

PARTNERS FOR A WATER-EFFICIENT CALIFORNIA



Annual Report 2005

November 15, 2006

Tam M. Doduc, Chair and Members
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Ms. Doduc and Members of the Board:

We are pleased to provide you with the 2005 Annual Report for the California Urban Water Conservation Council. This report is our annual update to the State Water Resources Control Board on Council activities for the calendar year 2005.

There are numerous accomplishments of statewide importance summarized in this report. During 2005, the Council:

- Convened a stakeholder task force per Assembly Bill 2717 (Laird) to develop recommendations to improve Landscape water-use efficiency, and prepared the task force's detailed report containing these recommendations for submission to the Governor and the Legislature.
- Developed the first model in the United States for quantifying the environmental benefits of water conservation programs.
- Conducted a stakeholder research project in partnership with the US Environmental Protection Agency to create a national water efficiency organization.
- Analyzed four new potential best management practices.
- Implemented the next phase of the highly successful low-flow pre-rinse spray valve program, which installed 12,200 devices in 2005.
- Conducted professional workshops with industry experts on water use and conservation.
- Assisted the California Energy Commission with the 2005 Integrated Energy Policy Report, which revealed large potential energy savings through water conservation programs.
- Added 26 new Council member organizations to a total of 350, representing nearly 75% of the State's urban water supply.

Please note that this report does not include new data on the implementation of the Council's Best Management Practices by member urban water suppliers. Water agencies report this information every two years, and 2005 was a non-reporting year.

We hope that you will find this report informative. If you have any questions, please contact us at 916-552-5885.

Sincerely,



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Executive Director



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AB 2717 Landscape Task Force



Front Row (L to R): David Zoldoske, Bill Jacoby, Irene Esparza Portillo, Frances Spivy-Weber, Ron Munds, Ronnie Cohen, Marsha Prillwitz
Center Row (L to R): Terry Roberts, Sarah West, Janet Hartin, Virginia Porter, Tracy Slavin, Jan Tubiolo, Scott Sommerfeld, Larry Rohlfes
Back Row (L to R): Darryl Miller, Steve LaMar, Larry Costello, Eric Wesselman, Donna Decker, Jim Metropulos, Bob Perry
Not Pictured: Gus Ayer, Tim Blair, Dana Haasz, Catherine Kutsuris, Jonas Minton, Adán Ortega, Peter Silva, Rick Soehren, Meena Westford



A major project for the Council in 2005 was the coordination of the state Landscape Task Force. Assembly Bill 2717, authored by Assemblyman John Laird and signed into law in 2004, requested that the Council convene a stakeholder task force to recommend improvements to landscape water-use efficiency by December 31 2005.

The Council recruited a stakeholder task force from diverse backgrounds, facilitated meetings and coordinated fundraising for the project. The Task Force report was submitted to the Governor and Legislature and contains 43 recommendations, which, if implemented, could save 600,000 to 1,000,000 acre-feet of water annually-- enough water to meet the needs of up to two million California households.

CALIFORNIA URBAN WATER CONSERVATION COUNCIL

2005 Annual Report



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- Attachment C: 2003-2005 Strategic Plan
- Attachment D: 2005 Council Budget
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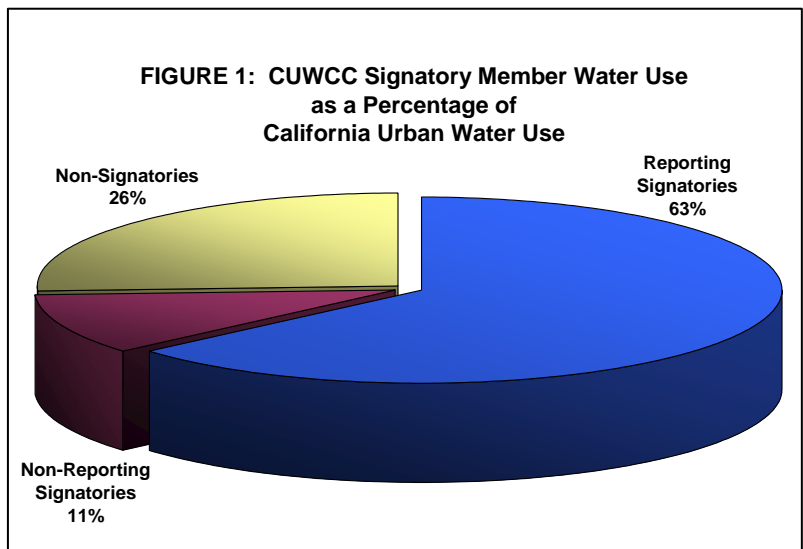
PART I: ADMINISTRATION AND PROJECT FUNDING

Background to the Council, the MOU, and the BMPs

The Mission of the California Urban Water Conservation Council is a simple one: to increase urban water use efficiency statewide. The Council was created by the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), first signed in 1991 by a group of urban water suppliers, environmental interest groups, and other interested parties. Water suppliers signing the MOU agree to develop and implement comprehensive conservation Best Management Practices (BMPs) that are cost-effective, using sound economic criteria. Since 1991, over 190 urban water suppliers across California have signed the MOU, representing nearly 75% of the state's urban water supply.

The BMPs and the criteria for their implementation are contained in the MOU, a copy of which is available through the Council's website (www.cuwcc.org). There are currently 14 water conservation BMPs addressing residential, commercial, industrial, landscape, system water loss, school education, public information, and pricing conservation practices. The BMPs are listed in Table 1. Signatory water suppliers are expected to implement a BMP only when it is cost-effective to do so. The MOU and supporting Council-developed guidelines describe the methods for determining when a BMP is cost-effective. In addition, most of the BMPs apply only to retailers; one BMP applies only to wholesalers. Thus, not all signatories are expected to implement all BMPs.

However, all signatories are expected to report their BMP implementation activity to the Council. The Council maintains an on-line BMP reporting database which provides uniform reporting capability statewide on water conservation programs. In even-numbered years, the Council provides detailed summaries of BMP implementation activity. 2006 will be the



Council's next Annual Report which will include BMP reporting summaries. Figure 1 shows the percentage of signatory water suppliers reporting in 2004.

