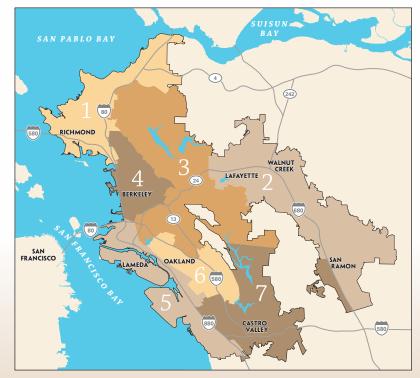
## **EBMUD WARDS**



## **EBMUD SERVICE AREA**



## **BOARD OF DIRECTORS**

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

Alexander R. Coate, General Manager

EBMUD provides high-quality drinking water for 1.3 million customers in Alameda and Contra Costa counties.

EBMUD's award-winning wastewater treatment plant generates renewable energy from waste and protects San Francisco Bay; it serves 650,000 customers.

## Editor: Cheryl Farr

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Photography: John Benson, Abby Figueroa,Todd Salerno, Rich Turner, Kingmond YoungMaps: EBMUD Graphic DesignPrinting: EBMUD Reprographics

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## EAST BAY MUNICIPAL UTILITY DISTRICT

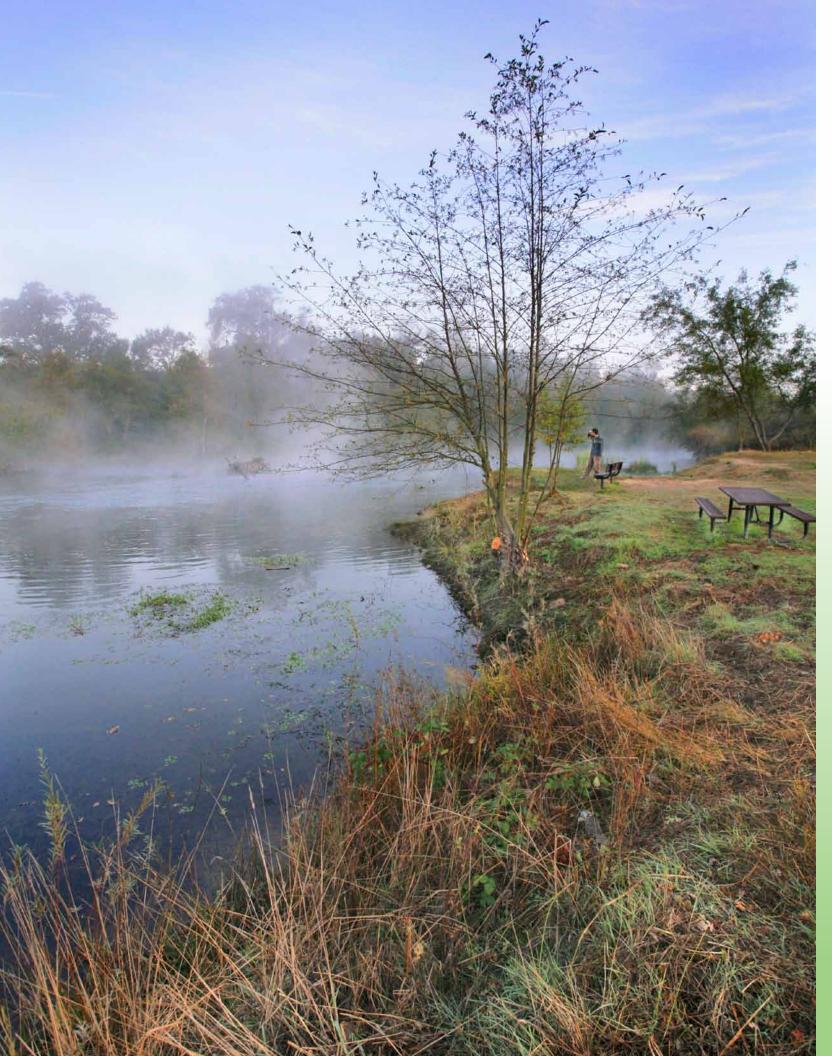
375 11th Street, Oakland, CA 94607 1-866-40-EBMUD www.ebmud.com



## Anticipating Change, **Creating Stability**

THE MELLER

EAST BAY MUNICIPAL UTILITY DISTRICT 2010-2011 BIENNIAL REPORT



## Focus on Reliability

## LETTER FROM THE GENERAL MANAGER

The last two years have been tumultuous. While drought released its grip on our region, record rains challenged us to manage against floods. Excellence in financial management resulted in a AAA bond rating, yet budget shortfalls due to a drought and the poor economy required a hiring freeze and spending cuts. Limited resources meant making tough decisions among capital investments. Still, we made remarkable progress toward a stable future.

