East Bay Municipal Utility District



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### East Bay Municipal Utility District



### from the general manager



Employees are the heart and soul of EBMUD. They have enabled us to serve pristine Sierra water to East Bay customers reliably, year in and year out, since 1929. Collectively, they create a work culture that values excellence and embodies a service ethic that permeates all operations at the District.

We have always strived to create a work environment that encourages employees to stay. And they do – a quarter of our workforce has been at the District for 20 years or more. But now our stable workforce is changing: large numbers of long-term employees are retiring. More than three quarters of our workforce is over 40, and one third of these Baby Boomers will retire within the next five years.

EBMUD has a history of attracting top personnel and providing comprehensive training programs to further develop existing employees. We recognized the immediate need to take steps to ensure that ample talent will be available to do the District's work today and tomorrow.

### Growing the Next Generation Workforce

With the future in mind, we've instituted improvements in traditional recruitment and developed training strategies to maintain a pool of employees with high levels of technical expertise (often quite specialized), who are ready to handle increasingly complex work, new regulations, cost pressures and shifting customer expectations.

To enhance recruitment efforts, we send staff into local schools to promote professions that are necessary and valuable to a water district. We want students to understand that people in these positions are directly responsible for protecting San Francisco Bay, ensuring water quality and delivering excellent water and wastewater service. During selection, we use a variety of assessment tools, and also look for a new recruit's commitment, focus and ability to learn.

New leadership academies for management and the trades rely on a shared commitment between EBMUD and its employees to build confidence and competence throughout the organization. Mentoring strengthens working relationships, builds internal and external networks, and helps capture institutional knowledge. Our employees have really stepped up. Our in-house experts are already proving themselves to be highly qualified as job candidates, and have shown they are also better prepared to hit the ground running after promotions to advanced positions.

Our talented and dedicated staff have made possible the success and progress we have made this year on so many fronts. We are closer than ever to delivering a dry-year water supply, and have worked tirelessly to maintain our system and protect it from damaging earthquakes. Our water quality remains some of the best in the nation. We continue to offer our customers more flexibility and better service. We protect our watershed lands, promote water conservation and reuse, and teach children to do the same. By implementing plans to develop our highly-skilled workforce, we are well on our way towards ensuring a successful future – for EBMUD, for our employees, and for the communities we serve.

Dennis M. Dieme

Dennis M. Diemer General Manager

### On the Cover

EBMUD has 2,000 employees, many of whom help customers directly. Field Service Representatives are problem solvers. They get to know their customers and community personally while they check leaks, provide conservation information, and work with customers to avoid water shut-offs.

### Reliability

Reliability It takes constant effort to ensure that EBMUD'S water system is reliable 24/7. Here, crews working at night (to mini-mize traffic disruptions) build a new pipeline connecting the water systems of EBMUD, San Francisco and Hayward. Now, the three agencies will be able to provide essential water for each other, and their customers, during emergencies.

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## Reliability Always There

What does it mean to always be there? Day to day it means working around the clock to provide the high level of service our customers expect. It also means well-planned improvements that will keep our operations running smoothly for years to come.

### Earthquake-Ready

Diligent planning helps to ensure water will be available quickly after a major earthquake. EBMUD's seismic improvements provide substantial reinforcement, redundancy and operational flexibility. Completion of the Claremont Tunnel seismic upgrades will wrap up the last major element of EBMUD's \$189 million Seismic Improvement Program, begun in 1995. The Claremont Tunnel, crossing the Hayward Fault near Tunnel Road in Berkeley, conveys water to 800,000 customers west of the Oakland-Berkeley Hills. EBMUD is upgrading portions of the original tunnel and constructing one final critical piece of infrastructure: a new bypass tunnel to replace the old one where it is most vulnerable.

Workers pour a concrete floor for the Claremont bypass tunnel. A creative design accommodates large earth movements where the tunnel crosses the Hayward Fault, so EBMUD can continue to deliver essential water supplies.



Excavation and the concrete lining were completed in the new bypass tunnel, designed to resist a major earthquake, with a separate pipe inside to ensure essential water delivery. During winter 2006-07, the Claremont Tunnel will be shut down to connect the bypass to the existing tunnel and complete grout reinforcement.

EBMUD routinely inspects and assesses facilities using advanced seismic and engineering techniques. In 2004, a study of San Pablo Dam, coordinated with the California Division of Safety of Dams, showed some of the soils and foundation of the dam are susceptible to liquefaction. In a maximum credible 7.5 earthquake on the Hayward Fault, the dam could slump, allowing water to flow over the top. EBMUD lowered the water behind the dam to protect downstream communities.

This year, EBMUD completed a preliminary design and all environmental studies for a permanent retrofit. We will improve the embankment by mixing existing soil with cement for extra strength and adding a larger downstream buttress. Design is under way and we expect two years of construction to begin in 2008. During construction, the reservoir will remain in service at the lower water level.

### Linking for Reliability

Linking pipelines with neighboring water suppliers adds reliability, allowing all of us to better serve customers during emergencies

or planned maintenance. EBMUD, the San Francisco Public Utilities Commission and the City of Hayward are building an intertie (interconnection) to transfer up to 30 million gallons per day (mgd) among the agencies. The California Department of Water Resources awarded a \$2.6 million grant for the construction, begun in January 2005 and expected to be in service by early 2007. The Contra Costa Water District (CCWD) began construction of another intertie in Brentwood, where EBMUD's Mokelumne Aqueduct and CCWD's Los Vaqueros Pipeline cross. This link will provide water to CCWD after EB-MUD completes the Freeport Regional Water Project on the Sacramento River in 2009, and will supply up to 100 mgd of untreated water to either EBMUD or CCWD in an emergency.

### System Improvements

By continually improving our water system, we provide the best service to East Bay residents and businesses. The Water Treatment and Transmission Improvements Program combines more than 20 upgrades to modernize treatment and move water quickly and efficiently. EBMUD's system of treatment plants, reservoirs and pipelines serving Lamorinda and Walnut Creek is generally effective, but the location and capacity of some facilities is not adequate for current peak use or for projected increases in demand. Improvements will replace aging infrastructure, help meet upcoming water quality regulations and correct operational constraints.

