\$3,002,026
<b>Contra Costa County</b>	285,411	287,370	299,701	292,357	297,289
<b>TOTAL</b>	\$2,944,621	\$3,285,230	\$3,458,845	\$3,435,582	\$3,299,315
<b>G. O. BOND AD VALOREM TAX LEVY</b>					
<b>Alameda County</b>	\$3,578,801	\$3,660,598	\$3,674,685	\$3,797,236	\$3,819,476
<b>Contra Costa County</b>	249,836	244,946	244,467	239,170	260,298
<b>TOTAL</b>	\$3,828,637	\$3,905,543	\$3,919,152	\$4,036,406	\$4,079,774
Fiscal Year	2007	2008	2009	2010	2011
<b>TOTAL PROPERTY TAX/AD VALOREM TAX REVENUES</b>					
<b>Alameda County</b>	\$6,238,011	\$6,658,458	\$6,833,829	\$6,941,851	\$6,821,501
<b>Contra Costa County</b>	535,247	532,316	544,168	530,137	557,588
<b>TOTAL</b>	\$6,773,258	\$7,190,774	\$7,377,997	\$7,471,988	\$7,379,089

(1) Net assessed valuations, plus homeowners' exemptions, the taxes on which are paid by the State. All valuations are stated on a 100% of full cash value basis.

(2) Net basis excluding all exemptions. Levies reflect the tax reductions effected by the adoption of Article XIII A of the State Constitution, the "Jarvis-Gann Initiative."

## Water System Financial Projections

The following table summarizes the District's Water System projected revenues, expenses, and debt service coverage requirements adopted as part of the "FY2012 and FY2013 Biennial Budget" for fiscal years ending June 30, 2012-2016.

**Table 4: Water System Projections**

<b>Fiscal Year Ending June 30</b>	<b>212</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Revenue <sup>(1)</sup></b>	\$423.2	\$447.2	\$469.6	\$492.6	\$516.4
<b>Operations &amp; Maintenance Costs <sup>(2)</sup></b>	192.9	203.1	215.0	222.2	229.4
<b>NET REVENUES</b>	\$230.3	\$244.1	\$254.6	\$270.4	\$287.0
<b>Outstanding Water Revenue Bonds/Parity Debt</b>	\$143.7	\$152.1	\$152.2	\$152.4	\$152.4
<b>Future Bond Issues</b>	-	-	-	2.1	5.1
<b>TOTAL REVENUE BOND DEBT SERVICE</b>	\$143.7	\$152.1	\$152.2	\$154.5	\$157.5
<b>Debt Service Coverage Ratio</b>	1.60	1.60	1.67	1.75	1.82

<sup>(1)</sup> Revenues exclude grant receipts, taxes, and developer contributions but includes Build America Bonds subsidy of \$8.2 million each fiscal year.

<sup>(2)</sup> Operations and Maintenance Costs exclude those expenses paid from ad valorem taxes. Under current District policy, taxes are used to pay for operations allocable to maintenance of fire protection capacity.

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The following table shows Water System net revenues and debt service coverage ratios for the past five years.

**Table 5: Water System Debt Service Coverage**

Fiscal Year Ending June 30	2007	2008	2009	2010	2011
<b>NET REVENUES (\$Millions)</b>					
<b>Water Revenue</b>	\$260.7	\$270.5	\$287.3	\$271.0	\$283.6
<b>Power Revenue</b>	4.2	3.1	4.3	6.2	8.1
<b>Interest</b>	21.8	40.4	24.5	9.7	5.7
<b>SCC Revenue</b>	19.7	19.7	16.1	40.5	46.2
<b>Seismic Rate Surcharge</b>	14.3	14.9	15.5	16.7	18.1
<b>Other Revenue</b>	<u>7.8</u>	<u>29.4</u>	<u>6.1</u>	<u>7.7</u>	<u>13.4</u>
<b>Total Revenue</b>	\$327.0	\$378.2	\$353.8	\$351.8	\$375.1
<b>Less: Operations and Maintenance Expense</b>	\$141.1	\$154.9	\$171.3	\$156.1	\$159.5
<b>Deposits Into Rate Stabilization Fund</b>	0	0	0	0	0
<b>NET REVENUES</b>	\$185.9	\$223.3	\$182.5	\$195.7	\$215.6
<b>DEBT SERVICE (\$Millions)</b>					
<b>Total Revenue Bonds/Parity Loans Debt Service</b>	\$98.6	\$119.5	\$119.0	\$125.2	\$141.6
<b>Debt Service Coverage Ratio</b>	1.89	1.87	1.53	1.56	1.52

## Water System Customers

The following table lists Water System revenues, number of accounts and annual consumption for fiscal year ending June 30, 2011.

**Table 6: Revenues from Water Sales**

Type of Customer	Gross Revenues (\$000s)	Percent of Revenues	Number of Accounts <sup>(1)</sup>	Percent of Accounts	Annual Consumption (000's of Ccf) <sup>(2)</sup>	Percent of Consumption
Residential	\$173,758	66%	351,972	92%	45,896	61%
Commercial	61,676	23%	27,629	7%	18,738	25%
Industrial	19,677	7%	1,187	<1%	6,879	9%
Other	11,500	4%	2,278	<1%	3,537	5%
<b>TOTAL</b>	<b>\$266,611</b>	<b>100%</b>	<b>383,066</b>	<b>100%</b>	<b>75,050</b>	<b>100%</b>

(1) Connections include inactive services and master metered accounts.

(2) Metered water consumption shown here is water delivered and billed to customers. Not included in the metered water consumption is water lost through leaks in the transmission system, used in the treatment process, evaporation, fighting fires and other miscellaneous causes, which approximates 10% of metered consumption.

The following table shows Water System number of accounts, total consumption, average daily consumption, peak demand, maximum treatment capacity, average residential charge and water rate increase for the following fiscal years ending June 30.

**Table 7: Water System Accounts**

Fiscal Year Ending June 30	2007	2008	2009	2010	2011
<b>Number of Accounts</b>	381,999	381,903	381,728	380,682	383,066
<b>Water Production (millions of gallons)</b>	76,932	75,059	66,200	63,588	63,421
<b>Average Daily Production (MGD)</b>	211	205	181	174	174
<b>Peak Demand (MGD)</b>	329	288	262	253	260
<b>Maximum Treatment Capacity (MGD)</b>	500	500	500	500	500
<b>Average Annual Residential Charge (1,100 cubic feet/month)</b>	\$360	\$378	\$396	\$431	\$464
<b>Water Rate Increase</b>	3.75%	5.00%	5.00%	7.50%	7.50%

## Water System Rates and Charges

The tables below summarize the rates and charges for the Water System for the fiscal year beginning July 1, 2011.