Table 1: Council MOU Urban Water Conservation Best Management Practices

#	BMP	Requirements
1	Water Survey Programs for Single and Multi Family Residential Customers	Survey 15% of residential single-family and 15% of multi-family customers within 10 years.
2	Residential Plumbing Retrofit	Retrofit 50% of residential housing constructed prior to 1992 with low-flow showerheads, toilet displacement devices, toilet flappers and aerators; or achieve 75% saturation of the water agency service area and be able to prove it statistically.
3	System Water Audits, Leak Detection and Repair	Audit the water utility distribution system regularly and repair any identified leaks; check yearly to see that water loss is less than 10%.
4	Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	Install meters in 100% of existing unmetered accounts within 10 years; bill by volume of water use; assess feasibility of installing dedicated landscape meters.
5	Large Landscape Conservation Programs and Incentives	Prepare water budgets for 90% of commercial and industrial accounts with dedicated landscape meters; provide irrigation surveys to 15% of mixed-metered customers.
6	High-Efficiency Washing Machine Rebate Programs	Provide cost-effective customer incentives, such as rebates, to encourage purchase of machines that use 40% less water per load. Number of clothes washers required is based on the total dwelling units x .048; up to a third fewer machines required if all of them are super high-efficiency (6.0 or less water factor).
7	Public Information Programs	Water utilities to provide active public information programs to promote and educate customers about water conservation.
8	School Education Programs	Provide active school education programs to educate students about water conservation and efficient water uses.
9	Conservation Programs for Commercial, Industrial, and Institutional Accounts	Provide a water survey of 10% of these customers within 10 years and identify retrofiting options; OR reduce water use by an amount equal to 10% of the baseline use within 10 years.
10	Wholesale Agency Assistance Programs	Provide financial incentives to water agencies and cities to encourage implementation of water conservation programs
11	Conservation Pricing	Eliminate non-conserving pricing policies and adopt pricing structure such as uniform rates or inclining block rates, incentives to customers to reduce average or peak use, and surcharges to encourage conservation.
12	Conservation Coordinator	Designate a water agency staff member to have the responsibility to manage the water conservation programs.
13	Water Waste Prohibition	Adopt water waste ordinances to prohibit gutter flooding, single-pass cooling systems, non-recirculating systems in all new car wash and commercial laundry systems, and non-recycling decorative water fountains.
14	Residential Ultra-Low-Flush Toilet Replacement Programs	Replace older toilets for residential customers at a rate equal to that of an ordinance requiring retrofit upon resale.

Members - Signatories

The Council is a unique collaboration between three member groups:

Group 1: Water suppliers:

Defined as *“Any entity, including a city, which delivers or supplies water for urban use at the wholesale or retail level”*. Group 1 members are Signatories to the MOU and pledge to implement the Council’s 14 Best water conservation BMPs listed in Table 2. These BMPs are periodically revised through a collaborative process with Group 2 members.

Group 2: Public advocacy organizations:

Defined as *“A non-profit organization:*

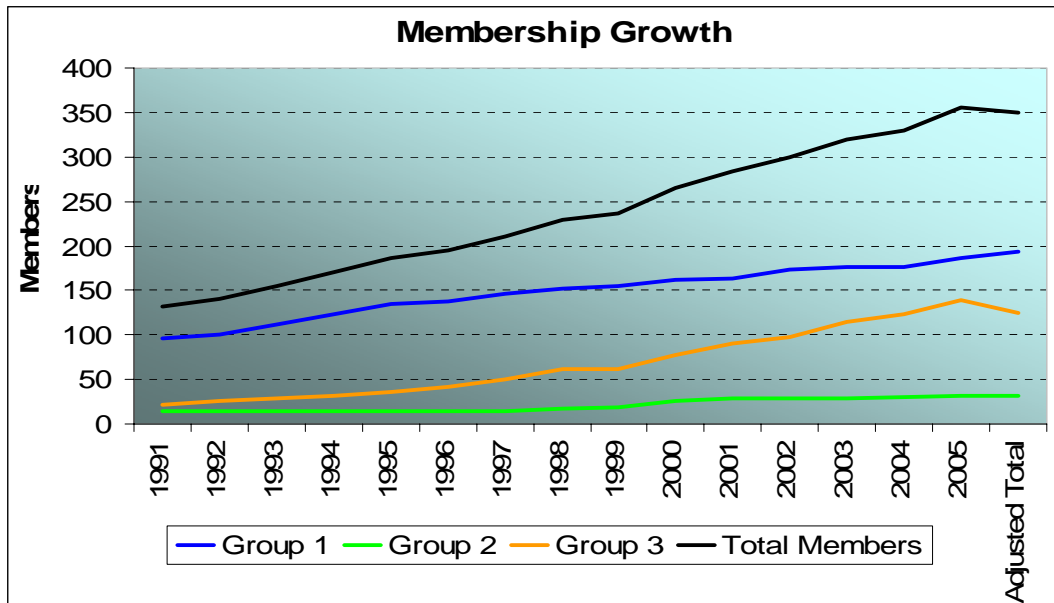
- (i) whose primary function is not the representation of trade, industrial or utility entities, and*
- (ii) whose prime mission is the protection of the environment or who has a clear interest in advancing the BMP (Best Management Practices) process.”*

Group 3: Other interested groups:

Defined as *“Any other group that does not fall into one of the two groups above.”* This includes consultants, product manufacturers, and government agencies that do not supply water.

Council membership increased to 350 in 2005, adding 26 new members. **Attachment A** lists the signatories of the Council by name. Figure 2 shows annual signatory growth.

FIGURE 2: Year-by-Year Council Signatory Growth*



* "Adjusted Total" accounts for the withdrawal of signatories.

Governance

The two main governance bodies of the Council are the Steering Committee (Executive Board) and the Plenary (Membership). The Steering and Plenary each meet four times a year. There are also five supporting Committees (Finance, Membership, Governance, Research & Evaluation, and Legislation), and four conservation program committees (Residential, Commercial-Industrial-Institutional, Landscape, Utility Operations, and Communications.) **Attachment B** provides an organization chart of the Council's governance structure, and a listing of the members of the 2005 Steering Committee. Some important 2005 governance activities include:

Some important 2005 governance activities include:

- A new position of Assistant Director, authorized in 2004, was filled in 2005.
- An Audit Committee, separate from the Finance Committee, was established in 2005 to improve accountability and to meet the requirements of SB 1262.
- Group 3 dues were restructured based on the type and size of the Group 3 member organization.
- Improved employee health and retirement benefits were approved in 2005.
- A Strategic Planning Retreat was held in 2005 to develop a new 2006-2010 Strategic Plan.

The Steering Committee provided critical guidance on the development of a new 2006-2010 Strategic Plan. The Strategic Plan outlines the future goals and objectives of the Council along with specific actions and an estimated budget to implement the plan. The new draft plan is undergoing Steering review and should be adopted in 2006. **Attachment C** contains the current 2003-2005 Strategic Plan, which follows the same format.

The Council currently has nine staff. The positions are Executive Director, Assistant Director, Program Manager, Technical Advisor, Database/Website Administrator, Web Developer, Office Manager, Executive Assistant and Administrative Assistant (pictured on the next page). The Council also relies on the expertise of several consultants.

Council Finances

Attachment D contains the Year 2005 Council Budget, which was approved by the Plenary membership in December 2004.

Actual revenues and expenditures for 2005 were \$3,177,811 and \$3,140,898 respectively. Approximately \$720,000 of revenue was received from dues, nearly all coming from member water agencies. More than 80% of the expenditures in 2005

were for “pass-through” funding for statewide implementation programs (Rinse & Save- see below), research, training and technical assistance for member water agencies. Actual general and administrative expenditures were \$465,500. The 2005 year end Audit shows the Council has \$688,763 in net assets, down from \$829,319 in 2004.



