

SECTION 9.0

EAST BAY MUNICIPAL UTILITY DISTRICT

WATER AND WASTEWATER SERVICE

9.1 Overview

The East Bay Municipal Utility District (EBMUD) provides wholesale water, retail water, wastewater collection and wastewater treatment services for an area of approximately 331 square miles in Contra Costa and Alameda counties. EBMUD serves a population of approximately 1.3 million people within the two-county service area.

EBMUD has its origins as a private water company which was formed to provide water to the newly incorporated City of Oakland in 1866. The company, known as the Contra Costa Water Company, completed its first major project in 1870 with the San Leandro Reservoir. The Reservoir helped combat the recurrent droughts occurring in that era. By 1910, the East Bay area was experiencing a dramatic jump in population as the result of the 1906 San Francisco earthquake and the settlement of approximately 50,000 earthquake refugees from the San Francisco area. In 1916, the Contra Costa Water Company incorporated into the East Bay Water Company. It was after World War I that California began to look at growth and how the State was going to provide municipal services to the growing population. Several new pieces of legislation were passed addressing special districts and service agencies during this time period, with the Municipal Utility District Act being passed in 1921. In 1923, EBMUD was formed, and in 1928, EBMUD purchased the East Bay Water Company.

Rapid growth continued in the East Bay area, and in 1929, EBMUD completed construction of the Pardee Dam on the Mokelumne River and the Mokelumne Aqueduct. This was the first major step in the Mokelumne River becoming 90 percent of EBMUD's current water supply. By 1930, EBMUD was delivering an average of 35 million gallons per day (MGD) of water to its customers. In 1944, EBMUD added wastewater collection to its services with the formation of Special District No. 1 (SD-1). Wastewater treatment services were added in 1951 with the opening of the regional wastewater treatment facility. SD-1 provides service within both Alameda and Contra Costa Counties, with a service area of approximately 88 square miles. Within Contra Costa County, the service area is 5.3 square miles and serves the Stege Sanitary District (SSD), which includes the City of El Cerrito, the unincorporated community of Kensington and a portion of the City of Richmond.

Today, EBMUD owns and maintains 2 water storage reservoirs on the Mokelumne River, 5 terminal reservoirs, 91 miles of water transmission aqueducts, 4,100 miles of water mains, 6 water treatment plants, 29 miles of wastewater interceptor sewer lines and a regional wastewater treatment facility rated at a maximum treatment capacity of 320 MGD.