The Lafayette Water Treatment Plant will be upgraded and expanded, and improvements will also be made to the Walnut Creek, Orinda, Oakland, and Sobrante water treatment plants. Plans include new facilities and upgrades of pipelines, pumping plants, and water storage tanks in Walnut Creek, Orinda, Moraga, Lafayette and portions of unincorporated Contra Costa County.

As part of the environmental review process, EBMUD staff made a concerted effort to provide information and encourage public involvement by all the communities potentially affected. The Environmental Impact Report was certified by the EBMUD Board of Directors in December 2006. Design and construction will be phased over the next eight to ten years.

### Protecting EBMUD's Aqueducts

EBMUD's three Mokelumne Aqueducts bring untreated water 90 miles from Pardee Reservoir to East Bay treatment plants or reservoirs. Because maintaining these links from our Sierra supply is critical, EBMUD has worked to repaint 10 miles of the elevated Aqueduct No. 2 where it crosses the Delta to prevent corrosion. Environmental and worker protection measures kept personnel safe while they removed lead-based paint.

EBMUD has partnered with five reclamation districts (responsible for levees) to prevent levee failure and flooding where elevated sections of our aqueducts cross the Delta. This \$10-million, multiyear program helps bring levees to Corps of Engineers agricultural levee standards. EBMUD has contributed \$6.6 million to date. EBMUD also is participating with other agencies in the Department of Water Resources long-term Delta Risk Management Strategy and Visioning Process. Stakeholders are assessing potential risks to regional and state-wide water supplies from Delta flooding due to sea level changes and earthquake-induced levee failures.

### Walnut Creek-San Ramon Valley Improvements

To improve water quality and increase reliability for customers in Walnut Creek and the San Ramon Valley, EBMUD began \$180 million in improvements in 2002. A pumping plant and pipeline in Alamo were completed in 2004. In 2006, upgrades to the Walnut Creek Water Treatment Plant were completed to provide added storage, seismic upgrades and innovative water treatment. Final testing and site restoration for a new pipeline in Walnut Creek were also completed in 2006.

### Maintaining Our Systems

The District minimizes unplanned water service interruptions with timely corrective and preventative maintenance of our water storage, treatment, and distribution systems using a defined priority system. Recently updated, this system better prioritizes maintenance activities based on safety, regulations, water quality, water production and customer service goals. We also continued development of an improved asset and infrastructure management system to track maintenance work to increase reliability and make future modifications easier.

### Innovative Protections for Land and Sea

In the early 1940s, East Bay voters demanded an end to raw sewage being discharged directly to the east shore of San Francisco Bay. EBMUD used its engineering know-how to find a solution. Since 1951, protecting the Bay has been a hallmark of EBMUD's Special



Ensuring that EBMUD's Mokelumne Aqueducts are ready to withstand earthquakes and flooding has long been a key component of our planning and maintenance efforts. These pipelines travel 90 miles, crossing the San Joaquin Delta, to bring vital water supplies to the East Bay.

District No. 1, providing wastewater treatment for more than 650,000 people. This year, upgrades to the system helped keep the Bay healthy, improved the work environment, and provided new research.

One of the by-products of wastewater treatment is methane. For more than 20 years we have recovered the gas to fuel generators powering operations at the main wastewater treatment plant in Oakland. We burn fewer fossil fuels and rely less on energy providers. EBMUD won an Environmental Achievement award from the U.S. Environmental Protection Agency for a pioneering program to convert tons of food waste into megawatts of power, used at the plant or applied to California's power grid. A first in the U.S., the program breaks food waste down in an environmentally responsible manner and increases methane gas production.

Nutrient-rich biosolids, another treatment by-product, are applied to non-food crop land as a soil amendment or used to cover landfills. EBMUD completed groundbreaking research on how pathogens are destroyed in the anaerobic digestion process. The work won a National Association of Clean Water Agencies' Research and Technology award, and may lead to more biosolids being safely recycled in agriculture worldwide.

EBMUD's \$8.5-million new Vortex Grit Removal System removes small rocks and sand from wastewater, saving energy, reducing operating costs, protecting downstream facilities, and providing additional capacity during wet weather. The design for the \$5-million Centrifuge Reliability and Odor Control System Improvements Project provides additional back-up so existing wastewater facilities can be taken off line for maintenance. Decreased odors benefit employees and neighbors.

Water Supply EBMUD continually searches for the best ways to provide a reliable water supply for customers, and recycled water is one of those options. This new tertiary treatment plant will provide safe, high-quality recycled water for landscape, industrial and commercial customers along the east shore of San Francisco Bay.

## Water Supply Creative Solutions

Guided by an Urban Water Management Plan, EBMUD's long-term water supply plans emphasize creativity and diversity. By stretching existing resources and keeping a mix of projects on track, we provide our customers with the most reliable service possible, even in the face of droughts or emergencies.

### Water for Dry Years

The Freeport Regional Water Project, EBMUD's key to meeting dry-year needs, will provide up to 100 million gallons a day (mgd) for EBMUD customers and 85 mgd for future needs in Sacramento County. EBMUD is partnering with the Sacramento County Water Agency to build this regional water project near Freeport on the Sacramento River. The Freeport Project will limit potential rationing for EBMUD customers to 25 percent and reduce economic losses during droughts.

The project includes a 185-mgd intake and pump station on the Sacramento River and 17 miles of large-diameter pipe extending to the Folsom South Canal. EBMUD's share will flow south down the canal to a 100-mgd pumping plant, then through 19 more miles of pipe to a second pumping plant near Camanche Reservoir and into the Mokelumne Aqueducts. Design is well under way on the \$850-million project. Construction will begin in 2007 and is scheduled for completion in 2009.