Council Staff (L to R): Karl Kurka, Katie Shulte Joung, Molly Garcia , Maria Malapaya, Tom Pape, Heather Woodford, Beth Ernsberger, Mary Ann Dickinson, and Jeffrey Hughes

Projects and Grant Funding

Assembly Bill 2717 Landscape Task Force

A major undertaking for the Council in 2005 was the successful coordination of the Statewide Landscape Task Force. Landscape irrigation consumes almost 3 million acre-feet of water annually in California (30% of all urban water supplied). AB 2717, authored by Assemblyman John Laird and signed into law in 2004, requested that the Council convene a stakeholder task force to recommend improvements to landscape water-use efficiency by December 31 2005.



The Council recruited a stakeholder task force; facilitated meetings; provided administrative staff support; coordinated fundraising; and produced of the final Task Force report to the Governor and Legislature. AB 2717 did not provide any state funding for this effort. The Council raised nearly \$300,000 from the generous contributions of our members and other stakeholders. The thirty member Task Force was recruited from urban water suppliers, government agencies, industry groups, universities and environmental advocacy and environmental justice organizations. An additional 89 stakeholders

participated in the seven work groups that were established to develop draft recommendations for discussion. The Task Force and its seven workgroups deliberated intensively, meeting 40 times around the state in 2005. Three Council staff members and a dedicated consultant supported this entire effort.

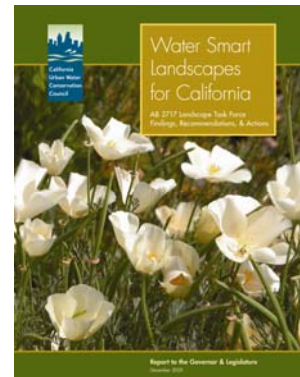
The final report entitled *Water Smart Landscapes for California: Actions to Improve the Efficiency of Water Use in California's Urban Landscapes* contains 43 recommendations, which the Task Force estimates could save between 600,000 to 1,000,000 acre-feet of water annually if implemented -- enough water to meet the needs of up to two million California households.

The Top Twelve recommendations are presented in the box below. Legislation will likely be introduced in 2006 to implement some of the report recommendations. The Council was also tasked to follow up and implement several of the Task Force recommendations which are described later in this report.

AB 2717 Landscape Task Force Top Twelve Recommendations

The Task Force made 43 recommendations for achieving greater landscape water use efficiency. The following top twelve recommendations are listed in priority order.

1. Adopt water conserving rate structures as defined by the Task Force.
2. Reduce the ET Adjustment Factor (the landscape water budget) in the Model Ordinance and review the ET Adjustment Factor every ten years for possible further reduction.
3. Enforce and monitor compliance with local ordinances and the state Model Ordinance including an enforcement mechanism to insure effective irrigation system installation and efficiency.
4. Require dedicated landscape meters.
5. Promote the use of recycled water in urban landscapes.
6. Require that local ordinances be at least as effective as the State Model Ordinance.
7. Increase the public's awareness of the importance of landscape water use efficiency and inspire them to action.
8. Require Smart Controllers.
9. Adopt and enforce statewide prohibitions on overspray and runoff.
10. Provide training and certification opportunities to landscape and irrigation professionals.
11. Support upgrading the California Irrigation Management Information System (CIMIS) Program.
12. Adopt performance standards for irrigation equipment.



For a copy of the full report, please go to: www.cuwcc.org/ab2717_landscape_task_force.lasso or call the California Urban Water Conservation Council at 916-552-5885.

Rinse & Save CPUC Grant for Pre-rinse Spray Valves

The Rinse & Save program is one of the most successful partnerships in California and an early leader in proving the water-energy efficiency connection. Undertaken in partnership with over 30 water agencies and two gas companies, and funded by grants from the California Public Utilities Commission (CPUC), the program has achieved remarkable water and energy savings.

The program targets restaurant owners -- a market segment which is typically difficult to reach -- with free energy and water efficient pre-rinse spray valves (used in restaurants for pre rinsing dishes and other purposes). Each spray valve has a lifetime savings estimate of 250,000 gallons over a five-year life expectancy.



In 2003, the CPUC agreed to provide the Council with \$2.97 million in funding for a Phase 2 of the program to install an additional 20,000 valves by the end of 2005. During 2005, the program installed 12,206 valves. The Council will receive an additional \$2 million for the final Phase 3 of the program to install 10,000 valves by the end of March 2007.

The Council also provided technical assistance and hearing testimony to the California Energy Commission to assist them in establishing a water efficiency standard for pre-rinse spray valves, which was adopted in 2005. The standard states that as of January 2006, all models manufactured and sold in California must have a flow rate equal to or less than 1.6 gpm and must meet a cleanability performance standard.

DWR/USBR/CALFED Cooperative Agreement

The Council's \$1.5 million cooperative agreement with the Department of Water Resources (DWR), the U.S. Bureau of Reclamation (USBR), and the California Bay-Delta Authority (CBDA) was increased by \$195,000 in 2003 to provide additional BMP Reporting information for use by the DWR Office of Water Use Efficiency staff in analyzing urban water use and urban water management plans. Cumulative savings for each of the quantifiable BMPs were posted online. Data from the reporting database were also used to prepare the CBDA Water Use Efficiency Program's Year Four Comprehensive Report, including projections of water savings under various funding scenarios.

The DWR and CBDA portions of the agreement were completed in 2005. The remaining USBR portion will be completed by December 31, 2006.

EPA Environmental Benefits Study

In 2005, the US EPA awarded the Council a \$100,000 grant to quantify the environmental benefits and costs resulting from water efficiency programs. This grant supplemented funding already received from the USBR for this project. Because water efficiency can yield substantial environmental benefits, it is important to include them in the utility avoided cost analysis for determining the cost-effectiveness of implementing a conservation activity or BMP. However, a monetary value of environmental benefit resulting from water conservation had never been available before, principally because no one had developed a method to determine the values. The Council applied for funding to build such a model, and after funding was received from USBR and USEPA, the project work was undertaken by Lawrence Berkeley Labs.

There were two distinct pieces to this project: refining the definitions of avoided costs; and developing methods to quantify environment benefits and costs. The resulting model will integrate both of these into a more comprehensive tool for water agencies to use when calculating the cost-effectiveness of a proposed BMP. The Council is also working with the American Water Works Association Research Foundation (AWWARF) to include the environmental benefits model in AWWARF's Integrated Resources Management Project 2935, which could result in national conservation benefits.

During 2005, the Environmental Benefits and Costs Model was drafted, and user guides and reports reviewed and refined by the project advisory committee. Stakeholder workshops were also conducted to solicit input on these models. The work will be peer-reviewed in 2006 and the models are expected to be finalized at that time.

