
Section 3: Best Management Practices (BMPs) for Agricultural Contractors

Not applicable.

Section 4: BMPs for Urban Contractors

The FOWD conservation program continues to expand as more of its customers are converted to metered service and metered rates. The majority of the District's efforts is focused on meter retrofit BMP 4 and is scheduled for completion by 2011. Once all customers are billed on metered rates, FOWD expects that more of its customers will take advantage of its BMP programs.

FOWD maintains an annual budget of approximately \$150,000 (excluding the \$2.5 million for meter retrofits) for its water conservation program. Annual monitoring and reporting for both the CUWCC and USBR requirements are accomplished through the CUWCC annual reporting website. In addition, FOWD is a signatory to the Water Forum Agreement, and submits its BMP efforts, status, and results annually to the Water Forum.

Actions and descriptions of each CUWCC BMP are presented in this section. The next three year's budgets for each BMP are included in the tables at the end of this section. The CUWCC 2008 Annual Report is presented in Attachment H. The budget information in the 2008 annual report was reported early in 2009, prior to the budget approval. The three-year budgets provided at the end of this section are the approved budgets.

1. BMP 01 - Water Survey Programs for Single-Family and Multi-Family Residential Customers

FOWD will continue to implement water surveys for single-family and multi-family residential customers to include the following:

- Survey development and marketing strategy that includes offering survey to all customers at least twice per year through newsletters and notes on customer's bills.
- Check for leaks including toilets, faucets, and meters.
- Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement if necessary.
- Check toilet flow rates and offer to install displacement device.
- Check irrigation system and timers.
- Review or develop irrigation schedule
- Provide customer information packets that include survey results and recommendations.

FOWD offered surveys to all of its residential customers in 2008, with only three customers requesting the survey.

2. BMP 02 - Residential Plumbing Retrofit

FOWD offers residential plumbing retrofits to all of its residential customers. Customers are notified of retrofit programs through the District newsletter, notes on bills, bill stuffers, community events, and through the Regional Water Efficiency Program Advisory Committee. FOWD does not maintain an ordinance to enforce retrofits and instead relies on the marketing strategy to inform customers of available retrofit services.

In 2008, FOWD distributed 251 retrofit kits which includes a low flow showerhead, toilet displacement device, and faucet aerator. The District estimates that 36 percent of its single family accounts and 73 percent of its multi-family households have low flow showerheads.

3. BMP 03 – System Water Audits, Leaks, Detection, and Repair

FOWD can not measure or monitor leaks due to incomplete meter coverage of their system. The District is aggressively replacing or investigating retrofit alternatives of currently known and newly identified steel piping in the District's system. The District's current master plan identifies approximately 37,000 linear feet of main to be replaced. The District spends approximately \$50,000 per year on leak repairs. In addition, the meter installation program includes replacing the service line out to the main, eliminating many leaks that may be undetected. The District plans on fully implementing this BMP when meter coverage is sufficient to allow for meaningful results from meter data.

4. BMP 04 - Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections

FOWD is nearing the end of its meter retrofit program. The District installed 1,317 meters in 2008, and expects to have all customers metered by the end of 2011. Once metered, customers will be placed on a metered rate after one year of comparison on their bills. The meter retrofit program is the largest budget item for FOWD's conservation program. The program is budgeted for \$2.6 million over the next three years.

FOWD requires meters for all new connections, and bills on volume basis for commercial and multi-family customers. The District began installing meters in 1986 and currently installs meters for all new service connections, service lines that are replaced, customers requesting meters, all commercial, and all multi-family connections. Bill-by-volume is offered to all residential customers one year after meter install. As the meter retrofit program nears completion in 2011, FOWD plans to conduct a billing rate study to include incentive-based pricing structures, per BMP requirements. Pending the results of the study, FOWD will implement billing by volume structures as recommended.

5. BMP 05- Large Landscape Conservation Programs and Incentives

FOWD will continue to provide customer support, education, and assistance by offering irrigation audits and notifications to large landscape accounts through District newsletters, bills, and community events. Information includes audit availability, controllers and services available, over watering evaluations, specific drought watering instructions, drought resistant landscapes, irrigation strategies, and other conservation methods. Information also includes schedules for irrigation seasons and lists recommended system checks and schedule changes prior to start and just after end of irrigation season.

