



# 2010–2011 ANNUAL REPORT

## BAY AREA CLEAN WATER AGENCIES

PROTECTING OUR WATER RESOURCES;  
PLANNING FOR A SUSTAINABLE FUTURE



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*Our thanks to member agencies for providing several of the photos in this report.*





*View of Berkeley Marina*

## MESSAGE FROM THE EXECUTIVE DIRECTOR/ BACWA CHAIR

The Bay Area Clean Water Agencies (BACWA) was established at a seminal, and exciting, time for our region. Congress' adoption of the Federal Clean Water Act a decade earlier had set in motion a massive public works effort to build or improve publicly owned treatment works (POTWs) across the country. Just weeks after BACWA's creation in 1984, the United States Environmental Protection Agency (EPA) set 1988 as a national deadline for POTWs to comply with secondary treatment – based limits. The environmental benefits of these federal regulations combined with billions of dollars of infrastructure investments were quickly realized in the San Francisco Bay Area. By 1985, Bay Area POTWs had reduced conventional pollutant loading by more than two-thirds as compared to twenty years earlier. Bay Area sanitation agencies have continued to achieve impressive water quality protections through POTWs' aggressive pre-treatment and pollutant minimization programs and collection systems' overflow reporting and management programs.

In the following decades, water quality regulation has become increasingly complex and stringent as the focus has shifted from conventional to toxic

pollutant control. With BACWA providing technical expertise, financial support and a public utility perspective, thoughtful and effective regional water quality regulations were developed and implemented for many pollutants, including copper, cyanide, mercury, and dioxin. With 40 POTWs and more than 100 collection systems in the San Francisco Bay region, BACWA provided, and continues to provide, a necessary mechanism for coordination to ensure thoughtful and effective water quality regulation.

The clean water community's focus is now shifting rapidly from toxic pollutant reduction to renewable resource generation; preparing for potential nutrient regulations; and understanding the potential impacts of micro-constituents, compounds detected at often miniscule levels that may present human health or environmental concerns. Even as issues on the forefront change, BACWA continues to offer the services to our members and the public that have garnered the agency much respect and success. We hope that you will find this report helpful in better understanding the issues facing the region and the work BACWA is doing to help your agency and the San Francisco Bay environment.

  
Amy Chastain  
*Executive Director*

  
Bennett Horenstein  
*BACWA Chair*







*Camp Reynolds, Angel Island*

# THE BAY AREA CLEAN WATER AGENCIES (BACWA)

## About BACWA

BACWA is a public Joint Powers Authority whose members include public utilities that collect and treat municipal wastewater in the nine counties that surround the San Francisco Bay. BACWA is dedicated to working with our member agencies, the state and federal governments, as well as non-governmental organizations to deliver useful information about the water quality of the San Francisco Bay. BACWA works to ensure that water quality information is fully utilized to promote the

health and needed protection of the San Francisco Bay. BACWA supports its public utility members—the clean water agencies of the San Francisco Bay region—to promote understanding of the water quality needs and requirements of the region and to make water quality protection and enhancement a priority in regional communities.

## BACWA Committees & Groups

BACWA's committees are one of the agency's cornerstones. Whereas a decade ago, BACWA had just a few committees, today it has seven committees and three information-sharing groups. These committees and groups facilitate communication, keep agency staff apprised of important regulatory and policy developments, provide a venue for establishing regional

collaborations, and help ensure that the Bay Area clean water community speaks with a unified voice.

- **The Air Issues and Regulations (AIR) Committee** focuses on air quality-related issues and research and regulations that affect sanitation agencies, including state and local climate change and greenhouse gas mitigation-related policies and laws.
- **The Bay Area Pollution Prevention Group** provides member agencies with an opportunity to exchange information and ideas about effective pollution prevention. The group leverages limited resources to develop and carry out innovative regional pollution prevention projects that protect the Bay Area and help member agencies comply with permit requirements.
- **The Biosolids Committee** provides proactive support to member agencies on regional biosolids issues, projects, and proposed regulations and legislation. This includes support for the development and maintenance of cost-effective, sustainable biosolids management options for Bay Area agencies, which produce more than 158,000 dry metric tons of biosolids annually.
- **The Collection Systems Committee** serves as the focal point for sharing information among and addressing the regulatory issues affecting the more than 100 agencies responsible for maintaining tens of thousands of miles of sewage pipes in the Bay Area.