**Table 8: Water System Rates and Charges**

Consumption Charge		Meter Charge	
Rate Class	Price Per CCF Unit	Meter Size	Per Month
<b>Single Family</b>		<b>5/8-inch and 3/4-inch</b>	\$11.54
<b>First Tier</b> (0 – 172 gallons per day)	\$2.28	<b>1-inch</b>	\$18.55
<b>Second Tier</b> (173-393 gallons per day)	\$2.83	<b>1-1/2 inch</b>	\$29.91
<b>Third Tier</b> (greater than 393 gallons per day)	\$3.47	<b>2-inch</b>	\$43.69
<b>Multi Family</b>	\$2.89	<b>Over 2-inch</b>	Various
<b>Other</b>	\$3.11		

On August 1, 2008, the District implemented a drought surcharge of 10% on its water rates in order to recover decreased revenues due to a declared drought emergency. Customers were also asked to reduce their consumption by 15%. These drought rates were rescinded by the District beginning July 1, 2009 as it was determined that there will be enough water supply to meet normal customer water requirements.

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Based on a survey completed in June 2011 of surrounding water utilities, the District has kept its residential water rates at a competitive level. The chart below summarizes the results of that survey.

**Table 9: Comparative Residential Water Charges**

Water Supplier	Average Annual Household Water Service Charge for 11Ccf/month
City of Palo Alto	\$744
City and County of San Francisco	\$652
Dublin San Ramon Services District	\$605
Contra Costa Water District	\$599
Marin Municipal Water District	\$588
City of San Jose	\$545
City of Los Altos	\$539
<b><i>East Bay Municipal Utility District</i></b>	<b><i>\$492</i></b>
City of Livermore	\$486
City of Hayward	\$479
Alameda County Water District	\$468
North Marin Water District	\$444
City of Pleasanton	\$342

## Water System Largest Customers

The five largest water customers of the District are listed in the table below:

**Table 10: Water System Largest Customers**

Customer Name	Consumption (CCF)	Percent
Chevron	4,470,356	6.0%
ConocoPhillips Refinery	2,025,147	2.7%
University of California	957,651	1.3%
C&H Sugar Company	840,958	1.1%
Golden Rain Foundation (Rossmoor)	490,877	0.7%
Total Top Five Customers	8,784,989	11.7%
<b><i>Total District</i></b>	<b><i>75,050,000</i></b>	<b><i>100.0%</i></b>

## Water System Five-Year Capital Improvement Program

The District's biennial planning process includes a review and update of facilities needed for the ensuing five Fiscal Years. The most recent biennial plan was completed in 2011 for Fiscal Years 2012 and 2013 and includes a five-year capital expenditure forecast for Fiscal Years 2012 through 2016. As summarized below, based upon the Water System's five-year capital expenditures forecast for Fiscal Years 2012 through 2016, the District projected cash expenditures in the aggregate amount of approximately \$878.1 million for its capital improvement program.

**Table 11: Water System Capital Program Expenditures  
Fiscal Years 2012-2016(\$ Millions)  
Fiscal Year ending June 30**

	2012	2013	2014	2015	2016	TOTAL
<b>Emergency Preparedness</b>	\$1.6	\$0.3	\$0.0	\$0.0	\$0.0	\$1.9
<b>Extensions/Improvements</b>	25.3	17.6	19.5	29.7	30.2	122.4
<b>Facilities, Services &amp; Equip.</b>	9.5	11.1	8.4	6.6	7.9	43.6
<b>Maintaining Infrastructure</b>	68.4	84.9	85.0	78.6	72.2	389.4
<b>Regulatory Compliance</b>	2.9	6.4	12.0	11.5	11.8	44.8
<b>Resource Management</b>	3.6	2.0	2.6	2.3	2.4	13.2
<b>Water Quality</b>	5.2	2.2	1.7	1.9	7.0	18.1
<b>Water Supply</b>	23.4	21.9	13.8	11.5	13.7	84.5
<b>Admin &amp; General Expenses</b>	35.0	35.0	30.0	30.0	30.0	160.0
<b>TOTAL</b>	\$175.2	\$181.6	\$173.2	\$172.3	\$175.6	\$878.1

The current five-year capital plan includes the following programs and projects:

**Emergency Preparedness.** Emergency preparedness projects are designed to increase the District's capability to respond to emergencies and to deliver reliable high quality service currently and in the future. In addition to the already completed Seismic Improvement Program, future projects include completing seismic upgrades to the Berryman South Reservoir and the installation of isolation valves at three reservoirs at a cost of approximately \$2 million.

**System Extensions and Improvements.** System extensions and improvements will provide service to new customers and improvements designed to provide more reliable service. These projects include:

(i) improvements in operations networking and mapping capabilities (ii) the pressure zone improvements program, and (iii) the water treatment and transmission improvements program.

Operations network and mapping improvements involve continued improvements to the District's control systems for water operations and the operations of the District's pumping plants. The benefits of the program include maintaining efficient and reliable operation of the Water System, optimizing energy cost savings for pumping plants and improved response to disasters and outage planning.

The pressure zone improvements program includes the continued upgrade and improvements to the District's 123 pressure zones that include upgrading or replacing reservoirs, pumping plants and transmission systems to increase storage capacity and water quality. These include replacement reservoirs in Berkeley and Oakland, and numerous transmission improvements in areas west of the Berkeley hills.

The water treatment and transmission improvements program includes new facilities and upgrades to existing facilities to more efficiently meet current and future regulatory standards related to both source and treated water quality, to comply with environmental permit conditions and to replace/upgrade existing facilities. The program includes completion of the new Highland Reservoir in Lafayette, completion of new filters at the Walnut Creek Treatment Plant, a new pumping station and reservoir in Orinda and a new pumping station in Lafayette. Additional planning is being completed toward the implementation of an extensive treatment and transmission program in the Fiscal Year 2017 through 2021 capital improvement program. Planned projects include numerous transmission, reservoir, pumping and treatment plant projects in service areas east of the Berkeley hills.

**Facilities, Services & Equipment.** The facilities, services and equipment projects provide for the renovation of existing facilities to improve public and/or employee safety, and provide upgrades to major information systems. The primary component of the facilities, services and equipment capital plan is the communications program, which involved replacement of the District's 20 year-old Customer Information System to better meet the District's billing, revenue collection and customer service needs. This project will be completed in Fiscal Year 2012. Additional projects to be completed in the current five-year capital plan include security improvements to numerous facilities, including a combination of fencing, lighting, alarms, video monitors and access card readers. This program also includes funding for vehicle and construction equipment replacements of approximately \$5.0 million a year.

**Maintaining Infrastructure.** These programs focus on preventative and corrective maintenance of District facilities to ensure delivery of reliable, high quality water service as described below.

The pipeline/appurtenances program will maintain efficient pipeline operations and improve the infrastructure by replacing appurtenances such as valves, lead service connections and hydrants and meters at the end of their useful life. This includes an ongoing project to install services for new customers, and to replace old services at the end of their useful lives. The relining of a portion of the Lafayette Aqueduct No. 1 will also be done under this program.

The pipelines/regulators program is an ongoing program to meet the pipeline replacement and expansion needs of the distribution system. In addition, the District also conducts an ongoing program to replace deteriorating water distribution pipelines. Pipelines for renewal are identified primarily through the evaluation of maintenance histories. The goal of this program is to replace 8 miles of pipeline per year, which is expected to maintain a stable leak rate and is used as an indicator of system integrity.

The District also has an ongoing program to relocate pipelines to accommodate projects of other agencies such as roadway improvements or rail system expansion. The District is obligated to bear the cost of pipeline relocations originating from street improvement projects of most cities, while costs for pipeline relocations driven by agencies such as Caltrans and BART are typically reimbursable.

