

Water Conservation

Program Report

FY09
FY10





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Our Mission

The mission of the Contra Costa Water District is to strategically provide a reliable supply of high-quality water at the lowest cost possible in an environmentally responsible manner.

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Introduction

Contra Costa Water District (CCWD, District) has implemented a successful Water Conservation Program for more than 20 years. The goals of the Program are to reduce long-term water demand in conformance with the District's Future Water Supply Plan, and meet the conservation Best Management Practices (BMPs) required in the water service contract with the United States Department of the Interior, Bureau of Reclamation (Reclamation). In the coming years, the Conservation Program will be an important tool for the District in meeting the newly prescribed State mandate to reduce water use by 20% by 2020. This report documents the accomplishments of the Water Conservation Program during Fiscal Years (FY) 2009 and 2010, and highlights additional conservation services provided to meet the demands of the drought.

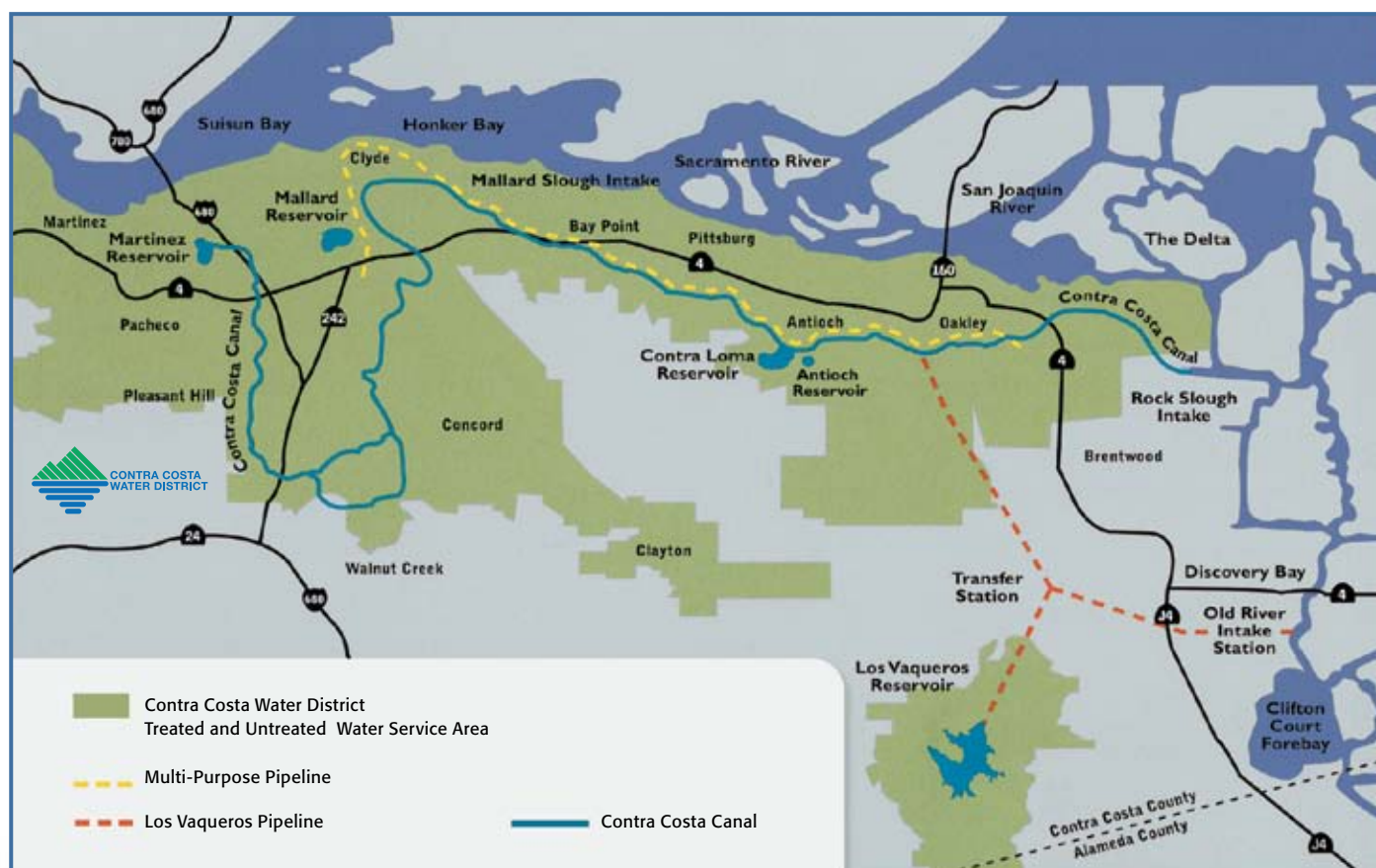
In response to three consecutive dry years, Reclamation announced that CCWD's 2009 water allocation would be reduced to 65% of historic deliveries. On April 1, 2009, the CCWD Board of Directors adopted a Drought Management Program (DMP) designed to reduce customer water demand in response to the lowered water allocation from Reclamation. The DMP required all customers to use no more than their historical water use, and required landscape irrigation customers and the highest single family customers to reduce water use by 45% and 15%, respectively. Customers who exceeded their water budgets were charged an excess use charge equal to four times the normal water rate. The DMP was in effect from May 1, 2009 through April 30, 2010. Subsequently, the District has continued the excess use charge at two times the normal water rate to encourage efficiency and discourage waste.