EPA National Water Efficiency Organization Research



Currently, there is no national-level organization promoting water efficiency. In 2004, the Council received a grant from the U.S. Environmental Protection Agency to research the creation of a national organization for water efficiency. Completed in December, 2005, the project involved identifying and surveying hundreds of stakeholders nationwide, holding regional workshops and focus groups, conducting surveys, and creating a web page to collect and disseminate information on a potential national organization. The purpose of the project was to gauge interest in a national organization, its potential benefits, activities and functions. A report was prepared by the Council documenting a high level of interest in establishing such an organization, and in having it do the following:

1. *Create a national water efficiency clearinghouse and network for program information sharing.*
2. *Advocate and research plumbing and code standard setting.*
3. *Independently research and test new products and programs for reliable water savings.*
4. *Coordinate with green building programs.*
5. *Train water conservation professionals.*
6. *Develop consumer education programs.*
7. *Assist with market transformation for high efficiency products.*
8. *Advocate strongly for water efficiency overall.*

The report results were favorably received, and on December 6, 2005 EPA Administrator Steven Johnson announced at a press conference that a new national water efficiency organization would be created. Called *Alliance for Water Efficiency*, the organization would eventually be located in Chicago. For the time being, however, the Council will continue to assist with establishing the organization and helping it to become fully independent. Additional grant funding is expected in 2006 for this purpose.

EPA Wastewater Avoided Costs Study

In October 2005, the Council was awarded a \$145,000 grant from the U.S. Environmental Protection Agency to develop a Wastewater Avoided Cost Model and Methodology. The avoided cost of deferring or downsizing wastewater infrastructure is essential for determining a least cost path for managing these challenges, and determining the optimal level of investment in water efficiency programs. Because water efficiency, as well as related reductions in wastewater and stormwater run-off, can yield substantial water quality benefits, it is important to be able to calculate these benefits as part of the utility avoided cost analysis. This research project will advance the state of knowledge regarding the calculation of wastewater/stormwater avoided costs by improving the ability of utilities to calculate true costs and benefits associated with implementation of urban water conservation programs. This model will share data with the Water Utility Avoided Costs model, which has also been upgraded, to provide a detailed analytical tool. Work on this project will begin in 2006 upon receipt of the final award contract.

Proposition 13 Smart Irrigation Controller Study

More than 20 California water agencies are using Prop 13 funding to distribute 8,000 Smart Irrigation Controllers (a.k.a. Weather Based Irrigation Controllers or ET Controllers) to residential and commercial landscapes. Smart Controllers adjust landscape irrigation according to climate, weather conditions, plant type and even soil type. Preliminary studies estimate irrigation savings potential of about 20%.

The Council is coordinating a statewide evaluation of the Prop 13 program. This will be the largest evaluation study of Smart Irrigation Controllers ever conducted.

In 2005, a Project Advisory Committee was established with project partners Metropolitan Water District of Southern California and East Bay Municipal Utility District. A contractor was selected and the scope of work finalized. Work has begun on the project database and evaluation surveys. The first phase of the project will evaluate program distribution methodologies (rebate, direct install, give-away and swap programs). The second Phase of the project will evaluate the performance of the various types of controllers installed, the water savings and cost-effectiveness. The final report will be completed by June 2008.

Proposition 50 Water Use Efficiency Grants

In 2005, the Council was awarded five grants to be administered by the Department of Water Resources and is a partner on a fifth. These grants, totaling \$2.4 million in funding, include the following projects and the following assignments for the Council:

1. **Technical Assistance:** Provide water conservation technical assistance to Water Agencies, including assistance on urban water management plans, efficiency training workshops, benefit-cost workshops, BMP reporting, and publications on residential BMPs and program evaluation.
2. **One-Stop Rebate:** Partner with water agencies to provide approximately 9,000 residential and commercial rebates for a variety of water saving devices, including high efficiency washers, toilets, urinals, water brooms and medical x-ray processors. The One Stop Rebate Program is aimed at small to medium size agencies where administrative costs may be prohibitive to running an independent rebate program.
3. **Cooling Tower Rebate:** Partner with water agencies to improve the water efficiency commercial cooling towers. Sensors (conductivity meters) will be installed on approximately 200 cooling towers. The project includes measuring water savings and cost-effectiveness.
4. **Smart from the Start:** Develop construction guidelines for new super water efficient homes that are more rigorous than current green building programs. The project will also partner with at least one home builder to design, build and market model homes, which could qualify as "Water Star" homes.

5. **Water Star:** Assist in creating a water efficient product labeling program for California. The project will design a program that will test and label products and is being coordinated by East Bay Municipal Utility District.

PART II: COUNCIL ACTIVITY ON BEST MANAGEMENT PRACTICES

BMP Reporting by Council Signatories

In the fall of 2000, the Council launched a database-backed online reporting system that allows signatories to enter BMP implementation data directly into the Council's website. Water agencies collect their program information on an annual basis, but report it bi-annually to the Council only in even-numbered years. Thus, for 2005, the latest aggregated data will not be available until the Council publishes its 2006 Annual Report. However, individual agency reports are public information and may be viewed as soon as they are posted at: http://bmp.cuwcc.org/bmp/read_only/list.lasso.

For purposes of BMP reporting, each Group 1 signatory is defined as a single reporting unit, but there are exceptions. First: where a Group 1 water agency has multiple service areas, each service area becomes a different reporting unit. Second: where a Group 1 water agency is both a wholesaler and retailer of water, each becomes a different reporting unit.

Reporting units enter information on those best management practices that relate directly to the reporting units' responsibility. Retail reporting units report on 13 of the 14 best management practices. They are not required to report on BMP 10, Wholesale Agency Assistance Programs. Table 2 compares BMP reporting requirements for retail and wholesale reporting units.

Table 2: Comparison of Retail and Wholesale BMP Reporting Requirements

Best Management Practice		Retail Reporting	Wholesale Reporting
1.	Water Survey Programs For Single-Family Residential and Multi-Family Residential Customers	Yes	
2.	Residential Plumbing Retrofit	Yes	
3.	System Water Audits, Leak Detection And Repair	Yes	Yes
4.	Metering With Commodity Rates For All New Connections and Retrofit Of Existing Connections	Yes	
5.	Large Landscape Conservation Programs And Incentives	Yes	
6.	High Efficiency Washing Machine Rebates	Yes	
7.	Public Information	Yes	Yes
8.	School Education	Yes	Yes
9.	Conservation Programs for Commercial, Industrial, and Institutional Accounts	Yes	
10.	Wholesale Agency Assistance		Yes
11.	Conservation Pricing	Yes	Yes
12.	Water Conservation Coordinator	Yes	Yes
13.	Water Waste Prohibition	Yes	
14.	Residential ULFT Replacement Programs	Yes	