### Every Drop Counts: Water Recycling and Conservation

Water recycling is a growing part of EBMUD's water portfolio. After years of preparation, the San Ramon Valley Recycled Water Program, a partnership between EBMUD and the Dublin San Ramon Services District, began delivering water to irrigation customers. This year marked completion of Phase 1 facilities including the tertiary treatment plant, which produces high-quality recycled water. EBMUD connected customers to the system by retrofitting their plumbing for recycled water and installing pipelines and meters. We retrofitted 23 of 39 sites, including parks, greenbelts and schools. Cross-connection testing ensured complete separation of potable and recycled water systems. Staff launched an award-winning site evaluation program to help customers make the transition successfully from potable to recycled water. This first phase will deliver 0.7 mgd annually. When completed, the SRVRWP will supply 2.4 mgd to parts of San Ramon, Danville and Blackhawk.

The East Bayshore Recycled Water Project will provide 2.5 mgd of recycled water to portions of Alameda, Albany, Berkeley, Emeryville, and Oakland for irrigation and other uses. Construction began on a 1.5-million-gallon storage tank and tertiary-treatment plant at our Oakland wastewater treatment plant, while EBMUD



This illustration shows a water intake facility on the Sacramento River that employs innovative architecture and showcases public art. Part of the Freeport Project, this structure will divert water from the river for delivery to EBMUD and Sacramento County customers.

crews installed 2.2 miles of distribution pipeline in a congested area of downtown Oakland during record rains. Deliveries of 0.7 mgd will begin in spring 2007, and first-phase construction will continue into 2008.

EBMUD is working with our largest water customer, the Chevron Refinery, to increase recycled water use. The Richmond Advanced Recycled Expansion (RARE) Water Project would produce up to 4 mgd of ultra-pure recycled water for use in Chevron's boilers. Microfiltration and reverse osmosis pilot testing were successful, and EBMUD and Chevron began identifying facility locations. The West County Wastewater District will supply wastewater for RARE. EBMUD began environmental review, including public outreach and education, and started preliminary design. Additionally, to expand recycled water use in Chevron's cooling towers, EBMUD initiated upgrades in summer 2006 at our North Richmond Water Reclamation Plant. These improvements, plus RARE, would meet about half of Chevron's needs, freeing up 6 mgd of our supply – enough for about 37,500 people.

EBMUD water conservation programs reduce water demand through education, marketing, financial incentives and research. Water-efficient practices help customers save on their water and energy bills, better prepare us for drought, and contribute to water supply sustainability. Last year, in spite of record rain and snow in our watershed, more than 11,000 customers benefited from water conservation services. EBMUD worked with retailers on



water-efficient hardware and rebates, and distributed nearly \$1 million in rebates to customers for purchasing water-efficient products.

EBMUD offers "key account" services for large water users to target savings opportunities. This year, EBMUD focused on homeowners' associations, property managers and select commercial and industrial customers. The U.S. Postal Service received \$50,000 in incentives and saved \$40,000 in annual water bills. With waterefficient restroom fixtures, USPS saves nearly 7 million gallons per year.

EBMUD provides guidance on water-efficient landscape design and promotes sustainable landscape practices through our awardwinning book *Plants and Landscapes for Summer-Dry Climates.* EBMUD partnered with the developer of a new community in the San Ramon Valley to create a water education center that demonstrates water-wise technology. EBMUD worked with the City of Richmond and community organizations to install a water conservation demonstration garden at Richmond Civic Center that showcases native and climate-appropriate plants, educational signs and an innovative low-water-use irrigation system.

Pilot studies of advanced metering systems may improve customer service and water efficiency. With assistance from the U.S. Bureau of Reclamation, EBMUD retrofitted more than 300 residential water meters with devices to record and transmit hourly meter readings remotely. With precise information about water use, we can identify leaks, irrigation problems and other high-water-use activities, saving thousands of dollars on customers' water bills and millions of gallons of water.

### Desalination

Today, lower costs, better technology and strong regional partnerships are making desalination a competitive water-supply option. The Bay Area Regional Desalination Project could serve 5.4 million customers of the Contra Costa Water District, the San Francisco Public Utilities Commission, the Santa Clara Valley Water District and EBMUD. This 65-mgd project could provide water during Each customer's situation is unique. EBMUD water experts provide specialized help for residents, businesses and institutional customers so they can learn ways to conserve water that work for them.

emergencies, droughts and major facility repairs. Of 21 sites evaluated, three are being studied further: one in eastern Contra Costa County, one at EBMUD's Oakland wastewater plant and one at San Francisco's Oceanside wastewater treatment plant. A feasibility study, supported by a California Department of Water Resources (DWR) grant, will be completed by spring 2007. A \$1-million grant will pay half the costs of pilot testing, and further work will be planned once piloting is completed in 2009. EBMUD's Low-Energy Application of Desalination (LEAD) Project proposes to capture unused steam energy at C&H Sugar in Crockett to power the plant and reduce the energy costs of desalination. This project could produce 1.5 mgd of water for C&H's industrial processes freeing enough water to serve more than 14,000 people. EBMUD will work next on environmental documentation and institutional arrangements, with DWR slated to provide \$3 million to support the project.

### **Using Aquifers for Storage**

Another component of EBMUD's water supply portfolio is the Bayside Groundwater Project in San Leandro/San Lorenzo, which will store surplus water available in wet years in an underground aquifer for use in dry years. The project includes a well to inject and remove water from the aquifer, a water treatment plant, a monitoring well network, piping, and a ground subsidence monitoring system. A portion of the project will be paid for with a \$2-million grant from the California Department of Water Resources. The environmental impact report for the 1-mgd project was certified in November 2005. Project design should be completed by early 2007 with treatment plant construction to be finished in 2008.

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### Nater Quality

Operating water treatment plants to ensure that all customers get high-quality EBMUD water is a 24-houra-day job. This year, EBMUD upgraded this water treatment plant in Kensington to ensure dependable service while the Claremont Tunnel, which serves 800,000 customers west of the Oakland-Berkeley Hills, is out of service for a seismic retrofit.

# Water Quality

EBMUD works around the clock to bring pristine Sierra snowmelt from the Mokelumne River watershed to the East Bay. We apply the latest science, adhere to all regulations, and set and monitor even more stringent internal water quality goals to assure the high quality customers expect.

