

May 9, 2008

**PUBLIC
OFFICIALS FOR
WATER AND
ENVIRONMENTAL
REFORM**



P.O.W.E.R.

WWW.CAWATERPOLICY.US
WWW.CAWATERPOLICY.ORG

NORTHERN CALIFORNIA OFFICE:
OTIS WOLLAN, EX DIR
PO Box 1750
COLFAX, CA 95713-1750
PHONE/FAX 530-346-7967
CELL 530-320-6841
OTIS@FOOTHILL.NET

SOUTHERN CALIFORNIA OFFICE:
4209 HERFANO AVENUE
SAN DIEGO, CA 92117
PHONE 858-272-6804
FAX 858-272-6805

BOARD OF DIRECTORS:

DAVID BEHAR
MARIN MWD

TIM BRICK
MWD OR SOUTHERN CALIFORNIA

MARY ANN DICKINSON
ARROWHEAD CSD

CONNER EVERTS
SOCAL WATERSHED ALLIANCE

DOROTHY GREEN
LA-SAN GABRIEL
WATERSHED COUNCIL,
FORMERLY LADWP

ELDON HUGHES
ORCHARD VALLEY WD

ANDY KATZ
EBMUD

CYNTHIA KOEHLER
MARIN MWD

DOUG LINNEY
EBMUD

SANDRA MERAZ
TULARE COUNTY WWD
CENTRAL VALLEY RWQCB

CAROL MONTANO
SAN GABRIEL VALLEY MWD

LYNNE PLAMBECK
NEWHALL COUNTY WATER DISTRICT

OTIS WOLLAN
PLACER COUNTY WATER AGENCY

GREG ZLOTNICK
SANTA CLARA VALLEY WD

To: Delta Vision Task Force

RE: Recommendations for Developing Alternative Elements of the Strategic Plan

POWER offers these recommendations to the Task Force all three areas of its strategic plan: governance and strategic finance, reliable water, and reasonable use and public trust in California water policy making. We are grateful to the Task Force for making this opportunity available for participation and input.

There is a growing imperative to accelerate water use efficiency in California. Likely impacts of climate change on California's water supplies, the precipitous collapse of the San Francisco Bay-Delta ecosystem, mounting evidence regarding the fragile state of the Delta levees, and the recent federal court decision to limit freshwater exports from the Delta all strongly suggest that State agencies must transform their policies and approaches in order to achieve the economic and environmental benefits available from improvements in water efficiency. The full market transformation of water use efficiency will change not just State agency approaches, but will transform how purveyors and consumers interact in the market, and over time refine the understanding and interpretations of reasonable use of water in California.

In 2007, POWER undertook an assessment of water conservation in California, including levels of compliance for each of the fourteen Best Management Practices (BMP). After the assessment developed in the Fall of 2007 seven recommendations which are included in these comments.

:The full Scorecard matrix is appended, and is available with comment and full source data at www.cawaterpolicy.us.

The assessment was limited to the voluntary members agencies of California Urban Water Conservation Council (CUWCC), which had publicly available data posted on the CUWCC website submitted by each water agency in their bi-annual reports. What is not in the POWER Conservation Scorecard matrix is information from all the California water agencies that are not signatories to the CUWCC MOU, and who do not provide data to CUWCC. CUWCC has 260 members; California has a thousand plus water purveyors. A clear takeaway from the POWER assessment is that while the voluntary Best Management Practice approach is necessary, it is not sufficient. POWER offered the following seven recommendations in the Fall of 2007 to encourage the State, regional wholesalers, local agencies, and consumers to take management of water efficiency to the next step.

The first recommendation, as noted below, is to establish performance measures and efficiency targets. This recommendation is moving forward rapidly: the Governor suggested an efficiency target in his letter of February 8, the legislature has responded with proposed legislation of efficiency targets, and CUWCC has been contracted by State agencies to develop options for performance measures and efficiency targets which is due later this summer. Establishing efficiency targets will affect all water purveyors, and provide incentives for all purveyors to adopt a comprehensive approach to Best Management Practices. A comprehensive revision of BMPs that can accommodate a flexible approach is also currently being developed by CUWCC. These developments are encouraging, and POWER is hopeful that these directions will continue and come to fruition.