EBMUD is weathering the economic challenges the region faces by focusing on the basics: water and wastewater system safety and reliability, and environmental stewardship. We are meeting our targets for infrastructure key performance indicators. We have better drought water supplies and stronger dams in place. We are anticipating future needs by building better customer service software and strengthening our pool of potential employees.

Our good fortune is a pure water source that enables our customers to enjoy water quality that ranks among the best in the world. Our job is to leave a legacy that reveals our commitment to reliability, controls costs, expresses our high regard for our 1.3 million customers and demonstrates our diligent stewardship of the natural resources entrusted to us.

The Mokelumne Day Use Area, adjacent to the Mokelumne River Fish Hatchery, is at the base of EBMUD's Camanche Dam in the Sierra foothills.



The years ahead will continue to test us, and we welcome the challenge. Lean budget years force difficult choices about what matters most, but also catalyze the interest in, and need for, new approaches that will make the organization even better and more efficient in the years to come. Our region has drawn heavily on the 20th century infrastructure that made reliable water supplies and a cleaner Bay possible. Now, it's our turn to continue a tradition of wise investments in the water and wastewater systems for the next generation.

Alupa for Curl

Alexander R. Coate General Manager

## Highlights July 1, 2009 – June 30, 2011

### **OVERVIEW**

On July 1, 2009, an improving water supply outlook allowed EBMUD to end mandatory rationing as drought loosened its grip on the East Bay. For the remainder of that year customers were asked to continue 10 percent voluntary rationing. Soon, abundant winter rain filled reservoirs and by April 2010, EBMUD was able to let customers know that all that was needed was ongoing wise water use.

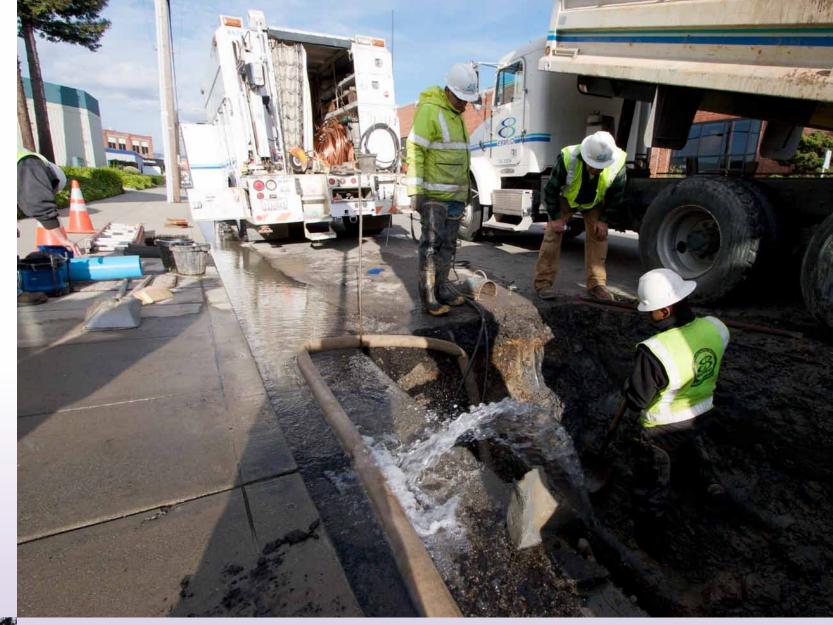
EBMUD practices environmental stewardship at home, building sustainable energy and water-efficient features into new facilities like the Mokelumne Watershed office in the Sierra foothills. Overall, water demand was down between summer 2009 and 2011. The fresh experience of serious shortages plus the economic downturn caused East Bay businesses to slow and families to watch their water budgets carefully. At EBMUD, rigorous cutbacks and prudent budgeting offset revenue shortfalls.