CCWD's Water Conservation Program expanded its services in order to assist customers to meet the reduction goals while the DMP was in effect. CCWD successfully helped many of its customers improve their water use efficiency, and the District met its water use reduction goal.



Service Area CCWD Service Area

CCWD purchases water from Reclamation and provides treated and untreated water to approximately 550,000 people in central and eastern Contra Costa County. The District provides retail treated water service to Clayton, Clyde, Concord, Pacheco, Port Costa, and parts of Martinez, Pleasant Hill and Walnut Creek. In addition, the District sells wholesale treated water to the City of Antioch, Golden State Water Company in Bay Point, Diablo Water District in Oakley, and the City of Brentwood (parts). CCWD sells untreated water to the cities of Antioch, Martinez, and Pittsburg, as well as to 22 industrial customers. Total District water use in FY10 was 48,000 acre feet less than it was in the late 1980s before the District instituted its conservation program. Savings are a result of the active conservation program, plumbing code changes and the DMP.



Water Conservation Program Highlights

The adoption of CCWD’s Drought Management Program (DMP) significantly increased the demand for Water Conservation services. CCWD successfully met the increased demand, by assisting many of its customers in meeting their water reduction goals by expanding its programs and services. The District provided free on-site conservation surveys, free conservation devices, rebates, and other services. As shown in the following table, customer participation in the conservation programs offered by CCWD increased significantly compared to pre-drought levels:

Program Element	FY10 Activities	FY09 Activities	FY08 Activities (pre-drought)
Single Family Surveys	1,028	888	675
Multi-Family Surveys	1,301	508	818
CII and Landscape Surveys	177	88	132
Showerheads	3,185	5,699	155
Faucet Aerators	3,321	6,586	163
High Efficiency Toilet Rebates	3,994	2,881	1,903
High Efficiency Washer Rebates	4,262	3,634	2,327
Smart Sprinkler Timers	108	91	50

CCWD also developed numerous educational materials to remind customers of California’s continued drought conditions and urging customers to use water efficiently. These included four-minute Shower Timers, Restaurant Table Tent Advertisers, and Cling-Stick mirror decals. New brochures were created to educate customers on how to manage water use during a drought, including the *Drought Survival 101* and *How to Read Your Water Meter* brochures and the new *Lawn & Landscape Watering Schedule*.

Water Conservation Program Goals

During FY09 and FY10, the Conservation Program had three primary goals: 1) assist customers to meet the required demand reductions under the Drought Management Program; 2) meet the Water Conservation Best Management Practices (BMPs) required under the District’s Central Valley Project (CVP) water supply contract with the United States Bureau of Reclamation; and 3) reduce long-term water demand in conformance with the District’s Future Water Supply Study (FWSS).