Accounts with dedicated irrigation meters have not been assigned ETo-based water use budgets as these accounts are still on a flat rate billing structure. The District plans to change this when the rate study is completed for BMP 04 and new rate structures are implemented. Comparative water use data from the previous year's bill is included on customer statements. The District has offered audits and water use budgets to all large landscape customers but no customers have requested the service yet. The survey elements include:

- Irrigation system check
- Distribution uniformity analysis
- Review/develop irrigation schedules
- Survey results with potential water savings, cost savings, and conservation information and other programs available.

The program also provides many other elements including:

- Landscape water use analysis/surveys
- Voluntary water use budgets
- Installation of dedicated landscape meters
- Landscape water use efficiency information
- Irrigation season start and end notices
- Follow up water use surveys/analysis

The District has installed climate appropriate landscaping at well sites, the main office, and the tank site and has investigated dual metering for these sites.

6. BMP 06 - High-Efficiency Washing Machine Rebate Programs

The two local power utilities, Sacramento Utilities District and Pacific Gas & Electric, both offer rebates on clothes washers and other appliances. To qualify, the unit must be installed with a water heating source using natural gas or electricity provided by one of the two power companies. Information on these programs is provided to District customers through District newsletters, web site, and community events. FOWD does not plan to provide high-efficiency washing machine rebates over the next three years as long as the rebates are available to customers from the energy providers. The exemptions calculations for this BMP are included in Section 6.

7. BMP 07 - Public Information Programs

FOWD maintains a robust public information program for its conservation program. The District is a member of the Regional Water Authority, which provides additional public information programs throughout the region for its members. The program includes the following:

- Providing speakers to employee, community, and media groups
- Using paid advertising
- Using bill inserts/newsletters/brochures
- Showing water usage on bills
- Demonstration garden
- Special events and media events to promote conservation
- Coordinating with other government agencies, industry groups, public interest groups, and media to promote conservation efforts

The public information program provided 13 paid advertising events, 823 public service announcements, four bill inserts, presence at two local events, eight speaking engagements, and maintained two demonstration gardens.

8. BMP 08 - School Education Programs

FOWD maintains a school education program covering urban, agricultural, and environmental water issues and conditions in the local watershed that includes classroom presentations and instructional assistance. All materials provided meet the State education framework requirements. In addition, FOWD also participates in Newspapers in Education, a program sponsored by the Regional Water Efficiency Program Advisory Committee and supports the Water Conservation Poster Contest, which includes distributing 10,000 copies of the conservation calendar.

The school education program provided two classroom presentations in 2008, reaching 150 students.

9. BMP 09 - Conservation Programs for CII Accounts

The District has already implemented most of the cost effective and customer-requested elements for this BMP. CII accounts are identified and ranked for water usage between commercial, industrial, and institutional accounts. An audit is offered to all customers. In addition, the District participated in the RWA Rinse and Spray retrofit program. However, because CII customers realized a significant savings when converting to water-use rates, none have expressed interest in the survey. The District will continue to offer the survey through the public outreach BMP and adjust the budget to meet demand accordingly.

The CII surveys that include the following:

- Site visit
- Evaluation of all water-using apparatus and processes
- Report identifying recommended efficiency measures, expected payback, and available incentives.

In addition, FOWD offers the CII ULFT retrofit through BMP 14.

10. BMP 10 - Wholesale Agency Assistance Programs

FOWD is not a wholesaler water district, but coordinates some of its conservation program with its wholesaler, San Juan Water District.

11. BMP 11 - Conservation Pricing

FOWD is converting to a metered system from a non-metered system. All CII accounts are metered and billed on a volumetric rate. There is currently a mixture of flat rate residential, flat rate irrigation, commodity commercial, and service charge commercial. Residential accounts are converted to meters and billed on volumetric rate voluntarily. Therefore, the Districts pricing structures are between the older, flat rate structure, and the newer conservation orientated methods. The District plans to update its rate study evaluation of incentive-based pricing structures and conservation pricing as the meter retrofit nears completion in 2011.

12. BMP 12 - Conservation Coordinator

FOWD has an established conservation coordinator whose duties include the following:

- Coordination and oversight of conservation program and BMP implementation
- Preparation and submittal of the CUWCC BMP Implementation Report
- Coordination of conservation efforts and programs with District executive team, other staff, and other agencies
- Preparation of annual BMP budgets
- Participation in CUWCC meetings
- Preparation of conservation elements in the District's Urban Water Management Plan

The conservation coordinator is a full-time position and FOWD has budgeted \$60,000 annually for the position. In addition to the coordinator, there are also 3 full-time-equivalents available through the customer service department to support and implement the conservation program as required.