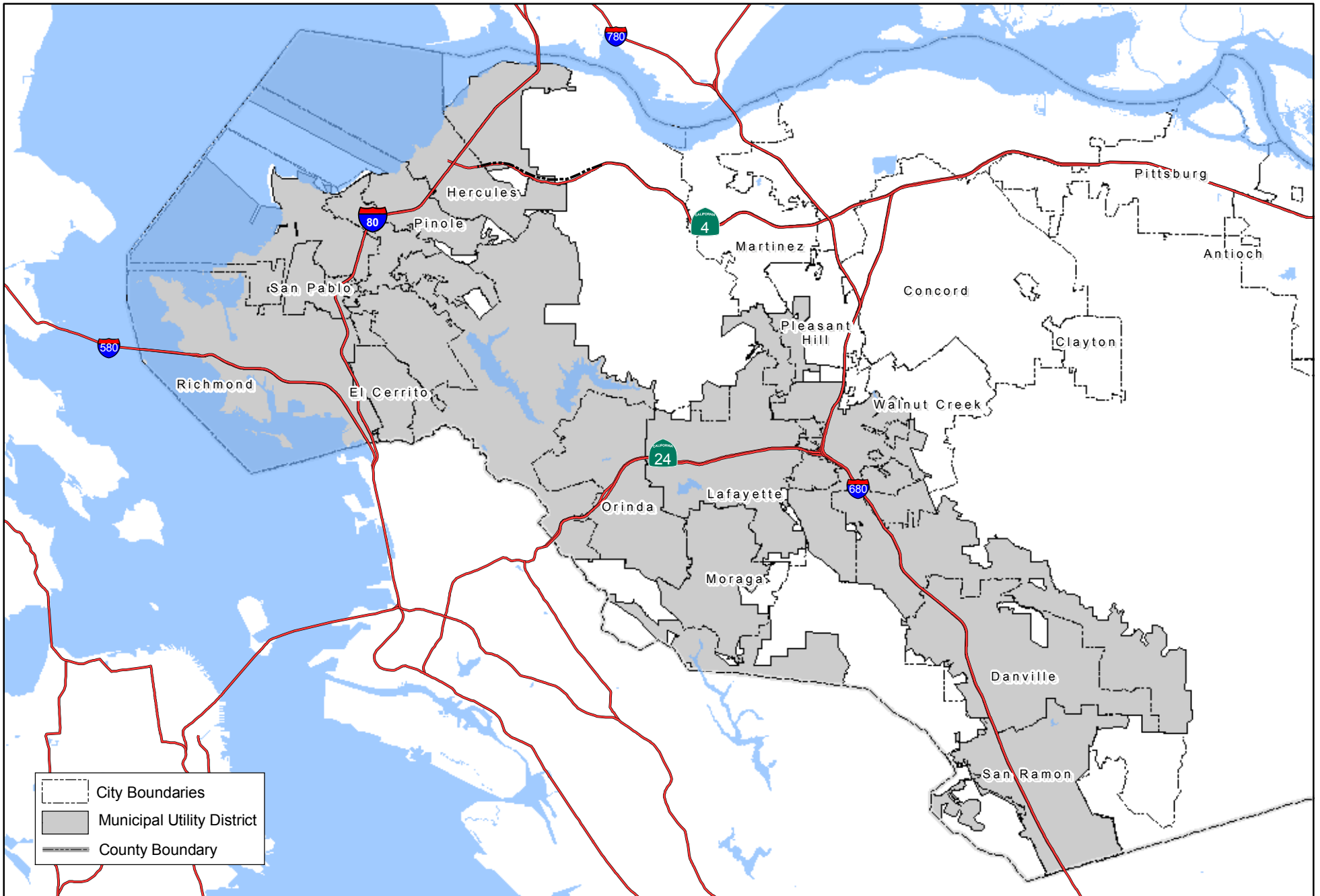
EBMUD’s profile for water and wastewater services is shown in *Table 9.1* and a map of EBMUD’s boundary and current SOI are shown in *Figure 9.1*.

Table 9.1
East Bay Municipal Utility District
Water / Wastewater Service Information

Service Area / Financial Summary	
District Office	375 11 th Street Oakland, CA 94607 (866) 403-2683 www.ebmud.com
Service Area:	331 square miles (approximately 146 square miles in Contra Costa County).
Population:	1.3 million (Year 2007) / 1.6 million (Year 2030) (460,000 – 2007 / 570, 000 – 2030 Contra Costa County) Average Annual Growth Rate =0.8%
Operating Budget (FY 2007-2008):	Revenues / Expenditures: \$343 million / \$310 million Net Assets at June 30, 2007: \$1.6 billion
Water / Wastewater Service Data	
Services	Wholesale Water, Retail Water, Wastewater Collection, Wastewater Treatment
Number of Service Accounts: Water	381,415
Number of Service Accounts: Wastewater	177,831
Average Dry Weather Flow to Treatment Plant	65.0 mgd
Wastewater Treatment	EBMUD treatment plant - Oakland
RWQCB Region	Region 2 – San Francisco Bay
Orders	Order No. 2006-0003 – Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order No. 01-072 – NPDES Permit No. CA0037702

EBMUD’s principal county for purposes of LAFCO is Alameda County, and EBMUD was reviewed in *Alameda County LAFCO MSR Volume II – Utility Services*, adopted November 2005. Because EBMUD was reviewed under the aforementioned MSR, EBMUD is not included as part of this MSR’s discussions and determinations. This brief summation is included to provide background reference about EBMUD for the Contra Costa LAFCO.