### **Ensuring Clean Water**

This year, our water treatment plant in Orinda was recognized for extraordinary performance over the long term, consistently producing water exceptionally low in turbidity while meeting all water disinfection goals. EBMUD developed the skills, policies and procedures to maintain excellent water quality in the midst of water supply changes and weather-related difficulties or operational challenges. Orinda is the first water treatment plant in California and the fifth plant in the U.S. to receive the American Water Works Association Partnership for Safe Water "Excellence in Water Treatment" Phase IV award.

EBMUD has a history of vigilance about water quality. We work to protect our customers' water supply every step of the way by guarding the watershed lands surrounding our reservoirs, testing water as it travels many miles through aqueducts and distribution pipelines, and maintaining the best water storage and treatment. The U.S. Environmental Protection Agency (EPA) and the California Department of Health Services set public health regulations water utilities must meet. EBMUD continually tests for more than 100 chemical and biological constituents and follows strict operational rules to meet health-related and aesthetic drinking water regulations, and this year, met them all. EBMUD views regulatory limits as our minimum standards of quality, and sets more than 100 of our own goals, including possible contaminants not yet regulated. We also factor in customer satisfaction. This year EBMUD met 99 percent of our internal goals.

Water quality regulations are based on constantly evolving science, continually revisited to reflect new information. EBMUD actively supports scientific advancements in water quality through involvement with research organizations such as the American Water Works Research Foundation and the Water Environment Research Foundation, and participates on the National Drinking Water Advisory Council advising the EPA on water quality. EBMUD worked with the EPA to craft revisions to lead and copper regulations to further reduce lead exposure from drinking water, and to create new regulations to protect quality as water is transported from treatment plants through miles of pipe. EBMUD worked with other water agencies and the EPA to develop a contaminant warning system, now being pilot tested by the EPA.



### Getting the Lead Out

EBMUD took action in 2006 to help protect our customers' health - and all California water consumers - by asking former Assembly member Wilma Chan (D-Oakland) to introduce Assembly Bill 1953, which was signed into law by Governor Arnold Schwarzenegger in September 2006. This law will reduce exposure to lead from drinking water in customers' homes, workplaces and schools by phasing out the lead in drinking water plumbing fixtures (e.g. faucets) sold in California. Lead levels in EBMUD's water are consistently low, well below state and federal limits for drinking water, because our source water is virtually lead-free. In addition, we use modern treatment technologies and install only lead-free plumbing in our distribution system. But after water moves through EBMUD's system, it can come in contact with brass household plumbing containing lead (current law allows up to eight percent lead), which can leach into the water at the faucet. AB 1953 maintains the strict regulatory testing requirements for reducing lead in drinking water that all water utilities must meet, and provides added protection by removing lead from plumbing parts, which will be required to contain no more than one quarter of one percent lead beginning in January 2010.

### Partnerships Help Protect Resources

EBMUD, citizens, water agencies, environmental groups and agricultural interests must work closely together to protect water quality and plan for water supplies in ways that benefit the region and state.

In June 2005, EBMUD and 12 public agencies interested in Mokelumne River water resources signed a memorandum of understanding to cooperatively study water supply alternatives that improve water quality and reliability and protect natural watershed resources. Mokelumne River Forum stakeholders envision a multiyear process of outreach to engage other interested groups and develop solutions. Initial work will focus on defining communication protocols and negotiating parameters.

The Upper Mokelumne River Watershed Authority, established in 2000, meets quarterly to address Upper Mokelumne River watershed issues of mutual interest to EBMUD, Amador, Calaveras, and Alpine counties, and their water districts. The joint powers authority is conducting two projects. The \$1.2-million Upper Mokelumne River Watershed Assessment and Planning Project received more than \$950,000 in CALFED grant funding, with authority members proportionately contributing the balance to develop watershed management strategies and preserve ecological resources. The second project is an \$82,000 member-funded K-12 education program focused on watershed stewardship for public schools in Amador and Calaveras counties.

In fall 2006, EBMUD began to develop a master plan outlining longterm management of our 28,000 acres of Mokelumne watershed land. When adopted, the Mokelumne Watershed Master Plan will replace the District's 1970 Land Use Master Plan. The new master plan project includes a watershed assessment to identify the effects of current and planned land uses on water quality and resource protection. The assessment will help EBMUD develop land-use policy and guidelines to protect water quality and habitats while meeting financial goals. A community liaison committee will provide a forum for stakeholder input, and the public will be invited to provide comment during the environmental review process.



To ensure our water quality, EBMUD checks 1,400 samples per month; processes 200,000 lab results a year; makes 10,000 field tests each month; and monitors more than 200 on-line stations.

With \$1.1 million provided by the CALFED Bay-Delta Authority, EBMUD is working with the Southeast Sacramento County Agricultural Water Authority, the Nature Conservancy, Sacramento County Water Agency, Sacramento Area Flood Control Agency, the University of California at Davis, Reclamation District 800, the San Joaquin County Resource Conservation District, and local landowners to evaluate potential floodplain improvements in the lower Mokelumne and Cosumnes rivers. The goal of the project is to develop a management plan and prioritize actions to enhance floodplain and riparian habitats, reduce flood damage, and recharge groundwater. The Cosumnes and Mokelumne Rivers Floodplain Integrated Resources Management Plan will be completed in spring 2007.

# Customer Service

EBMUD constantly works to understand our customers' expectations and experiences with us, so we can improve service. We continue to expand web and phone service to offer 24/7 access and add more options. We cultivate a strong customer service ethic, hiring people who are professional, empathetic and excellent at followthrough. We help staff shine by providing training and technical support. Meter readers, customer service representatives, the plumbers fixing a leak in your street, our engineers and planners, all help ensure your water service and water quality remains the best.

### What Do Our Customers Say?

EBMUD began implementing a new customer service survey that tells us most customers are pleased with the service provided by our contact center. About 50 percent of people calling in were asked to participate in a brief five-question survey. The results tallied so far show that 94 percent of customers rated their experience as excellent or good, surpassing our key performance goal. EBMUD uses survey information to assess customer responsiveness, and to identify topics to include in training programs that best support our staff and serve our customers better.