The District successfully met these goals as described in the following sections.

Water Conservation Program Achievements

The demand for Conservation services increased significantly during FY09 and FY10 as a result of the DMP. CCWD successfully met the increased demand by expanding its programs and services. The following is a summary of key program elements implemented during the year.

Conservation Surveys

Conservation surveys are available free of charge to help customers improve their water use efficiency. Conservation surveys allow CCWD staff to provide face-to-face assistance to our customers. In addition to water savings and educational benefits, conservation surveys provide a valuable customer service. Following the adoption of the DMP, the survey format was adjusted to focus customers' attention on the amount of water they were using in their landscapes and in demonstrating how to track consumption. Customers were taught how to read their water meters and to use

the information to track their water usage compared to their drought water budgets. In addition, customers were provided with site-specific information about how much water they are using in their irrigation system, and they were provided with site-specific landscape watering schedules aimed at meeting their reduction goals.

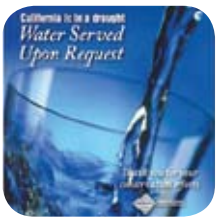
The District conducted 888 single family, 508 multi-family, and 88 commercial and landscape surveys in FY09, and 1,028 single family, 1,301 multi-family, and 177 commercial and landscape surveys in FY10.



Conservation Incentives

Showerheads and Faucet Aerators: CCWD's Conservation Program provided free devices to customers, including showerheads, faucet aerators, and spray nozzles for outdoor hoses. As a result of the DMP, requests from single family and apartment customers increased significantly, especially during the last few months of FY09 when the DMP began. In FY09, 5,699 showerheads and 6,586 faucet aerators were distributed, and in FY10, 3,185 showerheads and 3,321 faucet aerators were distributed. Demand was considerably higher compared to only 155 showerheads and 163 faucet aerators distributed in FY08.

Shower Timers: The District began distributing new water conservation shower timers in May 2009. These easy-to-use timers stick to the shower wall and are used to remind customers that we are in a drought and to take shorter showers. Customers responded very favorably to the timers.



Restaurant Table Tents: The District delivered informational "table tents" to all full-service restaurants in the treated water service area. These cards were placed on restaurant tables to remind customers of continued drought conditions in California and that water will be served upon request. The cards also provide information on the CCWD conservation program. The majority of the restaurants either accepted the table tents or already had a policy of not serving water unless requested. The primary benefit of the program was the additional reminder that California was in a drought.



recycle water can use 50% less water compared to washing with a hose.

Smart Wash Car Wash Coupon Program:

The District provided customers money saving coupons for discounts at local car washes that recycle water. Car washes that



Money Saving Mulch Coupon Program:

The District partnered with local nurseries to develop coupons for discounts on landscape mulch. Coupons for 10 to 20 percent savings encouraged customers to purchase mulch for their home landscapes. Mulch saves water by reducing evaporation from the soil. It also improves the soil as it decomposes, making plants healthier. More than 25 nurseries participated in the program.



Conservation Rebates

The District provides a variety of rebates designed to encourage customers to purchase and install water-efficient equipment and devices. Demand for rebates significantly increased in FY09 and FY10 due to the drought.



High-Efficiency Toilets:

Rebates on High-Efficiency Toilets (HET) provide an incentive to customers with inefficient toilets to update their bathroom fixtures with newer, water-efficient models. The program allows customers to pre-apply for a rebate and utilize vouchers for discounts at the point of purchase. To be eligible, a customer's existing toilet must flush 3.5 gallons or more, the new HET must flush 1.28 gallons or less, and be an Environmental Protection Agency (EPA) Water-Sense-certified toilet.

In addition to the goal of immediate water savings, the HET Program has a goal of increasing the availability and sales of HETs in the retail marketplace. For several years, water agencies throughout the state have offered incentives for HETs to promote this market transformation. In 2006, there were approximately 76 HET models available. Since that time the number has nearly doubled each year, and in 2010, there are more than 850 HET models available.