### **RELIABLE WATER SUPPLIES**

EBMUD customers receive 90 percent of their water from the Mokelumne River watershed in the foothills of the Sierra Mountains. Historically, precipitation in this watershed varies widely. Dry years can mean ten times less precipitation compared to wet years. With the recent completion of a new pumping facility on the Sacramento River, EBMUD customers are assured more reliable dry year supplies. EBMUD has studied the future water needs of East Bay residents and businesses to the year 2040. The work to meet those needs is in progress.

### **CUSTOMERS FIRST**

Quality customer service is the result of quality staff. EBMUD cultivates employee knowledge and skill and supplements it with wise use of technology. We ask for customer feedback, and we use that feedback to learn and improve. Over the past two years, we built new customer service software so employees can continue serving customer needs in the future and customers can access information any day at any time.



### **ENVIRONMENTAL STEWARDSHIP**

EBMUD led the effort to reduce the risk of exposure to lead in drinking water by sponsoring state legislation that became a model for national law. We achieved records in regulatory compliance and safe management of water and wastewater facilities that few other entities in the world have matched. To protect endangered species, EBMUD adopted one of the nation's largest Safe Harbor Agreements.

Water supplies were up, yet demand was down. **DURABLE INFRASTRUCTURE** EBMUD held costs down when water system Much of the water infrastructure we rely on today revenues came in lower than budgeted by \$13 was built during the East Bay's rapid growth period million in FY10 and \$23.6 million in FY11. EBMUD after World War II-a durable asset that has given funded investments in areas that would enhance us exceptional service but requires more and more public and worker safety and ensure regulatory care as it ages. Our crews complete more than 23,000 compliance, and made prudent choices as to what planned preventative work orders and respond other improvements could be delayed. promptly to make more than 56,000 corrective repairs



each year. In 2011, EBMUD launched a collaborative regional program to fix local sewer pipes and make San Francisco Bay even healthier by reducing excess sewage flows that reach the Bay during large storms. EBMUD's efforts to keep facilities and people safe from seismic hazards were boosted when an upgrade to San Pablo Reservoir's dam was completed.

**PRUDENT BUDGETS** 

Night and day, EBMUD crews work to provide high quality, dependable water service to East Bay communities.

# Reliable Water Supplies

EBMUD produced about 161 million gallons of water per day during FY10-11. That's more than two and a half billion eight-ounce glasses every 24 hours.

## **PREPARATION FOR MID-21ST CENTURY** WATER NEEDS

Long-term planning helps EBMUD adjust to new regulations, population change, climate change and other uncertainties. Long-term water supply plans focus on maximizing cost-effective water conservation and water recycling, preserving and protecting the environment and seeking water supply and storage solutions that benefit multiple regions.



EBMUD researched ways to extend water conservation and recycling into the future and determined that water savings from conservation, recycling and rationing in dry years can meet the increased water needs from projected population growth. By helping customers implement changes that conserve water, an additional three million gallons per day (MGD) were saved in FY10-11.

The Freeport **Regional Water** Facility stands ready to provide water to EBMUD customers in dry years. When industrial and irrigation customers use recycled water during droughts more potable water is available for customers. Federal grant funds are helping EBMUD expand recycled water service for landscape irrigation in the San Ramon Valley. In FY11, the Richmond Advanced Recycled Expansion Water Project started saving 3.5 MGD of potable water daily. Chevron, EBMUD's partner, contributed \$52 million towards the capital costs EBMUD invested

to plan, design and construct this facility. Future costs related to operations and maintenance will be recouped via a monthly service charge to Chevron.

## **DIVERSIFIED WATER SUPPLIES**

Working together as the Freeport Regional Water Authority, EBMUD and Sacramento County completed the Freeport Regional Water Facility. Construction began in June 2007 and ended in November 2011. The Sacramento River source will ease the severity of future droughts in the East Bay. The facility can deliver up to 100 MGD of water to EBMUD. Had the Freeport facility been in place in 2008, mandatory rationing that year by EBMUD customers would not have been necessary.