### The New Information Age

EBMUD's database of customer information served us well, but its age (20 years old) was showing. EBMUD completed a software

### Working from Home

Some EBMUD contact center employees work from home while providing the same high level of customer service. These customer service representatives save time and money by not commuting and help the environment by taking some cars off the road. They love the arrangement, and most importantly, these employees can respond quickly to customer calls during an earthquake or other disaster if our Oakland offices are damaged.

### **First Call Resolution**

Customers are happiest when they don't have to call us repeatedly to get the service they need. As part of a continuous effort to improve service, we identified ways to resolve most issues during the

first phone call. Better coordination quickens turnaround time for leak repairs and allows us to notify customers of repair procedures and timelines. New door hangers will provide contact information in different languages, and easy checklists help those with high bills to lower water use. Overall, customers will have better information upfront, resulting in fewer follow-up calls.

### **Doing Business with EBMUD**

A new tool for businesses, implemented in fall 2005, makes it easy for large customers to sign up for new water service, get cost estimates for installation, and track work requests online. Customers who want a new large fire service, or require information about fire flows required to adequately design their internal fire protection system, can receive the information online. Developers can determine fire flows upfront, saving the time and cost of redesigns that can occur when information is based on pressure data from nearby hydrants. EBMUD also saves time and gets assurance that proper pressures are used to develop fire protection systems. So far, the system has received unanimous praise from customers, who say it is efficient and customer-friendly.



Meter Readers process up to 10,000 accounts each day. They make sure that customers get their bills on schedule and generate billing for 85 percent of the District's revenue. Meter routes were reviewed and adjusted using route management software, resulting in increased stops and more efficient, tighter routes.

billing details or ask a representative to provide water conservation or leak information online. System selection should be completed in early 2007.

### **Emergency Planning**

Water utilities, especially in fault-ridden California, have a history of planning for emergencies. But after Hurricane Katrina, interest rose in emergency planning by agencies who want to do everything possible to help customers and employees during a disaster. The California Water/Wastewater Agency Response Network (CalWARN), launched in 1992 with support from EBMUD and other water utilities, now has 230 member agencies. CalWARN's mutual assistance agreement helps agencies quickly dispatch or receive equipment, material and workers to restore service for local water utilities suffering damage during emergencies. Our customers have an extra layer of protection beyond our own extensive emergency planning efforts because we can quickly ask other agencies in the network to send help.

evaluation and is now selecting a new customer information system that will profoundly affect the way EBMUD works. Modern technology streamlines out-of-date processes and consolidates stored data, improving information sharing – and customer service

throughout EBMUD. The new system will provide opportunities to record information for improved analyses of operations and service and offers a more effective interface with work management and financial systems, so staff can respond to problems more quickly. Expanded online services will provide more choices for customers, who will be able to request water service, review

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"Someone with happiness in their voice." That's what this Customer Service Representative believes makes for good customer service. Aware that each and every interaction leaves an impression on customers, EBMUD representatives are trained to listen well, handle tricky calls, demonstrate etiquette and problem-solve with ease.

### Stewardship

Dedicated stewardship and a customer service attitude are core traits of EBMUD rangers, who diligently guard watershed lands surrounding our reservoirs in the East Bay and Mother Lode. By managing these remarkable resources they do what matters most: protecting our water quality and the environment.

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## Stewardship The Nature of Our Business

Environmental protection, high-quality water and responsible sewage treatment go hand in hand. Our customers rely on us to protect San Francisco Bay and the 56,000 acres of watershed land under our watch, and we rely on a clean environment for a reliable supply of pristine water.

### Success in the River

The Lower Mokelumne River Chinook salmon population continues to demonstrate long-term sustainability. By managing river flows, maintaining the Mokelumne River Fish Hatchery, and by enhancing and restoring river habitat, EBMUD helps support the health of fall-run Chinook salmon and steelhead trout populations in the Lower Mokelumne River. We also monitor the number of salmon that return to the river. The average annual count is 4,252 salmon, and the highest number recorded was 15,861 salmon in 1983. This year's news was even better: fall counts were up to 16,140.

Salmon spend most of their lives in the sea, returning to their native freshwater streams to reproduce. In the past decade, EBMUD placed more than 17,000 cubic yards of gravel downstream of the Camanche fish hatchery to enhance natural habitat, improve spawning areas and increase egg survival. This year we added 4,400 cubic yards of gravel to the river, using mathematical models to maximize spawning habitat.

Below Camanche Dam, EBMUD, the California Department of Fish and Game and the U.S. Fish and Wildlife Service restored 12,000 square feet of salmonid rearing habitat in two isolated channels below Camanche Dam. The channels were lined with gravel after being excavated to provide increased water flows and re-establish the channel's connection to the river during spring flood releases.

### Stewardship for the Next Generation

In 1974, EBMUD launched a school program to instill a water conscience in future generations. Through teaching materials, assembly programs and hands-on watershed learning, students develop a sense of individual responsibility and the knowledge needed to conserve a limited natural resource.

EBMUD recently helped establish an upcountry (Mokelumne area) Youth Watershed Stewardship Program, which promotes understanding and protection of watershed lands through a series of classroom lessons and field trips.

Last year EBMUD partnered with local educators to give students a chance to understand a watershed: what lives there, the impact of humans on the land, and how water travels through a watershed. District Ranger-Naturalists led students in a variety of interactive field lessons, including watershed restoration, showing the need to preserve and protect the future of these precious resources.



Students involved in real-life environmental restoration better understand life on the watershed and learn how they can make a difference. Here, students get ready to plant willows along an East Bay creek to prevent soil erosion and sediment runoff.

Students planted willows and wetland grasses to help restore eroded areas. These hands-on lessons provide relevant and meaningful experiences for young students, who see first-hand what it means to care for the land, and practice watershed stewardship while having fun.

### A Home for Majestic Eagles

Careful watershed planning assures that protecting water quality also protects our environment – and the plants and wildlife that comprise it. Bald eagles are regular wintertime visitors to Pardee and Camanche reservoirs, where an abundance of fish provides a reliable food source. Our protected habitat led to annual visits, and remarkably, this year eagles successfully raised their young at both foothill reservoirs and at San Pablo Reservoir in the East Bay for the first time. The majestic residents are living proof that responsible watershed stewardship can create ideal habitat for iconic wildlife.