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- The **Laboratory Committee** was the first committee formed by BACWA. It keeps members informed of current scientific and technical development affecting Bay water quality, and the analytical methods and protocols necessary for members' permit compliance.
- The **Permits Committee** assists the Bay Area publicly owned treatment plants (POTWs) with National Pollutant Discharge Elimination System Permits and to stay informed about technical, scientific, and analytical issues impacting agencies' compliance.
- **The Water Recycling Committee** is dedicated to promoting water recycling efforts to protect the environment and to develop reliable Bay Area water supplies. The committee acts as a regional voice in state and national organizations and ensures that policies and regulations reflect the needs and concerns of Bay Area agencies.
- BACWA supports three **InfoShare Groups** that each meet quarterly: the Operations InfoShare Group, the Bay Area Maintenance InfoShare Group, and the Engineering InfoShare Group. These groups provide a setting for staff to discuss successes and challenges related to the operations, maintenance, and engineering issues faced by member agencies.



# INFORMING INTELLIGENT REGULATION TO PROTECT OUR WATERS

## Implementing the PCBs Total Maximum Daily Load

Over the past year, BACWA has been working with the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) to develop an implementation strategy that recognizes POTWs' limited ability to control for Polychlorinated Biphenyls (PCBs) sources of legacy contaminants as well as provide the Regional Water Board with information it needs to update its Total Maximum Daily Loads (TMDL) program in a few years. In March of this year, the Regional Water

Board amended the Mercury Watershed Permit to incorporate PCBs as part of this strategy. The permit regulates POTWs based on their current performance and requires agencies to analyze samples using a low-detection limit method. To help member agencies collect good quality data, BACWA prepared sampling, analyses and reporting protocols that were adopted by the Regional Water Board. In the coming year, we expect to compile and analyze the results to ensure that the current permit is working and to better understand PCBs pollution in San Francisco Bay.

## Continuing Mercury Compliance

In 2007, the Regional Water Board adopted the Mercury Watershed Permit, which requires the municipal wastewater community to collectively discharge no more than 17 kilograms of mercury each year. The permit also requires that agencies implement local programs to reduce mercury from dental offices that remove fillings containing mercury.

For the third consecutive year, BACWA prepared and submitted a report on behalf of its members demonstrating all member agencies' compliance with the permit. The 2010 mass loading estimate was 3.9 kilograms – substantially below the permit's limit of 17 kilograms. BACWA also submitted the first assessment of POTWs' compliance with the permit's dental amalgam control provisions. The report shows that agencies are on track to exceed regulatory requirements and that implementation of dental mercury source control programs has prevented an estimated 64 kilograms of mercury from entering Bay Area waters since the requirements took effect. This permit is



*Chemist analyzes samples and collects data at the San Jose/Santa Clara Water Pollution Control Plant*



*San Pablo Reservoir*

set to expire at the end of 2012, therefore BACWA is currently developing a strategy for ensuring that future permits reflect our successes to date and do not impose new requirements on member agencies.

## Improving Information about Selenium Loading & Impacts

The Regional Water Board's efforts to develop a TMDL for selenium in the North San Francisco Bay have been stayed while EPA develops new water quality criteria, which are expected in early 2012. In the interim, BACWA undertook a study to better characterize the types of selenium found in wastewater effluent to

more fully understand the contribution of POTW discharges to selenium bioaccumulation in wildlife, such as sturgeon. The results of this study are anticipated later this year. The study is expected to confirm that, like mercury, POTWs are relatively minor sources of this toxic metal and, therefore, existing controls on POTW discharges should be sufficient to protect water quality.

Program amendments will save agencies and the Regional Water Board resources by allowing dischargers to cease unnecessary monitoring.

## Streamlining Pretreatment Requirements

In a win-win for BACWA and the Regional Water Board, a team of BACWA member agency staff prepared and negotiated changes to pre-

## Statewide Coordination on Key Issues

BACWA coordinates with its counterparts across the State, the California Association of Sanitation Agencies (CASA), the Southern California Alliance of Publicly Owned Treatment Works, and the Central Valley Association of Clean Water Agencies, to ensure a coordinated and organized industry response in statewide policies and regulations. This year, BACWA helped its member agencies weigh in on two very important statewide policies under development by the State Water Resources Control Board - the draft permit for Sanitary Sewer Systems, and the State's Whole Effluent Toxicity Policy - by preparing template comment letters for members to use and by ensuring that letters submitted by CASA and Tri-TAC reflect Bay Area concerns. BACWA also partnered with CASA to support important research on composted biosolids to better understand the impacts of volatile organic compound (VOC) emissions on ozone levels. This research suggests that the ozone formation potential of these VOC emissions is relatively low and, therefore, stringent regulation of composting facilities is unlikely to have a detectable impact on air quality.