The ongoing polybutylene lateral replacement program was established to manage the cost-effective replacement of defective polybutylene service laterals. This project includes emergency replacements of broken laterals, pre-emptive planned replacements of laterals in areas suffering high failure rates, and opportunistic incidental replacements when laterals are uncovered during the course of other pipeline repair work.

The reservoir rehabilitation program maintains the integrity of the District's distribution reservoirs by preventing and mitigating corrosion, improving water quality and extending the useful life of the reservoirs. The program is intended to extend the service lives of many of the District's 80 steel and 58 reinforced concrete distribution tanks by replacing coating systems, installing and/or repairing cathodic protection systems, repairing or replacing roof systems, and performing structural upgrades. In Fiscal Years 2012 through 2016, the District will rehabilitate three steel tanks each year, and also plans to rehabilitate concrete tanks as opportunities arise. The open-cut reservoir rehabilitation project involves the development of outage plans and the design and construction of improvements for the 26 open-cut reservoirs in the distribution system. Projects address structural integrity, worker safety, operational reliability, regulatory requirements and water quality issues. Plans include completion of the Schapiro Reservoir in Richmond, replacement of South Reservoir in Castro Valley and the rehabilitation of the Central Reservoir in Oakland.

**Regulatory Compliance.** Regulatory compliance projects are designed to ensure compliance with all air, land and water discharge requirements, implement preventive and corrective maintenance programs, including dam safety improvements and modifications. The District's dams frequently undergo required State and federal dam safety inspections in addition to ongoing monitoring of the performance of the dams by the District. The District has implemented a dam safety program which includes a variety of projects to provide for upgrades to existing dams and associated critical facilities such as outlet towers and spillways to meet earthquake and flood safety requirements.

The dam seismic upgrades project includes seismic safety evaluations and dam freeboard increases to improve safety. The most significant improvements planned for Fiscal Years 2012 through 2016 will be the planning, design and construction of seismic upgrades to the Chabot Dam to prevent slope instability. In addition, initial work will be done for the seismic upgrades planned for Camanche Dam between Fiscal Year 2015 and 2018.

The reservoir tower modifications project provides for evaluating and making modifications to reservoir towers to withstand the effect of seismic events. The Pardee Reservoir outlet tower and tunnel will be evaluated in Fiscal Years 2012 and 2013 per the recommendation of the Federal Energy Regulatory Commission. A stability analysis has been conducted for the Upper San Leandro Reservoir tower with design and construction of any needed upgrades planned for Fiscal Years 2013 and 2014. Lafayette Reservoir tower modifications are planned for Fiscal Years 2014 and 2015 which include seismic and gate control upgrades, and modification of the tower to act as a spillway. A recent analysis indicates that seismic upgrades to the Briones Tower will be needed. The design and upgrades will be made beginning in Fiscal Year 2015 and continuing through Fiscal Year 2017. In addition, the design and construction of retrofits to the Chabot Tower is planned to commence in Fiscal Year 2015.

**Resource Management.** Resource management projects involve improvements to the Mokelumne River habitat and recreation areas and water quality on the watershed. These projects include upgrades to campgrounds, docks and roadways in the District's recreation areas, as well as the improvements in site drainage and stormwater management to the District's watershed lands to enhance water quality, support customer needs and protect the environment.

**Water Quality.** In the area of water quality, the District seeks to operate and maintain facilities to surpass federal and state drinking water regulations; and to make system improvements that meet or surpass environmental and regulatory requirements. Projects include making improvements to reservoirs and water treatment plants to improve water quality.

The distribution system water quality improvements project focuses on making ongoing infrastructure improvements related to water quality to the over 4,000 miles of pipe and 170 reservoirs. Projects include design and construction of Almond Regulator in Castro Valley and the installation of mixing equipment for distribution reservoirs. In addition, the three remaining redwood tanks in the District will be replaced. The treatment plant upgrades project addresses the need to rehabilitate and modernize the water treatment plants. Planned work includes electrical system improvements, installation of control systems for hydrogen peroxide, hatches at the chlorine contact basin at the Upper San Leandro Treatment Plant and numerous other improvements at various other treatment facilities. At the Walnut Creek Treatment Plant, a project to thicken sludge using a hydrogen cyclone will be installed to save energy and reduce sludge trucking.

**Water Supply.** Water supply projects include those capital projects being undertaken to ensure a reliable, high quality water supply for the future and to preserve current entitlements and obtain additional supplemental supplies, as well as conservation and recycling projects designed to reduce the demand for potable water. A description of the District's effort to date can be found under the discussion "Water Supply Management Plan" included below.

The East Bayshore Recycled Water Project began recycled water service in Fiscal Year 2008 and will ultimately supply up to 2.5 MGD of recycled water to portions of Alameda, Albany, Berkeley, Emeryville and Oakland for irrigation, industrial, commercial and environmental uses. Customer retrofits will occur through Fiscal Year 2014. Pending funding availability, additional elements of the project will be completed and/or implemented in Fiscal Years 2013 through 2017.

Another component of the water supply capital projects is the aqueducts program which involves the replacement of deteriorating cement lining in the Mokelumne Aqueducts. Design and construction of the relining of Mokelumne Aqueduct No. 3 across Upper Jones tract in the Delta began in Fiscal Year 2010 and is expected to be completed in Fiscal Year 2012. In Fiscal Years 2013 and 2014 relining of Mokelumne Aqueduct No. 3 across Woodward Island and Orwood Tract is planned.

### ***Water Supply Management Plan (WSMP)***

**WSMP 2020.** In October 1993, the District adopted its Water Supply Management Plan 2020 (“WSMP 2020”) to guide the provision of water to the District’s service area through the year 2020. In WSMP 2020, the District forecasted that average daily consumption would reach 277 MGD by 2020. However, during the 1990’s, the District began new water recycling and water conservation measures. The goal of those water-saving programs, which have been and will continue to be implemented incrementally over the years 1993 through 2020, was to reduce daily consumption to 229 MGD by 2020. Over the same period, projected increased use by senior water rights holders and in-stream flow requirements to protect and enhance fishery resources on the Mokelumne River will decrease the water supply available to satisfy this projected increase in customer demand.

WSMP 2020 and the District’s 2005 Urban Water Management Plan demonstrated that the District’s existing water supplies were insufficient to meet current and future customer demand during droughts, despite implementation of conservation and water recycling programs and an aggressive dry-year water rationing policy.

Following the adoption of WSMP 2020, and in order to satisfy unmet future water needs of its customers, the District embarked on multiple water supply projects described below.

***Freeport Regional Water Project.*** The Freeport Regional Water Project (hereinafter “FRWP”) is a regional water supply project undertaken by the District in partnership with the Sacramento County Water Agency (“SCWA”). In February 2002, with the support of the Bureau, the District and SCWA formed the Freeport Regional Water Authority (“FRWA”) under a joint powers agreement to develop the FRWP. The FRWP, which was placed in commercial operation on November 15, 2011, provides the permanent infrastructure to allow the District to receive water deliveries pursuant to the Long-Term Renewal CVP Contract at a new point of diversion along the Sacramento River. The FRWP can provide up to 100 MGD of supplemental water supplies to the District in dry years which helps meet projected drought year needs. It also can provide up to 85 MGD to SCWA in all years.