### Spring Cleaning

Unfortunately, not all watershed neighbors are careful about how they treat watershed lands. One section of private property along the Mokelumne River had become a dump, threatening to pollute our water supply. EBMUD took the initiative to inspect the area and partner with local communities to remove the junk from this Pardee Reservoir tributary. During the five-day clean-up, crews removed 221 tires, seven vehicles, appliances, engines, mattresses, eight trailer loads of recyclable metal and 44 bags of trash. Enhanced patrols and new signs in the area are now in place to help prevent future dumping.

### Finances Sound Money

### **Smart Buying**

Using sophisticated purchasing strategies for long-term contracts, EBMUD concentrates on price management and consistent sources. Our approach has inspired other public agencies who are asking us how to utilize our strategy for their own long-term contracting. This is one factor leading the National Purchasing Institute to recognize EBMUD with its Achievement of Excellence in Procurement award – for the seventh consecutive year.

EBMUD's purchase card program is a significant part of our purchasing strategy. It allows us to complete high-volume, low-dollar transactions quickly, leaving us time to focus on cost control for low-volume, high-dollar purchases. The program has helped us reduce outlay for high-cost materials by \$1 million annually since 1996. Despite price increases, program administrative costs rose by only 6 percent, resulting in annual avoided costs of about \$400,000. In fiscal year 2006, the bank sponsoring our purchase card program reimbursed us \$60,000 for the purchasing volume generated.

Teamwork helped extend EBMUD's contract for managing biosolids (organic by-products of the wastewater process) for another five years. This will potentially save EBMUD ratepayers more than \$3.5 million in operating costs over the next several years and ensure use of biosolids in an environmentally beneficial manner – often for soil amendment for non-food crops.

Tracking project schedules and budgets is part of responsible project management. EBMUD designed and built WebPM software to track projects using data from our financial databases and other sources. WebPM simplifies comparisons of budgets to completed work and schedules, and provides an early warning system if trends show potential future project overruns, helping managers make needed changes early and complete projects within budget.

EBMUD implemented a self-service module for employees to check benefits online, thus making benefits administration more efficient. This new system was much needed, but consultant costs of \$750,000 did not fit our budget, so in-house staff streamlined processes, built, tested and refined the benefits system, and put the software into production. Today, employees, EBMUD, and insurance providers all benefit from full automation of health and other insurance, deferred compensation and work leaves. Simplifying the benefits process saves money and provides better service.

### **Resourceful Savings and Efficiencies**

In January 2006, the City of Oakland, in partnership with the California Public Utilities Commission, awarded EBMUD an energy rebate check for \$9,000 for implementing measures that reduced long-term energy use at our administrative headquarters. The "tune-up" included installation of high efficiency heating and cooling equipment and accompanying control systems. Energy savings are estimated at 5 percent, or \$40,000 annually.

A wet winter boosted production at EBMUD's hydroelectric power facilities at Pardee and Camanche dams. Net revenue from hydropower sales for fiscal year 2006 was \$11 million, or 220 percent of the budgeted amount of \$5 million.

### Measuring Up

To better judge how we are achieving our goals, EBMUD defined 41 Key Performance Indicators that are measurable, comprehensive, and reflect our six Strategic Plan goals – and go well beyond financial indicators. We assessed performance in relationship to the targets, and set new targets for fiscal year 2007. In fiscal year 2006, EBMUD met 81 percent of our targets. We did especially well in three areas: customer service (excellent customer survey ratings, telephone response goals); infrastructure/maintenance (minimizing unplanned service interruptions and pipeline breaks) and financial indicators (reasonable rates and expenditures within budget). Areas where we will work to improve include how quickly we are reducing our dependence on retail energy use. With successive years of reporting, we will be able to see emerging trends and make improvements as needed.

### **Excellent Financial Health**

Financial controls maintain the integrity of EBMUD's fiscal systems, and we continue to examine our policies to optimize use of debt. EBMUD has worked to maintain and improve excellent bond ratings to get the best interest rates possible, keep maximum flexibility with financing and keep costs low. We balance cost and risk when preparing operating and capital budgets and will expand the capital budget planning horizon from five to 10 years to better plan our long-term infrastructure replacement. A master planning process and tools like life-cycle costing and value engineering improve our decision-making process for capital projects, and better tracking helps projects get done on time and on budget.

This is the second year of a two-year budget cycle, and EBMUD continues to strive for rates that are at or below median when compared to other agencies. Our responsible budgeting was rewarded (for the ninth consecutive time) with a budget award from the Government Finance Officers Association. GFOA found EBMUD's budget document met stringent guidelines and program criteria as a policy document, operations guide, financial plan and communication device.

### **Promoting Equality**

EBMUD has consistently led in promoting diversity and equality in contracting since 1984. Our commitment results in equal opportunities for men and women, small businesses, and all ethnicities, to compete for and receive EBMUD contracts. We continue to identify new firms interested in working with us, and host and participate in training workshops, business development forums and community events to promote diversity in contracting. We added 1,000 firms to our business database and held our first construction business roundtable to hear first-hand about ways to improve the construction contracting process. This year, online registration makes it even easier for vendors to update their contact and work information, so they are less likely to miss a contract opportunity. Recognizing our outstanding commitment to hiring small and minority businesses, this year the Northern California Supplier Development Council inducted EBMUD into its Hall of Fame.