*Partner agency staff working at the San Jose/Santa Clara Water Pollution Control Plant*

treatment program requirements. These program amendments will save agencies and the Regional Water Board resources by allowing dischargers to cease unnecessary monitoring, reduce paper submittals, and eliminate reporting redundancies.



*Richardson Bay*





*A pair of Shovelers feed in mud flats*

## PLANNING FOR A CHANGING BAY

### Understanding the Impacts of Nutrients

Historically, San Francisco Bay has been considered resilient to the effects of nutrient loads. Even though concentrations are similar to those found in other estuaries, such as the Chesapeake Bay, San Francisco has not experienced the same anoxia (low oxygen) problems. However, evidence is mounting that the Bay may be losing its resiliency. Decades of data show an increase in the frequency

and strength of phytoplankton blooms in the Bay, and concern exists that the Bay may not be able to sustain its resiliency to current nutrient loads. BACWA has teamed with HDR, Inc. to bring their regulatory, modeling and engineering expertise to help us understand the potential implications for wastewater utilities and help inform Bay management decisions. BACWA also worked closely with the Regional Monitoring Program and the Regional Water Board to host a day-long workshop on nutrient science and management in the Bay that brought together national and local experts to begin developing a strategy on this issue. The agency's goal is to ensure that any nutrient regulations are well-supported by science and that any necessary reductions in nutrient



loading will be equitable and lead to quantifiable improvements in water quality.

## Addressing Contaminants of Emerging Concern

BACWA, through the Bay Area Pollution Prevention Group (BAPPG), has a long proactive history of working to address contaminants of emerging concern, such as pharmaceuticals and personal care products. In 2006, BAPPG spearheaded the first Drug Enforcement Agency “Safe Medicine Disposal Day,” which won EPA’s 2007 Environmental Award for Outstanding Achievement. Currently, there are over 100 permanent collection sites for unwanted pharmaceuticals in the Bay Area and BAPPG and individual agencies are continuing to work to establish more. These sites are just a piece of BAPPG’s work to reduce pharmaceuticals coming into treatment plants: they have also developed

In 2006, BAPPG spearheaded the first Drug Enforcement Agency “Safe Medicine Disposal Day,” which won EPA’s 2007 Environmental Award for Outstanding Achievement.

and distributed outreach materials and organized trainings for key groups, such as hospice workers.

BAPPG has also worked closely with CASA to educate agencies—such as the Department of Toxic Substances Control and the Department of Pesticide Regulation—of the importance of ensuring that chemicals are safe before they reach our treatment plants. Pesticides have historically impacted agencies’ compliance with toxicity requirements and may continue to do so; the effects of chemicals such as triclosan and nanosilver are still poorly understood. These efforts will help lead to better control of compounds that have the potential to harm treatment plants’ compliance and operations.

## Educating Agencies, Regulators, and the Public

One of BACWA’s primary goals is to ensure that member and regulatory agencies have the information that they need to do their jobs well. Every year BACWA offers trainings and produces materials to communicate with our members and the public. Some of the highlights from this past year include:

- *Permits & Laboratory Committee Workshop. The Permits Committee hosted a very well-attended workshop to help POTWs prepare for their permit’s reissuance and understand the Regional Water Board’s process*



School tour of the Delta Diablo Sanitation District Wastewater Treatment Plant Facility for pollution prevention programs

and needs. The Laboratory Committee coordinated a workshop that clarified many issues around the 22nd Edition of Standard Methods and EPA's Method Rule Update.

- *Pollution Prevention Campaigns.* The Bay Area Pollution Prevent Group (BAPPG) reprised its successful Fats, Oils, and Grease media campaign, which produced more than 100 media spots in multiple languages and helped member agencies meet the requirements of the State's permit for sanitary sewer collection systems. BAPPG also launched its Spring Cleaning Campaign and website ([www.baywise.org](http://www.baywise.org)), which brings together tips for how residents can reduce pollution to the Bay.
- *Fact Sheets.* BACWA prepared, and assisted with, several fact sheets to help member agencies better understand key issues affecting them. These included fact sheets on the State's efforts to revise the Shellfish

Member agencies now receive monthly updates on regulatory affairs, upcoming events, and other agencies' successes.