The FRWP diverts water from the Sacramento River near the community of Freeport and conveys this water through new pipelines and the existing Folsom South Canal (“FSC”) to the Mokelumne Aqueduct near Camanche Reservoir. A turnout in the pipe within central Sacramento County delivers water to SCWA. Water is delivered to the District pursuant to the District’s Long-Term Renewal CVP Contract with the Bureau executed in 2006. See “– Water Supply – *United States Bureau of Reclamation Central Valley Project Contract.*” CVP water received by the District will be treated at existing District treatment facilities prior to delivery to customers. Short-term storage, if needed, will be provided at the District’s San Pablo terminal reservoir.

The FRWP includes a number of significant components. Chiefly, the components consist of an intake and pumping plant, approximately 16 miles of pipeline and a communications system. The capacity of the intake and pumping plant is 185 MGD. The pipeline includes an 84” diameter segment which runs from the intake to the SCWA turnout, a 66” pipeline segment which feeds a new SCWA Treatment Plant and a 72” pipeline segment which discharges to the FSC. Fiber optic and radio systems link project facilities and key outside agencies.

Water flows within the FSC for 14 miles and, in turn, is recaptured by the District and directed via pipeline along a route which leads to the Mokelumne Aqueducts. That southern system (known as the FSC Connection or the “FSCC”) is a District-only element, and includes two 100 MGD pumping plants (an intake and a pumping plant at the terminus of the FSC and a high head pumping plant near Camanche Reservoir) and approximately 18 miles of 72” diameter pipeline.

The combined FRWP/FSCC system has undergone a successful integrated operational test and was placed in commercial operation on November 15, 2011.

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

*Bayside Groundwater Project Phase 1.* The Bayside Groundwater Project consists of facilities designed to provide a means of storing treated drinking water in a deep underground aquifer during wet years for future recovery, re-treatment and distribution to customers during times of drought. Implementation of the project is planned in two phases. The Bayside Groundwater Project Phase 1, completed in December 2009, provides a modest, locally available supplemental water supply that helps reduce the need for rationing in the event of a prolonged drought. Phase 1 is used to store an annual average of 1 MGD of water within a deep aquifer that extends beneath the community of San Lorenzo. Storage operations will take place when water can be made available (during wet years). The District stored (injected) water for an eight week period beginning on June 2, 2011 and ending at the end of July 2011. The estimated volume of water stored is in the range of 30-40 million gallons. A volume equal to the total stored can be supplied to customers during dry years (at a delivery rate that does not exceed 1 MGD), helping to reduce the need for rationing. Primary Phase 1 facilities as constructed include an injection/extraction well (and pump), a treatment plant, a groundwater monitoring network and instruments used to measure minute changes (if any) in ground surface elevation (subsidence) during Phase 1 operations. The District intends to use the information gathered from Phase 1 operations to determine the feasibility of Phase 2 and inform its future determinations on how to proceed with Phase 2 (which could provide an additional 9 MGD of supply).

*The District-SFPUC-Hayward Intertie.* The CALFED Bay-Delta Program encourages exploration of Bay Area intertie opportunities. See "– Water Rights and Related Proceedings – *Delta Plan and Bay-Delta Conservation Program*" above. To this end, in April 2003, the City of Hayward completed CEQA documentation necessary to approve a project allowing for 30 MGD of water to be conveyed between the District and the San Francisco Public Utilities Commission ("SFPUC") water systems via the City of Hayward's distribution system. This project, which was funded by the participating agencies and the State of California through a Proposition 50 grant, was completed in 2007. It gives the District and neighboring agencies increased flexibility to provide water throughout the region during an emergency. The intertie allows sharing of water among the parties during emergencies or planned critical work on facilities that would be difficult to remove from service without an alternative water source. The project consisted primarily of improvements within the City of Hayward, although there were associated minor improvements in the District and SFPUC systems.

*Mokelumne Aqueduct Seismic and Fisheries Protection Elements.* Consistent with WSMP 2020, the District adopted a Lower Mokelumne River Management Plan ("LMRMP") that balances the long-term protection and enhancement of the lower Mokelumne fishery with the public's need for a reliable water supply. As part of the LMRMP, an upgrade of the Camanche Fish Hatchery was completed in 2002 and a project to strengthen a portion of the Mokelumne Aqueduct against earthquakes and floods in the Delta was completed in 2005.

*Amador Canal Improvement Project.* The District, PG&E, and the Amador Water Agency ("AWA") agreed to jointly contribute to the replacement of the Amador Canal with a pipeline that is anticipated to eliminate between 3,000 and 6,000 acre-feet per year in seepage losses from the existing earthen ditch canal. Until the AWA needs its full 15,000 acre-feet of entitlement, which is currently estimated to be approximately 2020, the conserved water will be available to PG&E and the District for additional hydropower generation and as additional inflow to Pardee Reservoir. The water conserved by this project will be available

to the District in most years for diversion into the Mokelumne Aqueduct or through the Pardee and Camanche power plants. The Board approved an "Amended and Restated" agreement in August 2000 which obligated the District to provide \$4,339,000 for construction of the project (which payment was made in 2006). The Amador Canal Improvement Project was completed in 2007.

**WSMP 2040.** In April 2007, the District began the process of updating its Water Supply Management Plan, extending the planning horizon to 2040 ("WSMP 2040"). Ten workshops were held with the Board before the environmental documentation for WSMP 2040 was released for public review on February 19, 2009. On October 13, 2009, the Board approved the final Program EIR for WSMP 2040 and authorized the implementation of WSMP 2040.

Following the Board's certification of the Program EIR, a legal challenge was filed by parties opposed to certain project elements identified in WSMP 2040 as potential options that could be implemented in future years to help the District meet its dry year water needs (namely, the "Enlarge Pardee Reservoir Option"). That legal challenge began in November 2009 and extended into the spring of 2011. In May 2011, after a court decision was issued in the Program EIR challenge, the District Board determined to set aside the 2009 certification of the Program EIR and instructed District staff to prepare supplemental analyses of the Enlarge Pardee Reservoir Option as well as to consider other options, such as participation in the enlargement of a reservoir (the Los Vaqueros Reservoir) owned by and located within the service area of the Contra Costa Water District ("CCWD"). Although the Board vacated its certification of the initial Program EIR for WSMP 2040, the underlying studies and analyses completed as part of that effort, such as the Demand Study, remain intact and continue to be considered the most current information for the District's long-term planning purposes. The District continues to work toward identifying reliable, secure long-term water supplies on the basis of the studies and analysis underlying the WSMP 2040 development.

Following completion of the supplemental analyses, the primary objectives of the revised WSMP 2040 will continue to be to maintain and improve the District's water supply reliability to its customers and help meet the growing need for water in the future. WSMP 2040 will also guide adaption of the District's water planning approach to circumstances that have changed since WSMP 2020 was adopted, such as competing and changing demands for water, the availability of water from the completed FRWP and Bayside Groundwater Project Phase 1, and long-term climate change. The goal of the WSMP 2040 is to examine what the District has done historically and what it can do in the future to ensure optimal use of the District's water resources.