13. BMP 13 - Water Waste Prohibition

The District's Board of Directors passed a resolution stating that water will be used in a beneficial manner. Water use must be confined to a customer's property with no run off allowed. The resolution states that automatic shut-off devices on garden hoses and filling apparatus shall be used and free flowing of water from such apparatus is prohibited. Pools, spas, fountains, and ponds shall be equipped with recirculating pumps and shall be constructed to be

fountains, and ponds shall be equipped with recirculating pumps and shall be constructed to be leak-proof. Hydraulic washing of streets, parking lots, driveways, sidewalks, patios, tennis courts, or buildings is only allowed for sanitary considerations. In addition, the District employs two additional full time seasonal staff to patrol the service area, helping to promote conservation practices within the guidelines of the District's "Water Conservation Requirements and Enforcement Measures" as well as being good will ambassadors in the education and promoting healthy landscapes. The District has not yet addressed water softener issues, as water quality precludes any significant use of softener units.

14. BMP 14 - Residential ULFT Replacement Programs

FOWD actively pursues ULFT replacement with its customers by offering rebates and advertising the program through its public information campaign. Rebates are up to \$75 per toilet for 1.6 gallon per flush (gpf) models and up to \$100 per toilet for 1.28 gpf models. At least 90 percent of all all new toilets and supply lines are inspected by the District for proper operation and leaks. The District through RWA has developed contracts with Sacramento Regional Sanitation District to receive funds for toilet replacement incentives up to 25 percent of each cost. The incentive does not exceed \$50 per toilet on a pro-rated basis. This results in total potential rebate of up to \$125 for 1.6 gpf models and up to \$175 for 1.28 gpf models.

A similar rebate and service is provided to all CII accounts as well. The CII program in this BMP 14 is in lieu of the ULFT CII program in BMP 12. However, the CII ULFT program in this BMP does not track detailed information on CII participants or projected water savings. The program is marketed along with all the other conservation programs the District offers in the newsletters, bill stuffers, and at community events.

In 2008, the program provided 112 rebates for single family customers and 10 rebates for multi-family customers for 1.6 gallon per flush (gpf) toilets. Four rebates were provided to single family customers for 1.28 gpf toilets.

3-Year Budget for Expenditures and Staff Effort for BMPs

2010 Year Budget and Staff Time Summary

BMP No.	BMP Name	Estimated Budget \$\$	Estimated Staff Time (Hours)
1	Residential Water Audits	3,000	100
2	Residential Retrofits	1,500	50
3	System Water Audit and Leak Detection	in ops budget	in ops budget
4	Metering w/Commodity Rates	2,536,800	21,000
5	Large Landscape Water Audits	500	5
6	Washing Machine Rebates	0	0
7	Public Information	20,000	120
8	School Education Program	20,000	200
9	CII Conservation	0	0
10	Wholesale Agency Programs	0	0
11	Conservation Pricing	0	0
12	Conservation Coordinator	60,000	2,080
13	Water Waste Prohibition	15,000	500
14	ULFT Program	19,000	300
	Total	2,675,800	24,355

2011 Year Budget and Staff Time Summary

BMP No.	BMP Name	Estimated Budget \$\$	Estimated Staff Time (Hours)
1	Residential Water Audits	3,000	100
2	Residential Retrofits	1,500	50
3	System Water Audit and Leak Detection	in ops budget	in ops budget
4	Metering w/Commodity Rates	200,000	2,080
5	Large Landscape Water Audits	500	5
6	Washing Machine Rebates	0	0
7	Public Information	20,000	120
8	School Education Program	20,000	200
9	CII Conservation	0	0
10	Wholesale Agency Programs	0	0
11	Conservation Pricing	0	0
12	Conservation Coordinator	60,000	2,080
13	Water Waste Prohibition	15,000	500
14	ULFT Program	19,000	300
	Total	339,000	5,435

2012 Year Budget and Staff Time Summary

BMP No.	BMP Name	Estimated Budget \$\$	Estimated Staff Time (Hours)
1	Residential Water Audits	3,000	100
2	Residential Retrofits	1,500	50
3	System Water Audit and Leak Detection	in ops budget	in ops budget
4	Metering w/Commodity Rates	200,000	2,080
5	Large Landscape Water Audits	500	5
6	Washing Machine Rebates	0	0
7	Public Information	20,000	120
8	School Education Program	20,000	200
9	CII Conservation	0	0
10	Wholesale Agency Programs	0	0
11	Conservation Pricing	0	0
12	Conservation Coordinator	60,000	2,080
13	Water Waste Prohibition	15,000	500
14	ULFT Program	19,000	300
	Total	339,000	5,435