### Comparative Highlights

WATER SYSTEM	2006	2005
During the Year:		
Total Water Consumption, millions of gallons	77,178	74,666
Average Daily Water Consumption, MGD*	211	205
Maximum Daily Water Consumption, MGD	311	310
Minimum Daily Water Consumption, MGD	131	139
At Year End:		
Number of Accounts	379,827	378,547**
Number of Employees	1,646	1,622
Miles of Water Distribution Pipe	4,085	4,065
Operating Distribution Storage Capacity, millions of gallons	833	832
WASTEWATER SYSTEM		
During the Year:		
Average Daily Wastewater Flow, MGD	82	76
At Year End:		
Number of Accounts	177,366	177,087**
Number of Employees	262	278

\*=millions of gallons per day

\*\*=2005 Number of Accounts for Water and Wastewater changed from 379,192 to 378,547 and 177,367 to 177,087 respectively due to different criteria used for statistics in prior year report





### Water System Balance Sheet

(in thousands)

Operating Expenses





### Utility Plant/Long-Term Debt

(in millions)



		AT JUNE 30
ASSETS:	2006	2005
CURRENT ASSETS:		
Cash and Investments	\$124,870	95,883
Receivables: Customer	19,390	17 194
Interest and Other	8,226	17,134 12,524
Materials and Supplies	9,978	9,506
Prepaid Insurance	3,039	709
TOTAL CURRENT ASSETS	165,503	135,756
NON-CURRENT ASSETS RESTRICTED CASH AND INVESTMENTS:		
Cash and Investments:	140 740	000 740
Bond Construction Fund Bond Interest and Redemption Fund	149,743	299,743 418
Debt Service Reserve Fund	33,793	33,793
Funds Received for Construction	91,833	68,585
FERC Partnership Fund	2,280	2,286
APX Monetary Reserve	665	619
TOTAL RESTRICTED CASH AND INVESTMENTS	278,314	405,444
UNRESTRICTED CASH AND INVESTMENTS: Vehicle/Equipment Fund	4,069	3,202
TOTAL UNRESTRICTED CASH AND INVESTMENTS	4,069	3,202
OTHER ASSETS:		
Deferred Bond Refunding Costs	11,560	12,039
Other	5,753	3,191
TOTAL OTHER ASSETS	17,313	15,230
CAPITAL ASSETS:		
Structures, Buildings and Equipment,		
Net of Accumulated Depreciation	2,303,555	2,180,272
Land and Rights of Way Construction in Progress	49,020 314,159	48,993 295,859
TOTAL CAPITAL ASSETS	2,666,734	2,525,124
TOTAL NON-CURRENT ASSETS		
TOTAL ASSETS	2,966,430	2,949,000
	\$3,131,933	3,084,756
LIABILITIES AND NET ASSETS:		
CURRENT LIABILITIES:		
Current Maturities of Long-Term Debt	\$32,420	30,976
Accounts Payable and Accrued Expenses	64,620	64,257
Accrued Interest	7,871	6,651
TOTAL CURRENT LIABILITIES	104,911	101,884
NON-CURRENT LIABILITIES: OTHER LIABILITIES:		
Advances for Construction	13,234	15,219
Other Liabilities	1,474	7,659
TOTAL OTHER LIABILITIES	14,708	22,878
LONG-TERM LIABILITIES, NET OF CURRENT MATURIT		1,760,333
TOTAL NON-CURRENT LIABILITIES	1,777,707	1,783,211
TOTAL LIABILITIES	1,882,618	1,885,095
NET ASSETS:	1,002,010	1,000,090
Invested in Capital Assets, Net of Related Debt	1,021,059	1,033,558
Restricted for Construction	78,599	53,784
Restricted for Debt Service	33,793	33,793
Restricted – Other	2,944	2,905
Unrestricted	112,920	75,621
TOTAL NET ASSETS	1,249,315	1,199,661
TOTAL LIABILITIES AND NET ASSETS	\$3,131,933	3,084,756
For the year ended June 30, 2006, certain account class	ifications have be	en changed to improve

For the year ended June 30, 2006, certain account classifications have been changed to improve financial statement presentation. For comparative purposes, prior year balances have been reclassified to conform with the June 30, 2006, presentation.

# Water System Statement of Revenues & Expenses

### (in thousands)

	FOR THE YEARS ENDED JUNE 30	
	2006	2005
OPERATING REVENUES:		
Water	\$244,280	235,790
Power	11,006	7,031
System Capacity Charges	13,730	12,840
TOTAL OPERATING REVENUES	269,016	255,661
OPERATING EXPENSES:		
Raw Water	24,239	23,152
Water Treatment and Distribution	75,983	72,749
Recreation Areas, Net	8,293	7,825
Customer Accounting and Collecting	11,670	11,382
Financial and Risk Management	16,690	14,423
Facilities Management	10,923	12,496
General Administration	30,871	24,402
Depreciation on Utility Plant	60,542	62,295
TOTAL OPERATING EXPENSES	239,211	228,724
NET OPERATING INCOME	29,805	26,937
OTHER INCOME (EXPENSE):		
Investment Income	18,404	7,657
Taxes and Subventions	19,125	18,267
Interest and Amortization of Bond Expenses,		
Net of Capitalized Interest	(75,622)	(68,547)
Other Income	4,425	5,437
TOTAL OTHER EXPENSE	(33,668)	(37,186)
NET INCOME BEFORE CAPITAL CONTRIBUTIONS	(3,863)	(10,249)
Capital Contributions	53,517	32,022
CHANGE IN NET ASSETS	\$49,654	21,773



### **Operating Revenues**



### Wastewater System Balance Sheet

(in thousands)

Operating Expenses	
(* 111) \	



### Utility Plant/Long-Term Debt

(in millions)