WSMP 2040 and the revised Program EIR will assess the supplemental supplies that are expected to be needed to serve a projected increase in water demand in the District's service area of approximately 0.8 percent per year between 2010 and 2040 (an additional 60 MGD from 2010 to 2040). WSMP 2040 also addresses the potential for additional constraints on the water supply available to the District arising from increased demand of the senior water rights holders along the Mokelumne River.

The revised WSMP 2040 will provide for the District to meet its future needs for water through 2040 by: (i) maximizing water conservation; (ii) aggressive water recycling, in an effort to enhance current supply; (iii) continued rationing during times of drought by up to 15 percent; and (iv) securing additional supplemental water supplies. It is anticipated that the revised Program EIR for WSMP 2040 will be completed within the next three months and presented for consideration by the Board in the spring of 2012.

Although WSMP 2040 is currently undergoing a revision as detailed above, efforts continue to identify and secure sources of supplemental water supply. For example, during the next several years, the District will be working to identify water transfer opportunities with various entities within Northern California, and specifically within the Sacramento River watershed, with a view toward utilizing the FRWP to move supplies as secured via water transfers. In addition, the District will review the operation of the Bayside Groundwater Project Phase 1, to determine the possibility for a Phase 2 expansion (which could provide an additional 9 MGD of supply).

Beyond those efforts, the District will also be reviewing partnership opportunities. The District will work with Sacramento County water providers to evaluate the possibility of developing a regional groundwater banking operation. Further, the District will continue to engage in discussions of the development of an Inter Regional Conjunctive Use Project, a regional partnership effort with other foothill and San Joaquin County water agencies that would include the potential to share existing resources (such as existing and expanded surface water reservoirs, groundwater banking elements, etc.) and thereby leverage storage options and water rights

for use during times of drought. The District will also continue to work toward the potential to develop a regional desalination project in partnership with other Bay Area water agencies as described below.

*Groundwater Banking Options.* The District has been exploring groundwater resource development in San Joaquin County. The District began negotiating with San Joaquin County water interests for a groundwater banking and conjunctive-use program in 1992. The overdrafted aquifer within San Joaquin County, which is traversed by the Mokelumne River and the District's Mokelumne aqueducts, presented an opportunity for a joint project of mutual benefit. However, lack of consensus among local water users and the absence of a legal framework to assure that a portion of the stored water could be exported to serve District customers during droughts has prevented a project from being developed. The District will continue to seek opportunities to develop a banking project within San Joaquin County, but no project has currently been identified.

*Bay Area Regional Desalination Project.* Since 2003, the District has been working with other Bay Area water agencies, specifically SFPUC, CCWD and Santa Clara Valley Water District, to explore the development of regional desalination facilities that could (1) provide additional source(s) of water during emergencies, (2) provide an alternative water supply that would allow major facilities to be taken out of service for an extended period of time for inspection, maintenance or repairs, and (3) provide a supplemental supply during drought periods. In mid-2010, the Zone 7 Water Agency became the fifth Bay Area water agency to become a project participant.

In the spring of 2010, the District and its partners finalized a report on the completed pilot testing of a desalination facility concept. The test was conducted in 2009 within the CCWD service area along Mallard Slough. Test results are being used to help evaluate the technical feasibility of developing and operating the above-mentioned regional desalination facilities in the form of a full scale project.

### ***Water Conservation***

The District provides technical and financial assistance to encourage customers to help assure an adequate water supply by using water efficiently. The District's water conservation staff advises customers on selecting water-efficient products, implementing best management practices, and designing/maintaining *WaterSmart* landscaping and efficient irrigation methods. Water conservation services include water use surveys, incentives for high-efficiency plumbing fixtures, appliances, process equipment and irrigation systems, and free distribution of conservation self-survey kits and water efficient devices (*i.e.*, showerhead, faucet aerators) that reduce water use. The District is also very active in new water conservation technology research and the development of education and demonstration projects. Beginning in 2011, the District is updating its Water Conservation Master Plan ("WCMP") to help meet long-term water supply needs through the year 2020. The WCMP serves as a blueprint for implementation strategies, goals and objectives for achieving additional water savings consistent with the targets identified in the District's 2010 Urban Water Management Plan. The WCMP incorporates elements of the State of California's Water Conservation Act of 2009 (Senate Bill X7 7) toward a statewide goal of a 20 percent reduction in urban per capita water use by 2020.

### ***Water Recycling***

The District has undertaken a Water Recycling Program to develop and implement projects that reduce demands on potable water supplies. Recycled water has been used for landscape irrigation, cooling, equipment washdown and construction purposes at the District's Main Wastewater Treatment Plant since the early 1970s, as well as at a number of golf courses in the District's service area, beginning in 1984. Since 1993, the District has implemented various other recycled water projects that are designed to produce in the aggregate 9.3 MGD of additional supply. The program currently includes six operating recycled water projects. In 1996, the District began providing recycled water to the Richmond Chevron Oil Refinery for use in recirculating cooling towers. In 2006, the District began providing recycled water to a number of sites in San Ramon for irrigation purposes. In 2008, the District began providing recycled water to a number of sites in Oakland for primarily irrigation purposes. As part of the Water Recycling Program, the Richmond Advanced Recycled Expansion ("RARE") Water Project is a key water recycling project, the first phase of which was completed and began operation in Fiscal Year 2011. It initially provides 3.5 MGD of high quality recycled water to the Chevron refinery for use in industrial boilers (recycled water has been provided by the District to the Chevron refinery for use in recirculating cooling towers since 1996). The project consists of a

new high-purity recycled water treatment plant at the refinery, an influent pump station, flow equalization and a standby generator. Construction of the RARE Water Project began in Fiscal Year 2009 and the first phase of the project was completed in Fiscal Year 2011. In November 2010, Chevron reimbursed the District approximately \$51.6 million for capital costs of the initial phase of the RARE Water Project. The remainder of the capital costs of the initial phase of the RARE Water Project is expected to be recovered from Chevron in Fiscal Year 2012. The Chevron Oil Refinery is currently the largest single user of recycled water in the District's service area.

On April 9, 1996, the District's Board adopted the Nonpotable Water Policy which requires customers of the District to use nonpotable water (recycled water and other nonpotable water sources) for nondomestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health, and not injurious to plant life, fish and wildlife. The District has undertaken or will undertake in the future several water recycling project expansions in accordance with the long-term water recycling goal of 20 MGD by the year 2040. The District has entered into a Joint Exercise of Powers Agreement with the Dublin San Ramon Services District ("DSRSD") creating the DSRSD/EBMUD Recycled Water Authority ("DERWA") for the purpose of implementing a recycled water program to make available reliable supplies of recycled water to be provided to the District and DSRSD for their distribution within portions of their existing and future service areas. The first phase of the DERWA recycled water program, the San Ramon Valley Recycled Water Program, which provides recycled water supplies to a number of sites in San Ramon as mentioned above, was completed and became operational in 2006. The costs of such initial phase of facilities were financed from commercial paper notes issued by DERWA, State loan and grant moneys and capital contributions made by the District and DSRSD. The DERWA commercial paper notes were fully retired in January 2011 through the refinancing by each of DSRSD and EBMUD of their respective obligations therefor. The second phase of the DERWA recycled water program has also been completed. The District's share of the costs of the second phase of facilities was financed from federal grant funding and District capital contributions for the District's local share portion. The District and DSRSD have entered into an agreement for the sale of recycled water by DERWA to the District and DSRSD pursuant to which each of the District and DSRSD are responsible for paying their respective share of the costs incurred by DERWA in implementing the DERWA recycled water program (including among other things, administrative costs, construction costs, operation and maintenance costs and costs of debt service on any obligations issued by DERWA for the purposes of the recycled water program). Payments to be made by the District under such recycled water sales agreement for the purchase of recycled water are payable as a Water Operation and Maintenance Expense regardless of whether any recycled water is made available to the District from such facilities.