EBMUD also completed the Bayside Groundwater Facility, a state of the art groundwater well that can inject water into a deep aquifer for storage more than 500 feet below ground. During droughts, water from the well can be pumped from the aquifer, treated at the on-site water treatment plant and distributed to customers. The well can provide up to one MGD on average.

## THE DELTA: WATERSHED OF COMMON CONCERN

While EBMUD's water supplies are not taken directly from the Delta, the Delta watershed is critical to our water supply reliability and fishery protection programs. EBMUD's water supply aqueducts cross fragile Delta levees to reach the East Bay. The health of the Delta also is critical to the Mokelumne fishery because the operation of major diversions and pumps can affect the migration of salmon and steelhead as they move to and from the ocean. EBMUD invests

in Delta levee maintenance to protect the ecosystem in the Delta and to protect EBMUD's aqueducts. This ongoing investment is important, but not enough.

In statewide work to chart the Delta's future, EBMUD has advocated for a long-term sustainable plan that addresses both ecosystem and levee restoration. The



water supply needs of the millions of Californians who rely on the Delta must be met in a way that fairly apportions costs and responsibilities. EBMUD has stood with other Northern California water suppliers to ensure that all beneficiaries bear their fair share of responsibility and cost for the Delta.

## Customers First

## TRAINING A NEW WORKFORCE

EBMUD helps employees prepare for promotional opportunities through Pipeline Training Academies. Forecasting that a third of the current plumber workforce will retire over the next five years, EBMUD joined with Laney College in Oakland to provide needed skills to people seeking entry into the trade. The outreach seeks out a diverse student body and offers training to close a skills gap that is a result of less vocational education being available to students. More classes are planned to support additional workforce needs.





Customer service representatives are happy to talk and help customers solve problems, but listening is what they are best at.

## EBMUD works closely with customers to meet their water and wastewater needs. Self-service tools allow customers to conduct business around-the-clock, and the goal of those systems being available 99.9 percent

**RESPONSIVE, PERSONAL SERVICE** 

the goal of those systems being available 99.9 percent of the time was met. In FY10-11, the Contact Center handled more than 800,000 customer contacts quickly and sensitively. At the same time, EBMUD replaced outdated software to provide more flexibility and better customer service system reliability.



## **GETTING THE LEAD OUT**

EBMUD's leadership established the toughest drinking water plumbing lead content standard in the world. When President Obama signed legislation in January 2011 adopting strict national standards requiring manufacturers to virtually eliminate lead from water faucets and fixtures, the language was identical to an EBMUD-sponsored bill that reduced California's lead standard for drinking water plumbing from 8 percent to 0.25 percent (AB1953-Chan). Lead exposure can have serious impacts on children and adults, including kidney disease, hypertension, hearing loss and brain damage.





## **OPEN ACCESS TO BUSINESS OPPORTUNITIES**

EBMUD wants all qualified, competitive contractors and entrepreneurs to be able to compete for contract awards. EBMUD sponsors and participates in outreach and training events for local businesses to enhance their ability to compete for contracts. A 12-session construction management training class for local small businesses generated positive feedback. Fair, active and open competition enhances the likelihood of getting the best value for the ratepayers' dollars.

## HELPING CUSTOMERS SAVE WATER

EBMUD tracks the water consumption of businesses and provides services to help them conserve water. In 2010 and 2011, EBMUD recognized a total of 17 businesses for outstanding water use efficiency, awarding each a WaterSmart Business Certificate that acknowledges their efforts.



When a water bill doesn't seem right, EBMUD investigates. Customers learn how to read their meter, check for leaks, and get tips on saving water from field representatives.

Each year, EBMUD certifies businesses that meet rigorous water conservation standards.

## Environmental Stewardship

## MINIMIZING ENERGY USE AND **GENERATING RENEWABLE ENERGY**

Energy is one of the biggest costs of delivering water to taps and treating wastewater. To reduce energy use, EBMUD minimizes pumping as much as possible by taking advantage of gravity. Annually EBMUD is a net energy producer. In FY10-11, EBMUD generated 383,000 MWh of renewable energy at its hydropower, photovoltaic and cogeneration facilities and used 163,208 MWh over that two-year span. More renewable energy will be produced in the future as a result of a partnership with local waste haulers. The haulers bring food scraps from grocery stores and restaurants to the wastewater treatment plant where it is digested and transformed into biogas. Then, the biogas is turned into electricity and sent to the electrical grid.