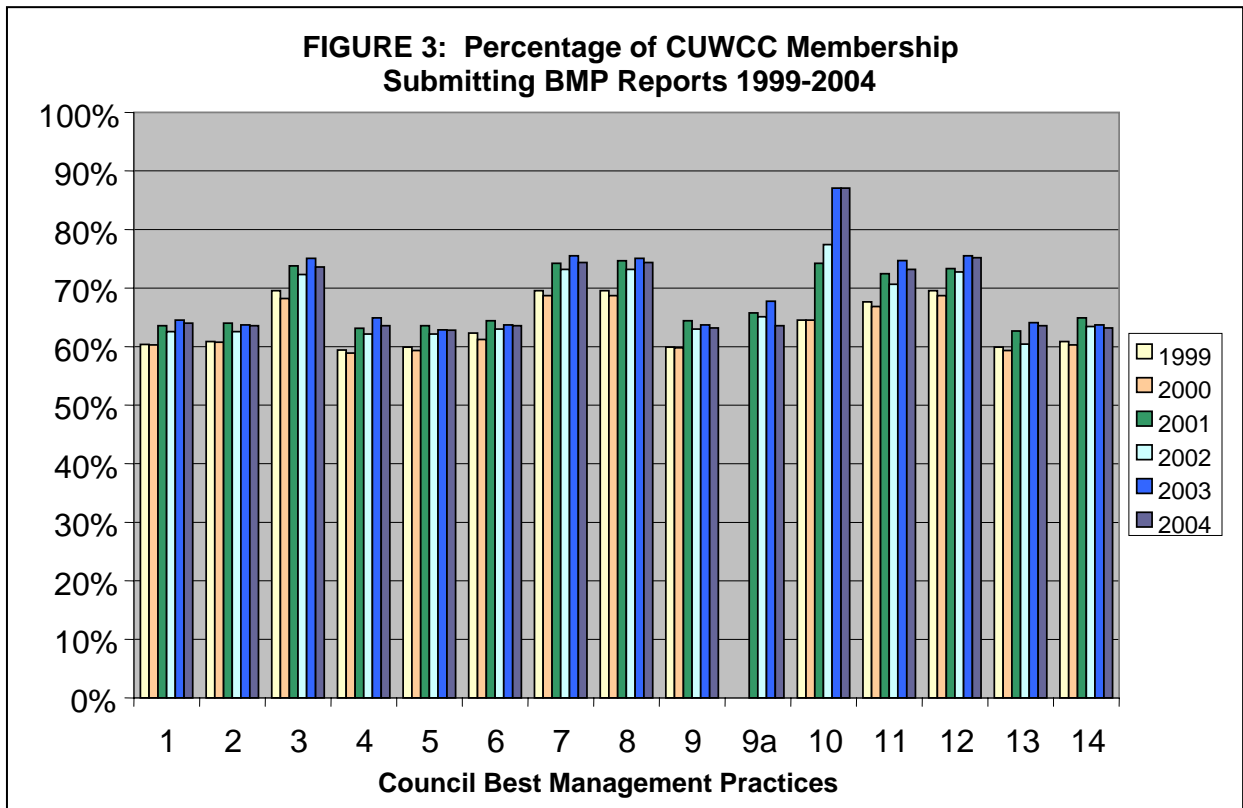
It is important to note that although signing the MOU is voluntary, reporting is expected of all signatories. The reported information is checked for obvious errors by the Council, but actual data entries are not independently verified for accuracy. We depend on the agencies to correctly enter their own information.

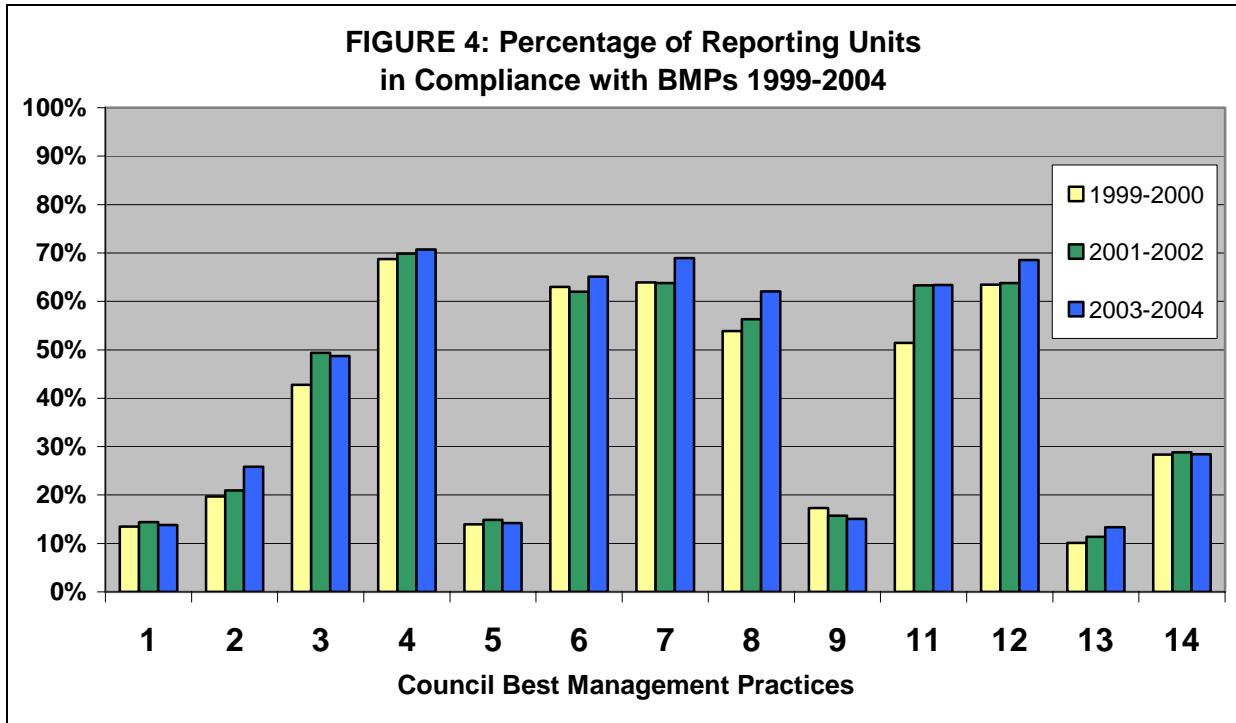
BMP Reporting Results for 2003-2004

As discussed above, new BMP reporting results will not be available until 2006 because water agencies report bi-annually. However, the figures below summarize reporting results for the last reporting period of 2003-2004. (More detailed information is contained in the Council’s 2004 Annual Report, available from the Council office or downloadable at www.cuwcc.org/annual_reports.lasso.)

Attachment E of this report lists the filing status of the signatories for the FY 2003 and 2004 BMP Reports.

Specific agency reports are public information and may be viewed at: http://bmp.cuwcc.org/bmp/read_only/list.lasso.





There are several caveats to note. First, the reporting results summarized herein include only data formally submitted to the Council by MOU signatories. Thus, there is water agency urban conservation activity that is not included here. Second, the data compilations are based on self-reported data provided by the signatory water suppliers. Although checked for errors, the data have not been verified as accurate. The data has been aggregated for summary purposes.