### ***Seismic Matters***

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

A seismic evaluation study prepared for the District and completed in 1994 examined the likely effects on the District's existing local water system of earthquakes on the Hayward Fault, the Calaveras Fault and the Concord Fault. The study concluded that, in the event of a magnitude 7.0 earthquake on the Hayward Fault, the District would likely experience major damage to the Claremont, San Pablo and Upper San Leandro Tunnels, substantial damage to buried pipes, damage to potable water reservoirs and a disruption in the operation of the District's pumping plants, rate control stations and water treatment plants. The District also would likely experience significant damage in connection with a lesser magnitude earthquake on the Hayward Fault or an earthquake on the Calaveras or Concord Faults. In the event of such damage, if the Claremont Tunnel were closed, it was determined that severe water rationing would be required in the western portion of the District during the estimated 26-week repair period. Further, in the event of severe earthquake damage

to the District's Mokelumne Aqueducts, which carry water from Pardee Reservoir to the District's service area, it was determined repair efforts could take up to one year before water could be transported again to the District's terminal reservoirs. This would necessitate a stringent conservation program to reduce consumption, as the District's terminal reservoirs currently store only a four to six months' supply under normal consumption patterns. A major earthquake could also have a severe adverse impact on the economy of the District's service area.

Studies prepared for the District on the safety of Pardee and Camanche Dams during seismic and extreme flood events also have been completed. The results of the studies indicate that both dams would perform satisfactorily in the event of a maximum considered event (MCE) of magnitude 6.5.

Following completion of the seismic evaluation study, the District initiated a multi-year Water System Seismic Improvement Program to identify those facilities most susceptible to earthquake damage and to address, to the extent deemed cost-effective by the District, identified needs. In 2007, the District completed the \$200 million Seismic Improvement Program, which is expected to significantly improve performance of the distribution systems and facilities.

The Seismic Improvement Program was designed to strengthen, reinforce and upgrade the District's water distribution and transmission systems to better enable the District to provide post-earthquake water service. Accomplishments include upgrades to 70 reservoirs, 130 pumping plants, 6 water treatment plants, 3 maintenance yards, the Administration Building and various electrical equipment anchorages throughout the District. Key project accomplishments include the completion of the Southern Loop Pipeline in June 2005, the completion of the Claremont Tunnel by-pass and seismic upgrades of the Mokelumne Aqueduct No. 3 across the Sacramento-San Joaquin Delta. The District projects that these improvements will allow the District to meet its service restoration goal of providing water service to 70% of its customers within ten days after a major seismic event.

Completed improvements include:

*Claremont Corridor Seismic Improvement Project.* The Claremont Tunnel is a vital transmission facility providing service to 800,000 customers west of the Oakland-Berkeley Hills. This tunnel crosses the Hayward Fault and seismic analysis suggested that in a magnitude 7.0 earthquake the tunnel would be damaged and most likely be out of service for up to six months for tunnel repairs. Loss of this transmission facility would result in severe water rationing and reduced supplies for fire fighting, so upgrading this facility was identified as a critical effort. The tunnel upgrade consisted of a new 1,501-foot bypass tunnel to replace the vulnerable portion of the tunnel at the Hayward Fault zone and the repair and reinforcement of the liner in the remainder of the tunnel and was completed in March 2007.

*Building Structure Seismic Improvement Project.* The Building Structure Seismic Improvement Project retrofitted occupied District buildings, including, but not limited to, the upgrade of the Administration Building to meet life safety performance goals and to ensure availability of facilities for post-earthquake operation. The seismic upgrades of the Administrative Building were completed in March 2005.

*Reservoir Seismic Upgrades Project.* The Reservoir Seismic Upgrades Project addressed seismic risks to 70 distribution tanks to assure continued water storage following an earthquake and mitigate the risks to life safety that would result from tank failure. By the end of Fiscal Year 2006, the District had completed the reservoir seismic upgrades, with the exception of one remaining tank which is expected to be completed by the end of 2011. Other accomplishments include the completion of landslide mitigations and the installation of seismic isolation valves at reservoirs and valve pit roof anchorages.

The District has also instituted a Seismic Mitigation Planning Program to establish an ongoing process to ensure earthquake readiness of District infrastructure. This program will identify potential seismic performance problems to ensure the Water System will remain in a constant state of readiness to perform following a major earthquake. Work includes keeping District earthquake standards current and providing a performance evaluation of the transmission and distribution system improvements made during the Seismic Improvement Program.

In the event of significant earthquake damage to the Water System and/or the District's service area, there can be no assurance that Subordinated Water Revenues would be sufficient to pay the debt service on any outstanding Water System Revenue Bonds.

**WATER SYSTEM CAPITAL FUNDING**

The District plans to fund capital improvements from revenues, bonds, commercial paper, loans and grant proceeds, service installation charges paid by developers, as well as from charges paid for new service connections. The District's estimated sources of funding on a cash basis for the fiscal years 2012-2016 for the Capital Improvement Program are included in Table 12.

**Table 12: Water System Funding Sources  
For Capital Expenditures**

<b>Fiscal Years 2012-2016 Total Funding Sources</b>	<b>(\$Millions)</b>
<b>Bond and Commercial Paper Proceeds</b>	\$237.0
<b>Advances and Contributions</b>	107.1
<b>Grants</b>	9.3
<b>Revenue</b>	524.7
<b>TOTAL</b>	<b>\$878.1</b>

## Wastewater System Financial Projections

The following table summarizes the Wastewater System's projected revenues, expenses, and debt service coverage requirements adopted as part of the "FY2012 and FY2013 Biennial Budget" for fiscal years ending June 30, 2012-2016.

**Table 13: Wastewater System Projections**

<b>Fiscal Year Ending June 30</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Revenue <sup>(1)</sup></b>	\$90.2	\$96.5	\$101.5	\$105.6	\$110.1
<b>Operations and Maintenance Costs <sup>(2)</sup></b>	53.1	55.7	57.5	59.4	62.7
<b>NET REVENUES</b>	\$37.1	\$40.8	\$43.9	\$43.2	\$47.4
<b>Outstanding Wastewater Revenue Bonds</b>	\$26.5	\$28.2	\$28.4	\$28.6	\$28.8
<b>Future Bond Issues</b>	-	-	-	-	-
<b>TOTAL REVENUE BOND DEBT SERVICE</b>	\$26.5	\$28.2	\$28.4	\$28.6	\$28.8
<b>Debt Service Coverage Ratio</b>	1.40	1.45	1.55	1.62	1.65

<sup>(1)</sup> Does not include property taxes. Revenues include approximately \$2.7 million of Build America Bonds subsidy for all years.