## DAILY COMMITMENT TO BEING GREEN

EBMUD's sustainability policies and practices encourage daily attention to conserving natural resources and to reducing, recycling, reusing and reclaiming waste. New facilities like the Mokelumne Watershed Headquarters incorporate sustainable practices embodied in the Leadership in Energy and Environmental Design (LEED).

## HELPING FISH SAFELY CROSS THE DELTA

To increase the Chinook Salmon smolt-to-adult survival rate and decrease straying, more than 6 million smolts reared at the Mokelumne Hatchery were released into the Delta at Jersey Point in spring 2011. This is the second year of release into net pens at this location.

**REUSING WHAT IS DUG FROM THE STREETS** 

EBMUD worked with the Presidio Trust Fund to provide 30,000 cubic yards of clean trench spoils for use as cover material at the Presidio. This reduced disposal costs for EBMUD and safely reused the trench spoils.

## **PROTECTING ENDANGERED SPECIES**

EBMUD and U.S. Fish and Wildlife Service entered into one of the largest Safe Harbor Agreements in the country in July 2009 to protect species on





Protected watershed lands

of nature.

offer wonderful

opportunities to enjoy the beauty

## Durable Infrastructure

Laid end-to-end our 4,100 miles of water pipelines would stretch from the East Bay to Iceland in the North Atlantic Ocean.

## **CONTINUAL INVESTMENT**

EBMUD's pipes, pumps and other infrastructure are built to last. Still, much of the system has been in service for more than 50 years. Keeping infrastructure in good repair protects the environment and public health. EBMUD is increasing investments in refurbishing and replacing aging infrastructure. In FY10-11, we expanded programs to protect San Francisco Bay and made seismic improvements to one of our larger dams, safeguarding thousands of residents downstream.

## **INFRASTRUCTURE MANAGEMENT**

New water tanks

like this are

replacing some

aging in-ground

reservoirs. These

tanks help EBMUD

cost-effectively keep

water quality high.

During this two-year budget period, about two-thirds of every rate dollar EBMUD collected went toward storage, treatment and delivery of water, day-to-day system maintenance, planning for future improvements and repaying bonds sold to pay for long-term investments in pipes, reservoirs, dams and other infrastructure. With an aging system, even greater investments in these areas are anticipated in the future.

EBMUD continually evaluates infrastructure durability and adjusts investments to address the most-pressing reliability concerns. Three performance measures are used to evaluate infrastructure reliability:

- » the number of unplanned water service interruptions of various durations (fewer than ten interruptions lasting more than four hours per 1,000 customer accounts).
- » the number of water system pipeline breaks (less than 20 breaks per 100 miles of pipe).
- » the availability of wastewater equipment and facilities (at least 90 percent available).

In FY10-11, EBMUD met these targets and minimized the impacts to customers from service interruptions and pipeline breaks.



<image>

EBMUD strives for capital investment levels that will maintain the system in good working order through cost-effective replacement and proactive repairs. In FY10-11, EBMUD replaced a total of 14.7 miles of water system pipe, and rehabilitation work was in planning, design or construction for a wide range of projects at pumping plants, treatment plants and other locations (contracts were awarded for rehabilitation of three steel reservoirs).

EBMUD also assessed wastewater pipelines by using closed circuit TV cameras to conduct detailed inspections of more than 20 percent of these large diameter pipes. Capital investment goals are adjusted over time based on condition assessments of the infrastructure and to keep pace with changing regulatory requirements.

### SAN PABLO DAM STRENGTHENED

EBMUD has a comprehensive dam safety program to ensure public safety and protect water supplies. EBMUD inspections are supplemented by federal and state regulatory inspections. The science of protecting dams from earthquakes is constantly evolving. EBMUD completed new safeguards to protect San Pablo Dam from earthquakes in July 2010. This was the third seismic upgrade in the dam's near-century of service. The recent work involved in-place foundation improvement and buttressing the downstream toe. EBMUD completed this work while reducing disruption to the environment and recreation and keeping the reservoir in service.