BMP Exemption Policy

Signatory water suppliers are expected to make a good faith effort to implement the 14 BMPs. However, the MOU has a provision for signatories to exempt from implementation of specific BMPs when warranted. Suppliers are exempted if they show that a particular BMP is either not cost-effective, that adequate funds are not available, or that the implementation of the BMP is not within the legal authority of the water supplier. Council staff reviews exemption submittals and indicates whether or not associated documentation was included (this information is posted on the BMP Reporting online database), but the Council does not have the authority to approve or deny exemptions.

Between 1997 and 2005, a total of 502 exemption submittals have been filed with the Council. Examination of those submittals found:

- 53% of exemption submittals indicated that the BMP was not cost-effective, but the agency provided no supporting documentation; and
- Overall, approximately 75% of the filers did not provide adequate documentation.

The current MOU policy does not allow the Council to reject water agency Exemption submittals that do not contain supporting documentation or that contain insufficient, inappropriate, or inaccurate documentation. In 2005, the Council's Steering Committee appointed a BMP Exemption Project Advisory Committee to look into developing a more standardized exemption process that requires minimum content in the filings.

The Plenary approved a change to the MOU in 2005 to move the due date for filing an exemption from the MOU itself to MOU Compliance Policies (where it can more easily be amended) and also changed the due date from two months to five months for filing an exemption. The Plenary also amended the BMP implementation schedule in the MOU to allow agencies more time to implement a previously exempted BMP.

Substantial amendments to several other BMPs are being developed for future adoption.

BMP Modifications

BMP 1: Residential Water Surveys

The Council continued to examine whether it should revise the current BMP 1 language to more adequately address outdoor water use. The Residential Committee had been evaluating the success and cost-effectiveness of home water survey programs and recommended that a new BMP be crafted to specifically deal with outdoor irrigation. The existing BMP 1 has been slated for "sunset" in 2007, and the Steering Committee has asked a BMP 1 Revision Project Advisory Committee to draft language for a new BMP "15" to address residential landscape water use. It is expected that this BMP will be adopted in 2007, perhaps in conjunction with recommendations which might be made by the AB 2717 Landscape Taskforce.

BMP 4: Metering & Commodity Rates

The current language of BMP 4 has been largely superseded by the enactment of state legislation (AB 514 in 2003 and AB 2572 in 2004), which will require metering and volumetric billing statewide. The Council supported the passage of both these bills. In 2005, the Council began work on revising BMP 4 to make it more rigorous than the new state requirements.

BMP 5: Large Landscape Conservation

The Council Steering Committee suspended revision of BMP 5 until the AB 2717 Landscape Task Force completed its recommendations, so that any potential recommendations from the Task Force could be considered in the revision of BMP 5. Two of the final recommendations from the Task Force directly relate to BMP 5:

Reduce the Water Budget in the California Urban Water Conservation Council's Best Management Practice (BMP) Five from 100% to 80% of ETo (Recommendation 13).

The Task Force felt that the water efficiency standard in BMP 5 should be consistent with the State Model Landscape Ordinance Water Budget of 80% ETo, and that the bar should be raised to improve irrigation efficiency in existing landscapes.

Revise BMP 5 to phase in more rigorous water budgets for both dedicated and mixed-use meters and to require an irrigation survey and/or an irrigation audit for landscapes 20% over budget (Recommendation 14).

The Task Force believed that it more productive to target high water users for irrigation audits than to require irrigation audits every five years for all customers.

The Council will carefully consider these recommendations when the revision of BMP 5 resumes in 2006. The Landscape Task Force and its recommendations are described on page 7 of the Annual Report.

BMP 6: High-Efficiency Clothes Washers

In 2004, the Council produced an analysis for the California Energy Commission (CEC) evaluating a proposed statewide efficiency standard which would require a maximum "water factor" (the number of gallons per cubic foot of wash load) for all new residential clothes washers. The Council calculated that a savings of over 2.6 million acre feet of water would result by 2019 from a "water factor" standard of 8.5 effective in 2007 and 6.0 effective in 2010. After deliberation, the CEC adopted the water factor standards as proposed for residential clothes washers.

Subsequently, the Council revised its BMP 6 (High-Efficiency Clothes Washers) to be more stringent than the CEC adopted standard. The revised BMP 6 creates financial incentives for the purchase of higher efficiency washers. The BMP will sunset in July 2007 when (or if) the CEC standards take effect.

In 2005, the Federal government adopted weaker residential clothes washer standards (Energy Policy Act of 2005) than those adopted by the CEC for California. Federal standards preempt state standards, effectively blocking implementation of any state standard such as California's that is more stringent without federal approval. To

remedy this, the CEC filed in 2005 a Petition for Exemption from the federal clothes washer standards, with assistance from the Council. A federal decision is pending.

BMP 11: Conservation Pricing - Water Rates

Conservation rates became a major topic of discussion for the AB 2717 Landscape Task Force in 2005. In fact, the revision of BMP 11 to more definitively define a conservation rate structure became the Task Force's highest priority recommendation. Some of the reasons cited are:

- Landscape water use makes up 30% of urban water consumption and conservation rate structures were seen as an important tool for curbing demand.
- Landscape water use is more price-elastic than indoor usage (Demand for outdoor uses is more responsive to price signals).
- Landscape water use is most often the cause of expensive peak water demand for water suppliers - pricing could be a useful tool to reduce summer peaking.

Currently, there is no benchmark to determine whether or not a water supplier's rate structure is conservation oriented. The Council's BMP 11 (Conservation Pricing) provides some guidance but lacks a quantifiable definition.

The Task Force made the following recommendation with follow-up actions regarding conservation rates:

Urban Water Suppliers (Wholesalers and Retailers) Should Adopt Water Conserving Rate Structures as Defined by the Task Force (Recommendation 38).

Action 38.1: CUWCC should convene a committee no later than January 31, 2006 to determine the appropriate thresholds of the percent of total rates based revenue that is derived from the fixed versus volumetric portions; work from this committee shall result in adoption of changes to BMP 11 (conservation pricing) by December 31, 2006. If, however, the deliberative process remains undefined at the end of the specified term, the thresholds identified in the existing Implementation structure would constitute the course of action for BMP 11. As part of this effort, wholesale water suppliers that are signatories to the Council's Memorandum of Understanding shall make a good faith effort to define a standard for conservation oriented rate structures. Task Force members whose organizations are signatories to the MOU commit to supporting the general structure of this rate proposal in these deliberations.

Action 38.2: If the CUWCC does not adopt a revised BMP 11 by 12/31/06, the

legislature should revise the Urban Water Management Planning Act to use the Task Force-developed Definition of water conserving rate structures as the definition for Conservation Pricing in the Demand Management Measures (DMMs) section and require water suppliers to report on their implementation of a conservation rate structure. (Note: Existing DMMs are not required to be implemented.) Urban Water Management Plans (UWMPs) are due every five years in years ending in "0" or "5." The next UWMP is due by 12/31/05 so it might be reasonable to ask water suppliers to report on their rate structure for the subsequent UWMP due by 12/31/10. This approach enables water suppliers to institutionalize the concept, adjust existing billing and planning practices, and conduct appropriate outreach to customers.) This would require a legislative change.