CCWD provided 2,881 HET rebates in FY09, and 3,994 in FY10, compared to only 1,903 in FY08.



High-Efficiency Clothes Washer:

Rebates on High-Efficiency Clothes Washers provide an incentive for customers to upgrade their inefficient top-loading washers to water and

energy-efficient front-loading models. The District and other Bay Area water agencies contracted with Pacific Gas and Electric (PG&E) to manage a single rebate program throughout the Bay Area. Participating customers were required to fill out a single application to receive a rebate from both the water agency and PG&E. The streamlined rebate processing reduced the administrative costs of the program and made it easier for customers to participate.

The District provided 3,634 Washer rebates in FY09, and 4,262 in FY10, compared to 2,327 in FY08.

Smart Sprinkler Timers:

Rebates for Smart Sprinkler Timers provide an incentive for customers to purchase sprinkler timers that automatically adjust themselves based on real-time weather changes. In FY09, the District provided 91 smart sprinkler timer rebates, representing 1,028 irrigation stations. In FY10, the District provided 108 smart sprinkler timer rebates, representing 1,630 irrigation stations.



Sprinkler and Nozzle Retrofit:

Rebates for sprinkler heads and sprinkler nozzles are available to commercial customers as an incentive to upgrade their sprinkler systems. To be eligible, commercial

customers must ensure installation includes pressure regulation, proper head spacing, proper sprinkler pop-up height, and matched precipitation within a watering zone. Water savings are achieved by improving the distribution uniformity of the sprinklers and by lowering the precipitation rate, allowing the water to be absorbed rather than run off the soil. Rebates of \$4 to \$7 per head are available for qualifying sprinkler heads and nozzles. The District provided rebates for 789 sprinkler heads and 928 sprinkler nozzles in FY09, and 1,483 sprinkler heads and 2,992 nozzles in FY10.

Drip Retrofit:

Rebates are available to commercial customers as an incentive to retrofit existing sprinkler systems with qualifying drip systems. To be eligible, the drip systems must meet specific criteria, including pressure regulating emitters, mulched landscape areas, and the removal of the sprinkler system. Water savings are achieved by eliminating overspray, runoff and wind drift. The District provided rebates for 92 sprinkler station conversions in FY09 and 110 in FY10.



Pilot Water-Efficient Landscape Rebate Program:

During FY10 the District initiated a Pilot Rebate Program to encourage customers to replace water-thirsty grass with water-efficient landscaping.

Participants were required to replace existing grass with water-efficient plants and retrofit existing spray irrigation with drip irrigation. Eighty customers participated replacing more than 225,000 square feet of grass. The Pilot program will be evaluated during the next year to determine continuing the program in the future.



Water Conservation Education & Outreach

Complimenting the extensive conservation programs in place for customers, the District developed educational materials to assist customers conserve water.



Drought Survival 101: A series of brochures was developed entitled, *Drought Survival 101*, which focused on providing customers with information to maintain their landscapes during

a drought. Three brochures focus on strategies to help landscapes survive drought conditions, while encouraging customers to use water efficiently with focus on lawn, trees, shrubs, and mulch. All brochures are available to customers at the District Center and at key community events.



How to Read Your Water Meter:

The District developed a flyer on *How to Read Your Water Meter*, which provides step-by-step instructions on how to use the water meter as a tool to monitor

usage. In addition, the CCWD website was updated with an on-line calculator and video to help customers to determine water use.



Lawn & Landscape Watering Schedule:

One of the easiest ways to save water during the fall months is to reduce lawn and landscape watering. The District has developed a flyer explaining

why plants need less water in the fall and providing a month-by-month watering schedule for lawns and landscapes. This watering guide was distributed to landscape customers, property managers, landscape managers, and others throughout the fall.



Gardening in Contra Costa County Plant Database:

In 2005 the District developed a Water-Wise Gardening CD-Rom Program. The CD-Rom was a photo-oriented plant and garden database designed

to inspire customers to plant low water-use gardens appropriate for Contra Costa County. The CD-Roms were distributed to customers for use on their home computers. Since 2005, more than 5,500 copies were distributed. In 2009, the District worked with its vendor to transfer the plant database onto a website. This has dramatically increased the ability for all customers to access the plant database and has reduced the cost of running the program.