*Beneficial Uses, the precedential permit issued to the Sacramento Country Regional Sanitation District, and a San Francisco Estuary Institute publication on triclosan, a contaminant of emerging concern.*

- *Sewer Rate Information.* As a service to its members, BACWA also took over management of the sewer rate information database previously managed by Redwood City.

BACWA strives to keep its members informed of regulatory, policy and scientific issues. This year, we successfully launched our first newsletter, and the response has been exciting. Member agencies now receive monthly updates on regulatory affairs, upcoming events, and other

agencies' successes. Each year BACWA also hosts a day-long member's meeting with speakers from EPA, the Regional Water Board and Bay scientists. This year's meeting – which featured updates on pending nutrient and collection system regulations – was the best attended in BACWA's history. We are committed to continuing these successful efforts to help your agency stay abreast of regional developments and connected to the Bay Area environmental community.



Egret on San Francisco Bay



Rail bridge over San Francisco Bay

## PREPARING FOR A SUSTAINABLE FUTURE

### Encouraging Wastewater as a Resource

Many Bay Area agencies are investigating ways to optimize production of energy and recycled water. Recognizing the value of these endeavors to



Energy efficiency projects include using goats to clear brush

member agencies and the environment, BACWA has undertaken projects to encourage and facilitate local efforts to produce energy and reusable water.

- *Following the May 2010 Symposium on wastewater as a resource at Stanford's Wood's Institute, BACWA adopted a vision for the Bay Area "in which systems for resource recovery from wastewater will be developed and deployed to maximize the value of recovered water, energy, and materials, thereby contributing to the development of vibrant, self-sufficient economies and healthy ecosystems around the Bay."*
- *In March of 2011, BACWA hosted a workshop on Austria's Strass in Zillertal Wastewater Treatment Plant, which produces 140% of the energy it uses. Representatives from Bay Area agencies, the Pacific Gas & Electric Company, EPA, and the Regional Water Board*



*attended and participated in a discussion about how the Bay Area can become a leader in energy management.*

- *In May, BACWA also partnered with the California Water Environment Association's San Francisco Bay section to hold a workshop on energy efficiency for managers.*
- *Since 2006, BACWA has successfully administered a \$12.5 million Proposition 50 grant from the Department of Water Resources, and has been awarded almost \$30 million under Proposition 84. All of these funds will benefit Bay Area public agencies and much of them directly fund key water recycling projects, thanks to the efforts of the Water Recycling Committee.*

## Responding to Climate Change

The Bay Area Conservation Development Commission predicts that global warming is expected to cause a sea level rise of 55 inches in the Bay Area by the end of the century. To respond to climate change, California and the federal government have a number of different initiatives that can affect POTWs, including regulation of greenhouse gas emissions. Through the Air Issues & Regulations (AIR) Committee and BACWA's involvement in the California Wastewater Climate Change Group, we are working to ensure that regulations and planning efforts take into account POTW concerns and are responsive to the community's needs.



Long-billed Dowitchers congregate on San Francisco Bay



# 2010 – 2011 GOVERNANCE

## Executive Board

### DESIGNEES

Arleen Navarret, San Francisco Public Utilities District, *Chair* (July - October)

Bennett Horenstein, East Bay Municipal Utility District, *Chair* (November - June), *Vice Chair* (July - October)

Tommy Moala, San Francisco Public Utilities District, *Vice Chair* (November - June)

Michael Connor, East Bay Dischargers Authority, *Board Member*

Jim Kelly, Central Contra Costa Sanitary District, *Board Member*

Bhavani Yerrapotu, City of San Jose, *Board Member*

### ALTERNATES

David Williams and Ed McCormick, East Bay Municipal Utility District

Karl Royer and Rich Currie, East Bay Dischargers Authority

Kirsten Struve, Dave Tucker, and Dale Ihrke, City of San Jose

Laura Pagano and Natalie Sierra, San Francisco Public Utilities Commission

Margaret Orr, Central Contra Costa Sanitary District

### COMMITTEE LEADERSHIP

Air Issues and Regulations Committee: Stephanie Cheng, East Bay Municipal Utility District (Chair), Randy Schmidt, Central Contra Costa Sanitary District (Vice-Chair)

Bay Area Pollution Prevention Group: Sharon Newton, City of San Jose (Chair), Sarah Scheidt, City of Sunnyvale (Vice-Chair)

Biosolids Committee: Greg Baatrup, Fairfield Suisun Sewer District (Chair); Matt Krupp, City of San Jose (Vice Chair)

Collection Systems Committee: Andy Morrison, Union Sanitary District (Chair); Dan Stevenson, City of Sunnyvale (Vice-Chair) Laboratory Committee: Guy Moy, Union Sanitary District