<sup>(2)</sup> Does not include expenses funded by property taxes or the ad valorem tax collected based on the yearly debt service amount of the Series F General Obligations bond.

The following table shows Wastewater System net revenues and debt service coverage ratios for the past five years.

**Table 14: Wastewater System Debt Service Coverage**

Fiscal Year Ending June 30	2007	2008	2009	2010	2011
<b>NET REVENUES (\$Millions)</b>					
<b>Wastewater Revenue</b>	\$44.6	\$46.1	\$47.1	\$48.8	\$50.9
<b>Wet Weather Facilities Charge</b>	13.7	13.7	14.3	15.3	16.1
<b>Interest</b>	2.7	5.8	3.1	1.2	2.0
<b>Other Revenue</b>	<u>7.2</u>	<u>7.6</u>	<u>8.7</u>	<u>8.7</u>	<u>11.8</u>
<b>Total Revenue</b>	\$68.2	\$73.2	\$73.2	\$74.0	\$80.8
<b>Less: Operation and Maintenance Expense</b>	\$39.1	\$41.6	\$44.6	\$41.3	\$46.3
<b>Deposits Into Rate Stabilization Fund</b>	0.0	0.0	0.0	0.0	0.0
<b>NET REVENUE</b>	\$28.5	\$31.5	\$28.4	\$32.6	\$34.5
<b>DEBT SERVICE (\$Millions)</b>					
<b>Total Revenue Bonds and Parity Loan Debt Service</b>	\$16.0	\$20.1	\$20.1	\$19.1	\$20.9
<b>Debt Service Coverage Ratio</b>	1.78	1.56	1.41	1.71	1.65

## EAST BAY MUNICIPAL UTILITY DISTRICT

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The following table shows Wastewater System number of accounts, sewage treated, average daily flow, maximum treatment capacity, average sewer rate change, and average residential charge.

**Table 15: Wastewater System Accounts**

<b>Fiscal Year Ending June 30</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Number of Accounts</b>	177,831	177,852	172,035	178,051	178,515
<b>Sewage Treated (millions of gallons)</b>	24,455	25,185	24,090	24,820	25,915
<b>Average Daily Flow (MGD)</b>	67	69	66	68	71
<b>Maximum Treatment Capacity (MGD)</b>	415	415	415	415	415
<b>Average Rate Increase</b>	2.8%	3.4%	3.7%	4.60%	5.00%
<b>Treatment Charge</b>	3.75%	4.00%	4.00%	5.00%	5.00%
<b>Wet Weather Facilities Charge</b>	0.0%	3.75%	3.75%	5.00%	5.00%
<b>Average Annual Residential Charge (670 cubic feet/month)</b>	\$210	\$218	\$226	\$236	\$248

## EAST BAY MUNICIPAL UTILITY DISTRICT

The following table shows the District's Wastewater System rates and charges for the fiscal year beginning July 1, 2011.

**Table 16: Wastewater System Rates and Charges**

Type	Charge	Measure
<b>RESIDENTIAL CHARGES</b>		
Service Charge (per account)	\$5.84	per month
Strength Charge (per dwelling unit)	\$5.77	per month
Flow Charge	\$0.625	per 100-cubic foot unit, to a maximum of 10 units
<b>NON-RESIDENTIAL CHARGES</b>		
Service Charge (per account)	\$5.84	per month
Treatment Charge	\$0.73-\$10.42	per unit, depending on the nature of the business
SF Bay Pollution Prevention Fee	\$5.48	per month
<b>PERMIT ACCOUNTS</b>		
Flow Charge	\$0.620	per hundred cubic feet
COD(f)	\$0.227	per pound of discharge
Suspended Solids	\$0.351	per pound of discharge
<b>WET WEATHER FACILITIES CHARGES</b>		
Residential Property	\$71.26	per year per dwelling unit per parcel
Commercial/Industry Property	\$106.90	per year per connection

The chart below summarizes the results of a survey conducted in June 2011.

**Table 17: Comparative Annual Wastewater Charges**

Residential Customers at 670 Cubic Feet/Month	
Wastewater Service Provider	Average Annual Household Wastewater Service Charge
City and County of San Francisco	\$682
Central Marin Sanitary District	\$638
City of Pinole	\$633
City of Richmond	\$574
<b><i>East Bay Municipal Utility District*</i></b>	<b>\$543</b>
City of Vallejo	\$500
City of Livermore	\$489
City of San Jose	\$406
City of Pleasanton	\$399
Delta Diablo Sanitary District	\$351
City of San Leandro	\$348
Dublin San Ramon Services District	\$345
Central Contra Costa Sanitary District	\$341
Union Sanitary District	\$304
West Contra Costa Sanitary District	\$279
Oro Loma Sanitary District	\$183

\* Based on adopted FY12 rates of \$263/year of EBMUD treatment and wet weather charges and \$280/year average collection charge for EBMUD cities.

## Wastewater System Five-Year Capital Improvement Program

The District's biennial planning process includes a review and update of facilities needed for the ensuing five fiscal years. The most recent biennial plan was completed in 2011 for Fiscal Years 2012 and 2013 and included a five-year capital expenditure forecast for Fiscal Years 2012 through 2016. Based upon the District's five-year capital expenditures forecast for Fiscal Years 2012 through 2015, the Wastewater System's projected cash expenditures in the aggregate amount of approximately \$156.4 million for improvements to the Wastewater System.

**Table 18: Wastewater System Capital Program Expenditures  
FY 2012 - 2016 (\$ Millions)**

	2012	2013	2014	2015	2016	TOTAL
<b>Maintaining Infrastructure</b>	\$24.0	\$22.4	\$20.7	\$24.1	\$23.8	\$115.0
<b>Regulatory Compliance</b>	4.3	5.8	6.7	4.2	3.9	24.9
<b>A &amp; G Expenses</b>	3.3	3.3	3.3	3.3	3.3	6.5
<b>Total Wastewater System</b>	<b>\$31.6</b>	<b>\$31.5</b>	<b>\$30.7</b>	<b>\$31.6</b>	<b>\$31.0</b>	<b>\$156.4</b>

The current Wastewater System Five-Year Capital Plan includes capital improvements both at the Main Wastewater Treatment Plant and at remote wastewater facilities designed to ensure that wastewater facilities are well maintained so that they function efficiently and safely and operate at an appropriate level of service; and comply with new and existing wastewater regulations and permit requirements.

**Wastewater Infrastructure Program.** The Wastewater Infrastructure Program includes a number of projects involving improvements at the Main Wastewater Treatment Plant, improvements to the District's resource recovery facilities, completion of the initial expansion of the District's power generation station, and improvements to the District's pump stations and collection system interceptors as described below.

The Digester Upgrade Project includes five phases and will rehabilitate the eleven active digesters at the Main Wastewater Treatment Plant. Digesters perform a key role in stabilizing wastewater solids prior to disposal. Phase 1 of the project was completed in Fiscal Year 2009 and rehabilitated four primary digesters with new covers and mixers. Design of the second phase was completed in Fiscal Year 2009, and construction will continue through Fiscal Year 2013. The second phase includes rehabilitating four additional digesters, converting two digesters from secondary to primary, installing new blending tanks and a sludge feed system, and constructing a new fats, oil, and grease receiving station. The third and fourth phases will rehabilitate three digesters and install covers, with the work expected to begin in Fiscal Year 2016 and continue through Fiscal Year 2021. Phase 5 includes the construction of two new digesters in Fiscal Years 2020 and 2021, outside the current Wastewater System Five-Year Capital Plan.