East Bay Municipal Utility District



- City Boundaries
- Municipal Utility District
- County Boundary

Map created 1/18/2007
by Contra Costa County Community Development, GIS Group
651 Pine Street, 4th Floor North Wing, Martinez, CA 94553-0095
37.59-48.456N 122.26-35.384W

This map was created by the Contra Costa County Community Development Department with data from the Contra Costa County GIS Program. Some base data, primarily City Limits, is derived from the CA State Board of Equalization's tax rate areas. While obligated to use this data the County assumes no responsibility for its accuracy. This map contains copyrighted information and may not be altered. It may be reproduced in its current state if the source is cited. Users of the map agree to read and accept the County of Contra Costa disclaimer of liability for geographic information.

Figure 9.1

0 1 2 4 Miles



9.2 Growth and Population Projections

EBMUD's boundaries within Contra Costa County include the cities of Danville, El Cerrito, Hercules, Lafayette, Moraga, Orinda, Pinole, Richmond, San Pablo; portions of the cities of Pleasant Hill, San Ramon and Walnut Creek; and unincorporated communities of Alamo, Crockett, Diablo, El Sobrante, Kensington, and Rodeo. The current estimated population for the EBMUD's estimated 146 square mile service area in Contra Costa County is 460,000 residents. The population served by EBMUD within Contra Costa County is expected to reach 570,000 by 2030 with an average annual growth rate of 0.8 percent.

9.3 Water Supplies

EBMUD provides both wholesale water and retail water to its customers within its 331 square mile service area within two counties. Historically, 90 percent of the water used by EBMUD comes from the 577 square mile protected Mokelumne River watershed. This watershed is located on the western slope of the Sierra Nevada Mountains. EBMUD has water rights for up to 325 MGD (997 acre-feet) or a total of 364,000 acre-feet per year. In normal years, EBMUD reservoirs in the East Bay receive an additional 30,000 acre-feet of local water from runoff annually. In dry years, evaporation and other losses can total more than the local runoff. Runoff from the Mokelumne watershed is not sufficient to meet EBMUD customer needs in times of severe drought. EBMUD's 2005 Urban Water Management Plan outlines drought protection measures, which include conservation, recycling, water banking (storing water in underground aquifers for use in dry years) and possible future sources of water using desalinated ocean or bay water. EBMUD is also working with the County of Sacramento to convey up to 100 MGD to EBMUD's reservoirs. This project is slated for completion in 2009.

EBMUD utilizes a system of dams and reservoirs for water storage, including the Pardee and Camanche Dams located approximately 40 miles northeast of Stockton. Pardee Reservoir has a maximum storage capacity of 197,950 acre-feet. As of May 27, 2008, Pardee Reservoir was holding 186,000 acre-feet of water, or at 94 percent of capacity. Camanche Reservoir, located 10 miles downstream of Pardee Reservoir, has a storage capacity of 417,120 acre-feet. The May 27 water supply report shows that Camanche Reservoir was holding 178,810 acre-feet of water in storage, which is 43 percent of capacity. During the 1977 drought, Pardee Reservoir storage was at 47,000 acre-feet, which is 22 percent of capacity. During the 1988 drought, Camanche Reservoir was holding just 10,000 acre-feet of storage, or just two percent of capacity.

Water is transported from Camanche Reservoir 91 miles to the initial EBMUD water treatment plants located in Walnut Creek in Contra Costa County. Any water not immediately put through water treatment and distributed is stored in five East Bay terminal reservoirs. The combined

maximum capacity is 155,150 acre-feet of storage. San Pablo Reservoir is the northernmost (located in Contra Costa County), the Briones Reservoir is the largest (located in Contra Costa County outside of the City of Orinda), and the other terminal reservoirs include Lafayette Reservoir (located in Contra Costa County south of the City of Lafayette), Upper San Leandro Reservoir and Chabot Reservoir (both located in Alameda County).

Water is distributed throughout EBMUD's service area (includes both counties) via 4,100 miles of pipelines, 140 pumping plants, and 170 local neighborhood reservoirs having a total capacity of 830 MGD. Average daily system wide demand is approximately 220 MGD. In 1929, when EBMUD began delivering water to its customers, the average daily per capita consumption was 60 gallons, and today's average daily per capita consumption is 162 gallons. EBMUD maintains six water treatment plants throughout its system to ensure that the drinking water delivered to its customers is of high quality and safe from contaminants.