Water Savings Team: In July 2008, the District created a Water Savings Team to address reports of water waste and unreasonable use of water, and to ensure proactive and timely actions. The team consists of members of Customer Service, Conservation, and Operations and Maintenance. The District responds to reports within an hour, and most issues are fully addressed within the same day. The majority of the water waste reports are for broken sprinkler systems or over-watering resulting in excessive runoff. The quick response by the Water Savings Team demonstrates to our customers that CCWD is committed to water conservation.



Customer Outreach: Throughout FY09 and FY10, the District participated in numerous community events to provide customers with water conservation information and education. This outreach provides direct communication with customers, keeps them informed and reminds them to continue their conservation efforts. The District also conducted numerous workshops for various customer classes to introduce the Drought Management Program and to provide customers with an overview of the available water conservation services.

School Education Program: Each year the District conducted school presentations to over 30,000 service-area students, teachers, and parents. The school education program provides information on various aspects of water and always includes information on water conservation. By educating students about the value of water and water conservation, the adults of tomorrow become more informed.

Electronic News: During the past two years, the District has utilized e-mail and the internet to provide conservation information to its customers. An electronic newsletter is sent approximately every month providing current drought updates, conservation tips, and monthly lawn and landscape watering advice. Customers can also receive a monthly water schedule to remind them to adjust their timers. Finally, the District provides information on current events through its blog.



Water Conservation Program

Water Savings & Costs

Total Annual Savings is defined as the difference between current annual use compared to historical use. The historical use period is the average annual use for 1987, 1988, and 1989, adjusted for growth (historical use). The current use is the FY10 use also adjusted for growth. The historical use period reflects a period prior to the implementation of the District's Conservation Program and prior to the adoption of major plumbing code changes. The total annual savings for FY10 was 48,331 acre-feet. Water savings occur in three categories:

Active Savings are defined as water savings from CCWD Conservation Programs that can be directly quantified. These include conservation surveys, rebates and other incentives. Active savings are calculated each year by multiplying the number of actions conducted by the unit savings. Individual conservation actions each have a defined savings life and decay rate. Active savings during Fiscal Year 2010 were approximately 4,036 acre-feet.

Plumbing Code Savings are defined as water savings from plumbing retrofits of inefficient showerheads, toilets and clothes washers that occur outside the District's incentive program. In 1992, the plumbing code was revised and the efficiency standards of these fixtures were increased. Therefore, conservation savings occur each time an older fixture is replaced. Plumbing Code savings are calculated each year by estimating the number of inefficient fixtures replaced by the unit savings. Plumbing Code savings during Fiscal Year 2010 are estimated to be 8,553 acre-feet.

Non-Quantifiable Savings are from actions taken by CCWD and independently by its customers for which the savings are not directly quantifiable. A large part of the savings in 2010 is due to customers reducing their water use to meet the demands of the Drought Management Program. Additionally, the spring of 2010 was cooler and wetter than normal; resulting in less landscape water use, and the slower than normal economy likely affected water demand. Savings can also be attributed to CCWD leak repair, CCWD meter replacements, public information, conservation outreach, and school education. Non-Quantifiable savings are estimated each year by subtracting the Active Savings and Plumbing Code Savings from the total annual savings. Non-Quantifiable Savings for FY10 are estimated to be 35,742 acre-feet.

Program Costs: The Water Conservation Program, including the additional costs for the Drought Management Program, was implemented within the adopted FY09 budget of \$2,114,444, and the FY10 budget of \$2,880,014. This included the labor and material costs for surveys, devices, rebates and other outreach programs, as well as additional costs for the DMP. Expenditures for the public information program and for the school education program are not included. The District obtained \$126,000 in FY09 and \$430,874 in FY10 in grant funding for the Water Conservation Program, which help offset rate funding for the Water Conservation Program.



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