Action 38.3: Reporting on implementation of a conservation rate structure should be a factor in determining whether or not an UWMP is complete. Existing law already requires a "complete" UWMP to be submitted to DWR in order to be eligible for drought assistance and grant funds administered by DWR. Many other state agencies, such as the State Water Resources Control Board, use DWR's list of complete UWMPs to determine eligibility for various funding programs (e.g. State Revolving Funds).

Action 38.4: CUWCC should adjust the reporting and coverage requirements for effective data gathering and determination of implementation; changes to the coverage requirements should include a phased approach to allow water suppliers adequate time to respond. (Note: Signatory water suppliers to the Council's MOU are required to report once every two years on their previous two years of activities - one report for each year; database reporting requirements for the next reporting cycle 2005/06 are already in place. any new reporting requirements should be included in the 2007/08 reporting cycle.) This would require a change to the Council's Memorandum of Understanding and adoption by the Council's membership.

Action 38.5: Water suppliers should consider using the revenue generated from the top tiers of inclining block rate structures, revenue from customers over their water budget, and revenue from customers who use excessive amounts of water to fund landscape water conservation programs and incentives.

Action 38.6: Water suppliers should consider establishing a monthly billing system that clearly communicates the water supplier's rate structure and the customer's current and historical consumption of water, if it is cost-effective for the water supplier to do so.

Action 38.7: CUWCC should analyze implementation of conservation pricing and this recommendation should be reevaluated for performance in 2012 (note: a report on

implementation and completeness of Urban Water Management Plans is due to the legislature by 12/31/11.)

Action 38.8: CUWCC should sponsor training Workshops throughout the state on implementing water conserving rate structures targeted at conservation coordinators, Board members, and finance and rates professionals.

In 2006, the Council will establish a BMP 11 Revision Project Advisory Committee to carefully consider the Landscape Task Force recommendations. A concerted effort will be made to reach consensus on the revision of BMP 11 by the December 31, 2006 deadline in the recommendation.

BMP 13: Water Waste Prohibition

During the dry summer months in California, it is not uncommon to see water flooding the gutters as irrigation systems miss their mark or exceed the soil's ability to hold water. Another priority recommendation from the AB 2717 Landscape Task Force was to reduce irrigation overspray and gutter flooding, which is one of the requirements of BMP 13. California lacks comprehensive statewide regulations that forbid runoff and overspray from urban landscapes. The Task Force believed that adoption and enforcement of such policies would improve the efficiency of landscape irrigation and made the following recommendation and corresponding actions:



Adopt and Enforce Statewide Prohibitions on Overspray and Runoff (Recommendation 17).

Action 17.1: The Legislature should adopt a statewide restriction of irrigation overspray and runoff to minimize water waste and reduce point and non-point source pollution. The legislation should include a warning and fine structure to encourage compliance.

Action 17.2: CUWCC should require signatories to report on enforcement and programs to reduce runoff and overspray as a component of BMP 13.

In 2006 the Council will consider this recommendation and additional follow-up actions.

Proposed BMP 16: Performance Track

A Performance Track BMP would allow water agencies the option of implementing conservation programs yielding water savings equivalent to or greater than the water savings expected from implementing all the quantifiable BMPs (BMP 1, BMP 2, BMP 5, BMP 6, BMP 9, and BMP 14). Under a Performance Track, water agencies would be able to design and implement conservation programs tailored to their service area and particular circumstances.

In 2005, Council staff drafted a proposed BMP 16 and the Steering Committee appointed a Project Advisory Committee which will begin its work in 2006.

Potential BMPs

In 2003, the Council began work on a three-year project funded by the U.S. Bureau of Reclamation to evaluate new and existing “Potential Best Management Practices” (PBMPs) for urban water conservation. A PBMP is defined as any device, program, technology or practice that has the potential for cost-effective, practical water conservation implementation. The Steering Committee adopted a new policy for evaluating and disposition of PBMPs in 2005. The project is evaluating and researching PBMPs and producing annual reports summarizing costs and water savings information. The project is identifying which of the existing PBMPs should: a) be removed from further research; b) be refined and made more specific in scope and objective; or c) undergo an assessment of water savings and economic potential.

In 2004, the Council completed the first annual report entitled *A Report on Potential Best Management Practices*. This report provided an initial evaluation of these PBMPs:

- Weather-based irrigation controllers (including ET controllers)
- Pre-rinse spray valves for food service
- X-ray film processor recycling units
- Steam sterilizer retrofits (medical industry)

In 2005, the Council completed the second annual report, which provides an initial evaluation of these PBMPs:

- High Efficiency Toilets (1.3 gpf or less)
- High-Efficiency Urinals (0.5 gpf or less)

- Building Cooling Systems
- Commercial Laundry Facilities
- Submetering for Multi-Family Housing

From these initial evaluations the following were found to be most promising for eventual BMP development:

- Pre-rinse spray valves for food service
- Commercial Laundry Facilities
- High Efficiency Toilets (1.3 gpf or less)
- High Efficiency Urinals (0.5 gpf or less)

A new set of PBMPs will be evaluated in 2006.

PART III: TECHNICAL ASSISTANCE

In addition to specific work on Best Management Practices, the Council provides general technical assistance to members and the public. Table 4 below summarizes the requests for assistance by BMP for 2004 and 2005.

Table 3: Technical Assistance Provided to Members

Subject	2004 Number of Inquiries	2005 Number of Inquiries
BMP 1: Residential Surveys	10	3
BMP 2: Residential Plumbing	14	8
BMP 3: Water Loss Management	5	7
BMP 4: Metering	5	4
BMP 5: Landscape	25	44
BMP 6: High Efficiency Clothes Washers	35	19
BMP 7: Public Information	3	6
BMP 8: School Education	7	3
BMP 9: Commercial, Industrial and Institutional	102	113
BMP 10: Wholesaler Support	2	1
BMP 11: Pricing	10	24
BMP 12: Conservation Coordinator	1	4
BMP 13: Water Waste Prohibition	5	10
BMP 14: ULFT	97	45
BMP Certification	5	2
BMP Cost Effectiveness Analysis	11	4
BMP Exemptions	13	3
BMP Reporting	177	176
BMP Savings Evaluation	8	13
Conservation Program Planning	41	48
General CUWCC Information	50	68
Potential BMPs	9	13
Water Supply Planning	23	38
Total	658	645

During 2005, the Council also pursued numerous areas of research funded by the Department of Water Resources, the U.S. Bureau of Reclamation, the U.S. Environmental Protection Agency, and the Council member agencies. Studies included:

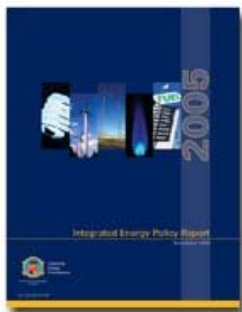
- Environmental Benefits Study funded by USEPA and USBR through CALFED
- Water Utility Avoided Cost Study, funded by USBR through CALFED & EPA
- PBMP Research investigations funded by USBR through CALFED Cooperative Agreement

- BMP Costs and Savings Study - Second Revision funded by USBR through CALFED Cooperative Agreement
- BMP 5 (large landscape conservation) Pilot Program to provide technical assistance funded by USBR through CALFED Cooperative Agreement
- AWWARF Water Budget Rates Study
- Weather Based Irrigation Controller Evaluation funded by Proposition 13 through DWR
- Distribution System Water Loss Case Studies

The Council additionally contracted with indoor water use expert John Koeller to work on national plumbing and appliance standards, maximum performance testing of toilets, and studies of high efficiency toilets (HETs). John Koeller also produces the Council's online WaterLogue Newsletter.