As part of the seismic work, EBMUD collaborated with the United States Geological Survey (USGS) to install a prototype instrument so USGS can measure ground movement at the dam site and inform the general engineering community of the characteristics during earthquakes. Based on that successful effort, EBMUD is collaborating with USGS to install additional instruments at Upper San Leandro and Pardee dams. When facilities are upgraded, EBMUD keeps sustainability in mind. In 2011, at the Walnut Creek Water Treatment Plant, solar panels were installed that raised EBMUD's photovoltaic generation capacity to 930 MWh.



It takes all of us to protect our waterways. Public agencies are working with businesses and residents to fix leaky sewer pipes that can affect the Bay.

### **BAY PROTECTION IN THE 21ST CENTURY**

EBMUD has protected San Francisco Bay since 1951 by providing regional wastewater treatment services and, in recent decades, helping businesses and residential customers keep pollutants out of the Bay. Over the years, Bay protection agencies, environmental groups and EBMUD have worked to keep the Bay as healthy as possible. EBMUD's wastewater treatment plant operated continuously, 24 hours a day, for more than 11 years within permit limits and without a National Pollutant Discharge Elimination System violation—a difficult feat and a measure of excellence.

Although the East Bay has separate systems for storm water runoff and sewage, storm water can seep into cracked, aging sewer systems during storms, resulting in excessive sewage flows and the runoff of partially treated sewage into the Bay. Almost half of each city sewage collection system is made up of private sewer laterals that connect homes and businesses to the public sewer systems. In a collaborative settlement agreement with U.S. Environmental Protection Agency, Regional Water Quality Control Board and local environmental groups, EBMUD is leading a renewed charge to keep the Bay healthy. During 2010 and 2011, EBMUD worked with the cities in its wastewater service area (Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont and the Stege Sanitary District, which includes El Cerrito, Kensington and parts of Richmond) to set in place plans for repairing damaged pipelines as quickly as possible, and for ensuring that private property owners do the same for their leaking private sewer pipes (laterals) serving residences and businesses.

## Prudent Financial Management

EBMUD continues to be recognized as a prudent steward of ratepayer funds.

## **STELLAR BOND RATINGS**

In 2010, EBMUD's financial management was recognized with a AAA rating by Standard and Poors, Aa1 by Moody's Investors Service and AA+ by Fitch Ratings. EBMUD's bonds fund work to replace and improve pumping plants, storage reservoirs, pipelines and treatment plants. After a bond issuance in 2010, the nation's leading financial wire service reported that EBMUD "sold taxable bonds at yields similar to the finance arm of Warren Buffett's Berkshire Hathaway Inc."

### WATER SYSTEM

### **During the Year:**

Total Water Production, millions of gallons Average Daily Water Production, MGD\* Maximum Daily Water Production, MGD Minimum Daily Water Production, MGD

### At Year End:

Number of Accounts Number of Employees Miles of Water Distribution Pipe Operating Distribution Storage, millions of gallons

## WASTEWATER SYSTEM

During the Year: Average Daily Wastewater Flow, MGD

### At Year End:

Number of Accounts Number of Employees

## **EFFECTIVE REPORTING**

EBMUD's budget document has received eleven consecutive national awards that recognize effective budget presentation for preparing budget materials that meet stringent guidelines as a policy document, operations guide, financial plan and

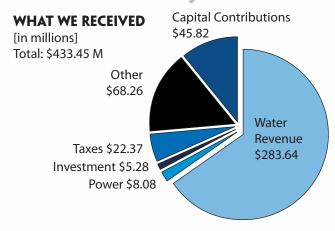


communications device. EBMUD also has received six consecutive national awards for meeting requirements for financial statement presentations and compliance with government accounting, auditing and financial reporting guidelines.

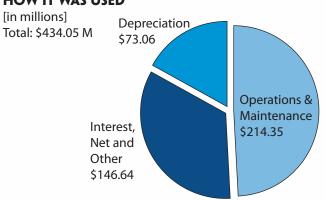
Prudent financial management helps ensure EBMUD ratepayer dollars are used wisely to keep the water and wastewater systems strong.