The Concrete Rehabilitation Project includes rehabilitating critical concrete hydraulic structures, channels and gates at the Main Wastewater Treatment Plant as sulfides and other constituents in the wastewater have accelerated corrosion of the concrete in these aging facilities. Repairing the plant effluent channel is the highest priority and is scheduled to be completed in Fiscal Year 2014. Repair of the primary tank channels will be completed in six phases and will be ongoing from Fiscal Year 2012 through Fiscal Year 2020. Repair of the secondary aeration reactor basins will be completed in four phases, repairing two tanks per year from Fiscal Year 2014 through Fiscal Year 2021.

The Odor Control Project provides for the design and construction of odor control facilities to improve the air quality in communities along the District's collection system and at the Main Wastewater Treatment Plant. Planned work includes odor control improvements at the influent pump station, the primary sedimentation tanks, the resource recovery receiving station and the dewatering building.

The Treatment Plant Infrastructure Project consists of cyclical replacement and rehabilitation of various treatment process facilities at the Main Wastewater Treatment Plant. In Fiscal Years 2012 through 2016, planned work includes rehabilitating the ventilation system in the dewatering building, replacing ductwork in the influent pump station, providing emergency power for the laboratory incubators, replacing large variable frequency drives, replacing and/or rehabilitating magnetic flow meters, improving the cooling system at the oxygen production plant, repairing piping in the return activated sludge and oxygen reactor systems; and installing online total suspended solids monitors at each of the 12 secondary clarifiers.

The Resource Recovery Program was developed to accept a variety of solid and liquid wastes delivered by truck to the Main Wastewater Treatment Plant. In Fiscal Years 2012 through 2017, several projects are scheduled, including automation upgrades, enhanced odor control, and conversion of one of the tanks to accept dissolved air flotation wastes. Process upgrades include dedicating a digester and dewatering system for food waste to meet the terms under a recent contract. Design and construction of these facilities is scheduled for Fiscal Years 2012 through 2014. In Fiscal Years 2015 through 2017, two of the solid/liquid receiving tanks will be rehabilitated and the other three will be inspected. This project also includes several studies, including a study in Fiscal Years 2012 and 2013 to evaluate the “anamox” process, a form of nutrient removal, and potentially develop a full-scale demonstration of the process.

The Power Generation Station Expansion Project is a renewable energy project to expand the existing station at the Main Wastewater Treatment Plant from 6 megawatts to 10.5 megawatts. The District has previously had insufficient turbine capacity to utilize the full potential of the increased biogas production due to the growing Resource Recovery Program, and significant quantities of biogas have been flared to the atmosphere. The expansion includes a facility for two turbines, each with a capacity of 4.5 megawatts, with one turbine installed initially. The additional renewable energy can be sold or utilized on-site at the Main Wastewater Treatment Plant to attain 100% energy self-sufficiency. Construction will be completed in Fiscal Year 2012. The purchase and installation of the second turbine is planned for Fiscal Years 2017 through 2019.

The Interceptor Rehabilitation Program includes several projects to rehabilitate portions of the District's interceptor system that is now approaching 60 years of service. The Wood Street segment of the South Interceptor in Oakland had one section rehabilitated in 2000. The rehabilitation of the remainder of this two-mile, 105-inch reinforced concrete interceptor will occur in Fiscal Years 2012 through 2015 and include structural retrofit and a protective lining as necessary to extend its useful life. The Buchanan Street Interceptor in Albany is scheduled for rehabilitation in Fiscal Years 2012 and 2013; Versailles and Alameda Interceptors in Fiscal Years 2014 through 2016; and the 3rd Street Interceptor in Oakland in Fiscal Years 2015 through 2018. In addition, the District will be assessing the condition of its force mains, gravity pipelines and interceptors in Fiscal Years 2012 and 2013, as well as rehabilitating existing cathodic protection systems and installing new ones as needed to prevent corrosion.

In Fiscal Years 2012 and 2013, the Pump Station Master Plan will be updated to identify and prioritize long-term pump station and collection system upgrade and improvement needs. This will include inspections of the 15 wastewater pumping stations. Improvements are planned in Fiscal Years 2012 through 2016 for three pump stations and include such work as replacing dry weather pumps, making improvements to the chemical system piping and instrumentation, replacing the control system with a programmable logic controller, replacing mechanical and electrical components, controls and instrumentation, and adding emergency generators. Other pump stations will be rehabilitated in subsequent years.

***Wastewater Regulatory Compliance Program.*** The Regulatory Compliance Program consists of improvements necessary to comply with new and existing regulations and permits and includes the Infiltration/Inflow Control Project and the Wet Weather Plant Improvements Project as described below.

The Infiltration/Inflow Control Project includes work required by the NPDES permit, Cease and Desist Order, and Stipulated Order for Preliminary Relief issued in 2009 for the District's three wet weather facilities. The required work includes extensive flow monitoring and modeling in Fiscal Years 2012 through 2021, development of various asset management tools, inspection of the entire District interceptor system, and a private sewer lateral incentive program in Fiscal Years 2012 through 2016. The project also includes continued sampling and laboratory analysis related to the Ettie Street storm water treatment demonstration project.

The Wet Weather Plant Improvements Project addresses upgrades at the District's wet weather facilities required to improve operations. It includes chemical system improvements to the wet weather facilities at Point Isabel in Richmond, Oakport in Oakland and San Antonio Creek in Oakland. Improvements to the chemical feed systems at Point Isabel were completed in Fiscal Year 2009. Similar chemical feed system improvements at the Oakport and San Antonio Creek wet weather facilities are scheduled for Fiscal Years 2012 through 2014. Other improvements to the mechanical and electrical systems at Point Isabel are planned for Fiscal Years 2013 and 2014.

## **Wastewater System Capital Funding**

The Wastewater System plans to fund capital improvements from revenues, bonds, loans and grant proceeds, as well as from charges paid for new or upsized service connections. The Wastewater System's estimated sources of funding on a cash basis for the fiscal years 2012-2016 for the Capital Improvement Program are shown in Table 19.

**Table 19: Wastewater System Funding Sources  
Capital Expenditures**

<b>Fiscal Years 2012-2016 Total Funding Sources</b>	<b>(\$Millions)</b>
<b>Commercial Paper</b>	\$0.0
<b>Existing Bond Proceeds</b>	59.9
<b>Revenue/Reserves</b>	86.2
<b>Reimbursements</b>	0.0
<b>Equipment Replacement Fund</b>	10.0
<b>Loans</b>	0.0
<b>TOTAL ALL SOURCES</b>	<b>\$156.1</b>

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## EBMUD Finance Department Web Site

The District has listed general financial information on its Web Site: (<http://www.ebmud.com>.) The site is updated on an annual basis and is designed to assist ratepayers, investors and other interested parties in learning more about the District's financial condition.