POWER's seven recommendations are based on the 2007 Conservation Scorecard assessment (appended), and are as follows:

1. Establish performance measures. The POWER Scorecard demonstrates the difficulty in using Best Management Practices (BMPs) to measure performance. Half of the BMPs are not directly

quantifiable, like public outreach, school education, having a conservation coordinator, etc.; many new technologies and approaches are not covered by the ten-year-old existing BMPs.

While the Best Management Practice approach is valuable, it should be complemented with a verifiable performance-based approach that can provide clear measurable standards toward clearly outlined water efficiency goals. Several steps need to be taken:

- Water efficiency potential needs to be studied by each agency, and by each region engaged in integrated regional planning.
- Efficiency targets need to be established both within each agency, for planning regions, and for the State as a whole. Targets may need to be appropriate for California's unique biomes. The Governor's letter of February 28, 2008 offers a statewide goal of 20% reduction by 2020, and invites legislation to incorporate the goal into statute.
- Agencies need to have a "Conservation Plan" on the demand side, just as agencies have a capital improvement plan on the supply side. Those plans should be fully integrated into the agency's Integrated Resource Plan (IRP). Agency IRPs should be consistent with the Integrated Regional Water Management Plans.
- Methods of measurement, analysis protocols, and evaluation frameworks need to be standardized across the industry and throughout the State for both public and private water utilities.
- Reporting should be done annually, so performance can be tracked and indexed for weather variations, and provide a basis for continual improvement.
- A process for independent verification of annual reports should be established.

Accurate and timely measurement and reporting are the basis for a performance-based approach which can produce continual improvement in water conservation within and among

water agencies. The POWER Scorecard lists three clear performance measures that are candidates for such a metric: residential sector gallons per capita per day (gpcd), combined residential-commercial-industrial-institutional gallons per capita per day, and residential gallons per connection per day (listed in the last three Scorecard columns.)

2. Use imbedded energy analysis and climate change greenhouse gas (GHG) analysis in evaluating and prioritizing water resource planning and implementation. Imbedded energy in water can be an early surrogate for the global warming impacts of different water resources. But the full life cycle impact of water resource acquisition and implementation strategies should be measured for their global climate change impacts. By not including imbedded energy and environmental impacts with GHG analysis, the traditional cost/benefit analysis comparing water resource options is in reality a market distortion. Agencies should analyze their GHG footprint, agencies should become involved with the California Climate Registry, the International Council for Local Environmental Initiatives (ICLEI), and the Water Utility Climate Alliance.
3. Undertake triple bottom line analysis of new and existing water resources. Implications of not just financial cost/benefit(s), but also environmental and social costs and benefits, should be included in water agency planning and project implementation. For example, an environmental benefits model is a part of an avoided costs model developed by CUWCC (see Technical Resources at www.cuwcc.org).

Social considerations should also be considered. Most water agencies are local governments (municipal or special districts), with both ratepayers and taxpayers. Resource allocation and project investment have local social implications. For example, conservation investments generally benefit the customer directly, saving consumers not just water but money, which is then reinvested and circulated in the local economy. But an additional social benefit is that almost all

conservation investments are local, creating jobs---often local jobs, .Agencies need to pay more attention to the value of community benefits and local investment. It is time to take a comprehensive approach to assessing costs and benefits which can better assess the true value of our actions in our communities as well as the environment. Private water companies (investor owned utilities, or IOUs) should share this view as part of the obligation to be good corporate citizens in the community.

4. Utilize all indoor conservation technologies and practices in all sectors (residential, commercial, industrial, institutional, landscape) where economic, environmental and social benefits outweigh costs. Devise methodologies to measure performance and give early adopting agencies credit for the conservation work already done. Devices are appearing in the marketplace faster than the traditional MOU BMP approach can process. More and speedier research needs to be funded to determine water/energy/GHG savings for conservation technologies and practices, and methods for giving performance credit need to be established for pro-active agencies that go beyond existing BMPs. When conservation products reach maturity in the marketplace, a process should be in place to phase old standards out and new standards in to plumbing and building codes and local and state ordinances, ending the need for incentives and rebate subsidies.