9.4 Wastewater Service

SD-1 was established in 1944 as a subsidiary district within EBMUD and is administered by EBMUD's Wastewater Department. SD-1 is governed by the same EBMUD Board of Directors.

EBMUD treats domestic, commercial, and industrial wastewater within the 81 square mile service area of SD-1. Within Contra Costa County, SD-1 accepts wastewater for treatment from SDD which services El Cerrito, the community of Kensington, and a portion of the city of Richmond. Wastewater collected system wide is transported by five interceptor sewer trunk lines that convey the wastewater to EBMUD's Main Wastewater Treatment Plant located in Oakland, near the entrance to the San Francisco-Oakland Bay Bridge. The average daily flow is approximately 80 MGD. Local cities and communities own and operate their own wastewater collection systems that discharge to the EBMUD interceptor system. Primary treatment removes floating materials, oils and greases, sand and silt and organic solids heavy enough to settle in water. Secondary treatment biologically removes most of the suspended and dissolved organic and chemical impurities. EBMUD provides secondary treatment for a maximum flow of 168 MGD. Primary treatment can be provided for up to 320 MGD. Storage basins provide short-term plant capacity of 415 MGD during peak wet weather events. The treated effluent is disinfected, dechlorinated and discharged through a deep water outfall in San Francisco Bay.

Deteriorated local sanitary sewer systems and improper storm drain connections allow rainwater to enter into the sewer system. During heavy storms this infiltration caused overflows at 175 locations throughout the system. In 1979, EBMUD entered into a joint powers agreement (JPA) with the communities in its sewer service area to develop a regional solution for the rehabilitation of the city- and community-owned and operated wastewater collection systems. In 1986, the JPA was amended to carry out the East Bay Infiltration/Inflow Correction Program, for

which EBMUD is the lead agency. EBMUD has constructed over \$300 million in improvements, including three new wet weather treatment plants, two storage basins, 7.5 miles of new interceptor lines and expansion of the Main Wastewater Treatment Plant.

EBMUD also instituted a Wastewater Source Control and Pollution Prevention Program (WSCPP). This requires customers at the source to remove such toxics as heavy metals and organic pollutants by carrying out management practices and process controls. EBMUD has over 20,000 commercial and industrial accounts. The WSCPP program has reduced the amount of heavy metals discharged into sewers by 91 percent, with EBMUD's treatment plant removing an additional 75 percent of the remaining heavy metals. These two steps together have reduced the quantity of heavy metals discharged into the Bay by 98 percent since 1977.

EBMUD currently supplies approximately 6 MGD of recycled water for non-potable uses, such as irrigation of golf courses, parks and landscaping. By 2020, EBMUD plans to supply an additional 8 MGD of recycled water to achieve the 14 MGD water recycling goal established in the District's adopted Water Supply Management Program.

9.5 Financial

EBMUD adopts a bi-annual budget, allowing EBMUD to manage revenues and expenditures over a longer budget window. EBMUD operates the water and wastewater systems as two legally distinct enterprises, with expenditures and revenues separate for each.

EBMUD has several sources of revenue for both the water and wastewater enterprises. These include the sale of water, hydroelectric power, system capacity charges, sewage treatment charges, connection fees, wet weather facilities charges, interest and property tax increments.

The water system is anticipated to generate a total of \$375.5 million in revenue for FY 2007-08. Approximately 76 percent of the revenue will come from water sales, with System Capacity Charges generating an additional 7 percent in revenue. Property Tax Revenue is expected to generate an additional 5 percent of revenues, with interest, electric energy sales, reimbursements and other sources making up the remaining 12 percent of revenues.