FY 2011	FY 2010
63,421	63,588
174	174
260	253
119	120
383,066	380,857
1,492	1,551
4,110	4,110
826	812
FY 2011	FY 2010
71	68
178,515	178,051
262	253

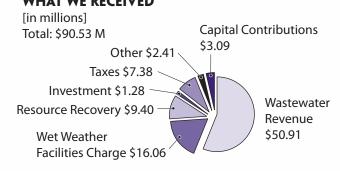
## Water System



## HOW IT WAS USED



## WHAT WE RECEIVED



## **TOTAL REVENUES**

**TOTAL EXPENSES** 

[in millions]

\$400

\$300

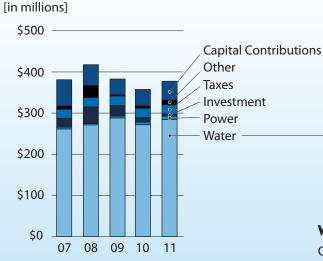
\$200

\$100

\$0

07

08 09 10 11



Depreciation

Interest, Net

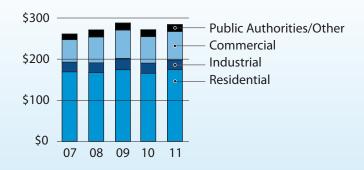
**Operations** &

Maintenance

and Other

## COMPONENTS OF WATER REVENUE

[in millions]



## WATER SYSTEM FINANCIAL HIGHLIGHTS

Operating revenues have slowed during the past three years due to a 2008 drought and the economic downturn which began in 2009.

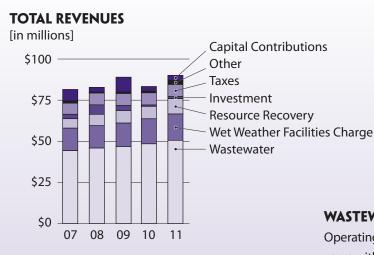
Total revenues for the Water System increased 5 percent from \$357 million in 2010 to \$377 million in 2011 primarily due to an increase in water rates, higher water run-off for power production and a Build America Bond rebate.

Total expenses increased 8 percent from \$349 million in 2010 to \$377 million in 2011, primarily due to an increase in bond interest expense from the issuance of Build America Bonds in June 2010, which was partially offset by the rebate in total revenues.

Before considering capital contributions, net assets decreased \$46 million.

Cash reserves are \$250 million or \$138 million above the target of \$112 million. These excess reserves will be used to fund future capital improvements.

Standard & Poors continues to issue a AAA rating on the Water Systems Fixed Rate Revenue Bonds.

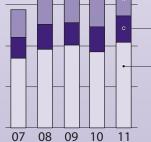


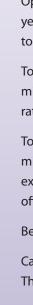


\$50

\$25

\$0





Depreciation

Interest, Net

**Operations** &

Maintenance

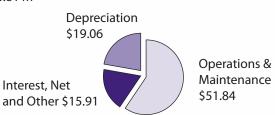
and Other

14

## Wastewater System

## HOW IT WAS USED

[in millions] Total: \$86.81 M



### Chart Notes:

On an expense basis, the Water System was five times the size of the Wastewater System in 2011. The pie charts on these pages are scaled proportionally to reflect the difference in magnitude and to facilitate relative size comparisons between items in the pies on either side. For the bar charts, the monetary scale differs between Water and Wastewater to facillitate readability.

## WASTEWATER SYSTEM FINANCIAL HIGHLIGHTS

Operating revenues and expenses have grown steadly over the past five years with the difference between operating revenues and expenses used to fund debt service and capital improvements.

Total revenues for the Wastewater System increased 8 percent from \$84 million in 2010 to \$91 million in 2011, based on an increase in sewage rates, higher resource recovery revenue and a Build America Bond rebate.

Total expenses increased 11 percent from \$78 million in 2010 to \$87 million in 2011 primarily due to increases in treatment costs and interest expense from the issuance of bonds in October 2010 which is partially offset by the rebate in total revenues.

Before considering capital contributions, net assets increased \$1 million.

Cash reserves are \$39 million or \$20 million above the target of \$19 million. These excess reserves will be used to fund future capital improvements.

Standard & Poors continues to issue a AAA rating on the Wastewater Systems Fixed Rate Revenue Bonds.

## 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 ACCOMPLISHING 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 and sustainability