The Water Energy Partnership

2005 was an important year for illuminating the strong link between water conservation and energy conservation. The Council played an instrumental role in providing technical assistance and data to the California Energy Commission (CEC). The resulting CEC *2005 Integrated Energy Policy Report* establishes just how important water conservation is for energy conservation.



The report finds that California's water infrastructure accounts for nearly 20% of the state's electricity consumption and nearly a third of the state's natural gas consumption. Large amounts of energy are used to pump water from the state's wetter regions to dryer regions, then treat it and distribute it to consumers. Finally, customer end use and wastewater treatment consume significant amounts of energy. This "embedded energy" in water offers a significant opportunity for water conservation to reduce the state's energy demands.

While the Council has been very successful in pursuing energy funding for *hot* water conservation (the Rinse & Save Program is funded by CPUC and PG&E), the energy sector has not yet recognized and funded the energy conservation benefits of funding *cold* water programs. The CEC report shows that cold water conservation programs may be very cost-effective means of reducing California's energy consumption.

In the coming year, the Council will continue to work with the CEC and CPUC through the Water Energy Partnership to ensure both hot and cold water conservation programs get adequate recognition and much needed funding (possibly through the Electricity Public Goods Charge).

Technical Assistance Consultants

Annually a Council committee competitively reviews the qualifications of water conservation consultants and approves them for use on Council projects or for member water agency projects. A Request for Qualifications (RFQ) is issued for consultants with specific experience in best management practices, planning, and cost-effectiveness analyses. The 2005 list of 37 approved consultants was made available for downloading in the Technical Resources area of the Council website. Also available was a roster that classified these consultants both by their area of expertise and by their expertise for specific BMPs. Signatories consequently have access to dozens of pre-qualified consultants who can help plan, design, implement and evaluate best management practices.

Residential New Technologies Workshop

Conservation coordinators often do not have the time to learn about the latest products and programs to help their agency save water. In April of 2005, the Council assembled a workshop on a wide variety of new residential conservation technologies and programs. The speakers were chosen for their nationally-recognized expertise, programs, and products. Both indoor and outdoor residential water use were covered. The Workshop was video taped for an interactive DVD that will be produced in 2006.

Virtual Water Saver Home Website



Launched in January 2002, the Water Saver Home (www.h2ouse.org) website is a user-friendly site for consumers to learn how they can reduce their water use in and around the home. In 2003, the Council expanded the scope of the website by beginning work on a detailed landscape component. This work was funded by \$35,000 from the U.S. Bureau of Reclamation and \$64,000 from the U.S. Environmental Protection Agency. The landscape component was completed in 2005 and will be posted in 2006. In 2005, the Water Saver Home website received an average of 569,033 hits per month, and a monthly average of 22,712 unique visits. Since the website's launch, there have been 10,888,275 total hits and 428,610 total visitors.

Updated Council Website

Many additions and updates were made to the Council website in 2005:

- New studies were made available to download from the Product News/Technical Information page such as *Water Savings Potential of Connectionless Food Steamers*,

Testing of Popular Flushometer Valve/Bowl Combinations, and the UCLA and the Pacific Northwest National Lab studies on non-water urinals.

- The *Unified North American Requirements (UNAR) for toilet fixtures* and *High Efficiency Toilet (HET) Definition* standards and the *Los Angeles Supplementary Purchase Specification (SPS) for Toilet Fixtures* certified toilet lists on the Product News/Technical information page were all updated on a monthly basis.
- The High Efficiency Clothes Washer lists for BMP 6 were updated in the Product News section.
- Quarterly Reports were added for the Pre-Rinse Spray Valve Program.
- New web pages were added to the Product News section: *Potential BMP Report* and *Residential Dishwashers*
- Web pages were created for the new *AB 2717 Landscape Task Force* section
- Committee meeting agendas, minutes and presentations were posted to the Committees and Minutes section
- The website template headers and the Search function were restructured

In 2005, the Council's website received an average of 63,340 hits per month, and a monthly average of 816 unique visits. Since the website's launch there have been 1,475,211 total hits and 31,311 total visitors.

The WaterLogue Newsletter



The Council continued its online newsletter publication, *The WaterLogue*, on water efficiency products and emerging technologies. The *WaterLogue* covers news about plumbing technology, including water conservation improvements in manufacturing, and programs that support the use of water-saving devices. Subjects include Unified North American Requirements (UNAR) for toilet fixtures, wet cleaning (an environmentally sound, water-based replacement for dry cleaning technology), and water standards for appliances based on the Energy Star^R program.

Federal Water Labeling Program

The Council continued working with the U.S. Environmental Protection Agency (EPA) to develop a national water labeling program for appliances and plumbing fixtures. The program will promote water-efficient products to consumers in a manner similar to the existing Energy Star[®] program, which promotes energy-efficient products.

PART IV: GENERAL OUTREACH

In 2005, the Council's Executive Director represented the Council in the following capacities:

- Association of California Water Agencies, Water Efficiency and Conservation Committee, Co-Chair
- Association of California Water Agencies, Water Management Committee, Member
- American Water Works Association, Water Conservation Division, Member
- American Water Works Association, Water Loss Control Committee, Member
- American Water Works Association Research Foundation, Water Loss Control Project PAC Member
- California Irrigation Institute, Board of Directors
- California Water Policy Conference Planning Committee, Member
- EPA Water Sense Labeling, Steering Group member
- International Water Association, Water Loss Task Force, Member
- Water Education Foundation, Board of Directors
- Member, California Water Plan Advisory Committee
- Expert witness at a Water Rights Hearing before the State Water Resource Control Board.
- Participant at hearings of the California Energy Commission on product efficiency standard setting

Excellence Awards

The Council awarded its annual Excellence awards in memory of two outstanding water conservation leaders. The Michael Moynahan Award for Statewide Innovations was presented to **Ron Munds** of the City of San Luis Obispo for his outstanding leadership as Chair of the AB 2717 Landscape Task Force, and to **Peter Gleick** of the Pacific Institute for his influential work to bring conservation to the forefront of sustainable water management in California.

The Llana Sherman Award for Local Innovations was presented to **Lynn Florey**, Conservation Coordinator for Sonoma County Water Agency for her inspirational leadership in promoting and implementing water conservation programs in the North Bay Area.