Permits Committee: James Ervin, City of San Jose

Recycled Water Committee: Cheryl Munoz, San Francisco Public Utilities Commission (Co-Chair); Linda Hu, East Bay Municipal Utility District (Co-Chair)

# STATEMENT OF FINANCIAL ACTIVITIES

**TABLE 1: FY 2010-2011 GENERAL BACWA BUDGET**

Project Elements	Budget	Obligated	Actuals
<b>REVENUES</b>			
Principals	\$450,000	NA	\$450,000
Assoc. & Affiliates	\$159,000	NA	\$162,000
Other	\$89,216	NA	\$79,473
<b>Revenue Total</b>	<b>\$698,216</b>	<b>NA</b>	<b>\$691,473</b>
<b>EXPENSES</b>			
Committees	\$113,000	\$93,619	\$81,295
Technical Support	\$125,000	\$104,500	\$79,077
Legal Support	\$30,000	\$18,878	\$9,623
Collaborations and Sponsorships	\$35,500	\$35,500	\$35,500
Communications and Reporting	\$105,000	\$56,448	\$34,460
Pollution Prevention	\$50,000	\$50,000	\$50,000
General BACWA	\$25,000	\$10,554	\$10,270
Administration	\$257,000	\$248,983	\$239,965
<b>Expense Total</b>	<b>\$740,500</b>	<b>\$618,482</b>	<b>\$540,190</b>

**TABLE 2: FY 2010-2011 GENERAL CBC/WQAS BUDGET**

Project Elements	Budget	Obligated	Actuals
<b>REVENUES</b>			
Principals	\$300,000	NA	\$300,000
Assoc. & Affiliates	\$150,000	NA	\$150,500
Other	\$8,000	NA	\$6,551
<b>Revenue Total</b>	<b>\$458,000</b>	<b>NA</b>	<b>\$457,051</b>
<b>EXPENSES</b>			
Expert Technical Support	\$191,728	\$235,515	\$192,530
Collaborations & Sponsorships	\$50,000	\$50,000	\$50,000
Trainings	\$7,190	\$0	\$0
Communications & Reporting	\$65,000	\$20,000	\$34,440
Unplanned Tech. Issues	\$103,430	\$102,648	\$78,538
Administration	\$60,810	\$60,810	\$60,810
<b>Budget Totals</b>	<b>\$478,158</b>	<b>\$468,973</b>	<b>\$416,318</b>

# MEMBERS

## PRINCIPALS

East Bay Municipal Utility District

East Bay Dischargers Authority

- *Castro Valley Sanitary District*
- *City of Hayward*
- *City of San Leandro*
- *Oro Loma Sanitary District*
- *Union Sanitary District*

San Francisco Public Utilities Commission

Central Contra Costa Sanitary District

City of San Jose

## ASSOCIATES

Central Marin Sanitation Agency

City of Livermore

City of Palo Alto

City of Sunnyvale

Delta Diablo Sanitation District

Dublin-San Ramon Services District

Fairfield Suisun Sewer District

Napa Sanitation District

South Bayside System Authority

San Mateo Wastewater Treatment Plant

South San Francisco

Vallejo Sanitation and Flood Control District

West County Agency

## AFILLIATES

City American Canyon

City of Albany

City of Belmont

City of Benicia

City of Berkeley

City of Brisbane

City of Burlingame

City of Calistoga

City of Fairfield

City of Millbrae

City of Milpitas

City of Mountain View

City of Petaluma

City of Piedmont

City of Pleasanton

City of Redwood City

City of Richmond

City of San Bruno

City of San Carlos

City of St. Helena

City of Windsor

Cupertino Sanitary District

Las Gallinas Valley Sanitary District

Mt. View Sanitary District

North San Mateo Sanitation District

Novato Sanitary District

Pacifica

Pinole/ Hercules Wastewater Treatment Plant

San Francisco International Airport

San Mateo County, Department of Public Works

Sanitary District of Marin County No. 1

Sanitary District of Marin No. 2

Sanitary District of Marin No. 5

Santa Clara County Sanitation District No. 2-3

Sausalito/Marin City Sanitary District

Sewer Authority Mid-Coastside

Sewerage Agency of Southern Marin

Sonoma County Water Agency

Steger Sanitary District

Tamalpais Community Services District

West Bay Sanitary District

West Valley Sanitation District

Yountville



**BACWA**  
BAY AREA  
CLEAN WATER  
AGENCIES