The wastewater system is anticipated to generate a total of \$79.3 million in revenue for FY 2007-08. Approximately 57 percent of revenues will come from treatment charges. Wet weather charges will account for an additional 18 percent of revenues and property taxes will generate an additional 8 percent. Resource recovery will generate an additional 6 percent, with reimbursements, interest, lab services, connection fees, and permits making up the remaining 11 percent of revenues.

Table 9.5
East Bay Municipal Utility District
Financial Summary

	FY 28007/2008 Water	FY 2007/2008 Wastewater	FY 2007/2008 Budgeted
Operating Revenues	\$375,500,000	\$79,300,000	\$454,800,000
Operating Budget	\$194,000,000	\$50,000,000	\$244,000,000
Debt Services	\$121,000,000	\$26,000,000	147,000,000
Total Operating	\$315,000,000	\$76,000,000	\$391,000,000
Capital Appropriation	\$417,000,000	\$104,000,000	\$521,000,000
Total Operating and Capital Appropriation	\$732,000,000	\$180,000,000	\$912,000,000
Grand Total			

EBMUD’s maximum monthly wastewater charge for a single family residential account is \$14.93, which includes a \$4.92 service charge, \$0.17 SF Bay Residential Pollution Prevention Fee, \$4.72 Strength Charge, and \$5.12 maximum flow charge. Non-residential rates are based on wastewater loading and include a monthly service charge, Pollution Prevention Fee, and flow charge. The current top rate is \$8.56 per hundred cubic feet (ccf) and the lowest rate is \$0.60 per ccf. EBMUD also collects a Wet Weather Facilities Charge through the property tax roll to help pay for the Wet Weather Program mandated by the U.S. Environmental Protection Agency to improve EBMUD’s capacity to collect and treat all sewer flows during rainy weather.

A portion of the one percent property tax within the EBMUD sanitary sewer service area (which includes SSD’s service area in Contra Costa County) accrues to EBMUD. In addition, property owners are paying for a bond for the EBMUD sanitary sewer system through the property tax bill. The assessment rate is 0.0065 percent of the assessed value; the bond matures in 2014-15.

EBMUD charges a capacity fee for each new or existing customer that increases demand for treatment processing, measured in wastewater volume and strength. The one-time charge is based on the maximum monthly wastewater volume and average strength. For single family residences, the capacity fee is \$1,125.

9.6 Opportunities for Shared Facilities

EBMUD owns and operates all of its infrastructure, including interceptors, main treatment facility, and wet weather facilities. SSD, as noted in *Section 6.3*, participates in the EBMUD

JPA. SSD participates on the EBMUD Technical Advisory Board to ensure that the interests of SSD are represented. SSD is able to contract for certain services through EBMUD contracts established with field service contractors.

9.7 Local Accountability and Governance

EBMUD operates under the oversight and guidance of a Board of Directors elected by wards by the voters within each of the wards. EBMUD’s governance is summarized in *Table 9.7* below.

Table 9.7
East Bay Municipal Utility District Governance

Date Formed:	1923		
Statutory Authorization:	Municipal Utility District Act of 1923		
Board Meetings:	District Office, 2 nd and 4 th Tuesday each month at 1:15 pm		
Member	Title	Term Expires	Compensation*
Lesla R. McIntosh*	President	12/31/2008	\$1093/month
John A. Coleman*	Director	12/31/2010	
Katy Foulkes*	Director	12/31/2010	
Andy Katz*	Director	12/31/2010	
Doug Linney	Vice President	12/31/2008	
Frank Mellon*	Director	12/31/2010	
William "Bill" Patterson	Director	12/31/2008	

* Ward falls within Contra Costa County

Meeting notices and agendas are posted at least 72 hours in advance at the EBMUD office and on EBMUD’s website (www.ebmud.com). EBMUD Board meetings are open and accessible to the public. EBMUD also provides public information through its website, including meeting minutes, the ordinance code, project information, annual reports, technical reports, fact sheets, newsletters, water supply reports, EIRs, budget and financial information as well as other service information.

As indicated above, Alameda LAFCO is considered the principal LAFCO for EBMUD and provided written MSR determinations, SOI options and recommendations as part of the *Alameda LAFCO MSR Volume II – Utility Services* (November 2005).