	AT JUNE 30	
ASSETS:	2006	2005
CURRENT ASSETS:		
Cash and Investments	\$28,113	54,726
Receivables: Customer	3.244	3,231
Interest and Other	1,539	1,761
Prepaid Insurance	165	
TOTAL CURRENT ASSETS	33,061	59,718
NON-CURRENT ASSETS		
RESTRICTED CASH AND INVESTMENTS:		
Cash and Investments:		
Bond Construction Fund		2,517
Bond Interest and Redemption Funds	87	337
Debt Service Reserve Fund	3,813	1,300
TOTAL RESTRICTED CASH AND INVESTMENTS	3,900	4,154
UNRESTRICTED CASH AND INVESTMENTS:		
Reserve Funded CIP	12,111	11,773
	5,815	4,314
TOTAL UNRESTRICTED CASH AND INVESTMENTS	17,926	16,087
OTHER ASSETS:	0 5 1 7	0.607
Deferred Bond Refunding Costs Other	2,517 1,008	2,607 693
	,	
TOTAL OTHER ASSETS	3,525	3,300
CAPITAL ASSETS: Structures, Buildings and Equipment,		
Net of Accumulated Depreciation	478,696	469,415
Land and Rights of Way	5,587	5.587
Construction in Progress	30,013	21,278
TOTAL CAPITAL ASSETS	514,296	496,280
TOTAL NON-CURRENT ASSETS	539,647	519,821
TOTAL ASSETS	\$572,708	579,539
	+,	
LIABILITIES AND NET ASSETS: CURRENT LIABILITIES:		
CORRENT LIABILITIES: Current Maturities of Long-Term Debt	\$11,767	11,288
Accounts Payable and Accrued Expenses	12,790	10,936
Accrued Interest	2,031	2,106
TOTAL CURRENT LIABILITIES	26,588	24,330
NON-CURRENT LIABILITIES:	20,000	
OTHER LIABILITIES:		
Other Liabilities	6,110	6,400
TOTAL OTHER LIABILITIES	6,110	6,400
LONG-TERM LIABILITIES, NET OF CURRENT MATURITIES	297,456	307,868
TOTAL NON-CURRENT LIABILITIES	303,566	314,268
TOTAL LIABILITIES	330,154	338,598
NET ASSETS:		
Invested in Capital Assets, Net of Related Debt	205,074	179,641
Restricted for Construction	_	185
Restricted for Debt Service	3,900	1,452
Unrestricted	33,580	59,663
TOTAL NET ASSETS	242,554	240,941
TOTAL LIABILITIES AND NET ASSETS	\$572,708	579,539
For the year ended June 30, 2006, certain account classification	tions have be	en changed to improve

For the year ended June 30, 2006, certain account classifications have been changed to improve financial statement presentation. For comparative purposes, prior year balances have been reclassified to conform with the June 30, 2006, presentation.

# Wastewater System Statement of Revenues & Expenses

### (in thousands)

	FOR THE YEARS ENDED JUNE 30	
	2006	2005
OPERATING REVENUES:		
Sewer	\$42,581	42,244
Wet Weather Facilities Charges	13,839	13,900
TOTAL OPERATING REVENUES	56,420	56,144
OPERATING EXPENSES:		
Sewer Lines and Pumping	11,725	10,678
Sewer Treatment Plant Operations	22,062	20,853
Customer Accounting and Collecting	1,597	1,572
Financial and Risk Management	801	795
General Administration	3,841	4,502
Depreciation on Utility Plant	16,352	16,390
TOTAL OPERATING EXPENSES	56,378	54,790
NET OPERATING INCOME	42	1,354
OTHER INCOME (EXPENSE):		
Investment Income	2,078	1,943
Taxes and Subventions	5,341	4,670
Interest and Amortization of Bond Expenses,		
Net of Capitalized Interest	(13,241)	(15,523)
Other Income	4,918	3,948
TOTAL OTHER EXPENSE	(904)	(4,962)
NET INCOME BEFORE CAPITAL CONTRIBUTIONS	(862)	(3,608)
Capital Contributions	2,475	1,671
CHANGE IN NET ASSETS	\$1,613	(1,937)





# Mission Statement

In the early 1900s, not one of seventeen different private companies could provide the East Bay with a safe, dependable water supply. Communities fed up with the lack of service dreamed of clear, fresh water from the Sierra Nevada. In 1923, seven cities voted to form a municipal water agency with public accountability: EBMUD was born. Today, EBMUD provides water quality that ranks among the best in the world. EBMUD serves Sierra Nevada water to more than 1.3 million people in a

325-square-mile area. A commitment to reliable high-quality water became the cornerstone of EBMUD's practices and remains central to its mission.

Since 1951, EBMUD has consistently protected public health and the San Francisco Bay with responsible wastewater treatment and innovative programs to decrease stress on the coastal ecosystem. EBMUD's wastewater operations serve about 650,000 people in an 83-square mile area along the east shore of the Bay.

### **EBMUD Mission Statement**

To manage the natural resources with which the District is entrusted; to provide reliable, high-quality water and wastewater services at fair and reasonable rates for the people of the East Bay; and to preserve and protect the environment for future generations.

In carrying out this mission, we will:

- Exercise responsible financial management
- Ensure fair rates and charges
- Provide responsive customer service
- Promote ethical behavior in the conduct of District business
- Ensure fair and open processes involving the public
- Provide a healthy work environment
- Promote diversity and equality in personnel matters and contracting
- Promote environmental responsibility



Upper row Robert C. Helwick, General Counsel

Dennis M. Diemer, General Manager

Rema Randle Jones, Assistant to the General Manager

Lower row, left to right

Michael J. Wallis, Director of Operations and Maintenance

David R. Williams, Director of Wastewater

Artis L. Dawson, Director of Administration

Gary Breaux, Director of Finance

Marilyn L. Miller, Director of Engineering and Construction

Rob Alcott, Director of Water and Natural Resources

Randele Kanouse, Special Assistant to the General Manage

Cheryl A. Farr, Special Assistant to the General Manager

# oromising future

### Water for the Next Generation

Students race to haul water – equal in amount to average daily water use – from Lake Camanche. Carrying the water gives them a better sense of how much water they use and promotes appreciation of how convenient and readily available water is.

### **EBMUD** Ward Map



### **EBMUD Service Area**



### 2007 Board of Directors by Warc

Board Member	Ward
Lesa R. McIntosh	1
John A. Coleman	2
Katy Foulkes	3
Andy Katz	4
Doug Linney	5
William B. Patterson	6
Frank Mellon	7

Board meetings are open to the public and held the second and fourth Tuesdays of each month at 1:15 p.m. in the Board Room, second floor, 375 Eleventh Street, Oakland, California.

This is the East Bay Municipal Utility District Fiscal Year 2006 Annual Report (July 1, 2005-June 30, 2006). EBMUD publishes a variety of reports, newsletters, and fact sheets, including the 2006 EBMUD Financial Annual Report and the Water Conservation and Water Recycling 2006 Annual Report.

Please visit www.ebmud.com, or call (866) 40-EBMUD to request a copy of any of our publications.

Dennis M. Diemer, General Manager

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