5. Landscape irrigation is where the water is. This is the area of most potential for saving water; landscape conservation is addressed in the MOU by BMP 1 and 5, but the POWER Scorecard shows that program implementation of these BMPs has been ineffective and/or spotty. These BMPs have the lowest compliance levels. Agencies have been reluctant to try to change customer behavior outdoors, from landscape choices to aggressive implementation of outdoor water saving technologies. Programs to influence developers and the landscape industry need to be robust. Programs like “California Friendly” are a good beginning. But landscaping with native species

and drought tolerant plants is the exception, not the norm. Our landscapes do not celebrate the biomes in which we choose to live, and more often than not are characterized by a national aesthetic defined by temperate rainy summer climates and not dry Mediterranean climates. We need to have the courage and foresight to undertake a massive, long term campaign to change our landscape aesthetic to choices that are appropriate for our Mediterranean climate, that match our season and our rainfall, and that show we love where we live.

6. Agencies need to develop a closer marketplace relationship with the customer. Marketplace principles and practices will help agencies partner with customers to achieve conservation savings. Leading water agencies have recognized that selling water with rates based on volume is the best business practice for efficiency (e.g. new BMP 11), and that inclining rates promote efficiency, and give incentive to conserve water.

But sending the price signal to customers is only half the relationship; the customer needs to receive the signal in a timely way and with clear billing statements that are information rich. New generations of water meters will allow both agency and customer to know how much water is being used in real time and at what prices; time of use billing will be an option, and water budgets can be managed accurately in real time. Agencies and customers should endeavor to transform the water meter market over the next generation of meter change-outs, so that buyer and seller can understand the transaction as it occurs. Timely measurement, feedback, and understanding are the foundations for performance-based approaches.

7. The last challenge to all water utilities is not just to fully take on our previous six challenges, but to do so with full disclosure and transparency. Include key stakeholders in the process and keep the public, ratepayers, and taxpayers informed.

The POWER Scorecard is presents this conservation data for the first time in one place, and it

shows we have a lot of work to do. POWER challenges the water utilities and the California Urban Water Conservation Council to successfully complete by the end of 2008 the BMP revision process it has begun, which will streamline the BMP process, make it up-to-date, and include improved data base reporting capability. POWER challenges water utilities and regional and state agencies to make data easily available and understandable so there is no need for a POWER Scorecard next year.

Introduction to the Water Conservation Scorecard

California has long been a leader in water conservation programs, developing new technologies and approaches that have been copied worldwide. Much of this innovation has been in direct response to a Memorandum of Understanding (MOU) signed since 1991 by water providers throughout California pledging to do best management practices (BMPs) that are cost effective. Significant conservation implementation has been accomplished in the 15 years since the MOU was first adopted. However, it has been difficult to accurately assess the actual “success” of each of the best management practices. Even though the MOU sets forth a number of options for complying with the practices, the resulting patchwork quilt of individual water provider compliance has been confusing to decipher.

The California Urban Water Conservation Council (CUWCC), the “keeper” of the MOU, built in 1999 a detailed web-based reporting system for compiling this information for individual water providers as well for individual BMPs. The data in these reports are publicly viewable on the CUWCC web site. But until now interpreting the reports and making comparisons has been difficult because of the lack of an aggregated summary.

This Water Conservation Scorecard compiles into a single public document for the very first time all of the conservation reports from retail water utilities across California that are participating in the CUWCC. . The report shows how well each water utility has fulfilled its commitment to implement the fourteen BMPs for water efficiency. The compliance records are presented in an understandable graphic format familiar to consumers. Water usage data for each utility are also presented using three different metrics: average gallons per residential connection per utility, and two different approaches to gallons per capita per day (gpcd) for each utility.

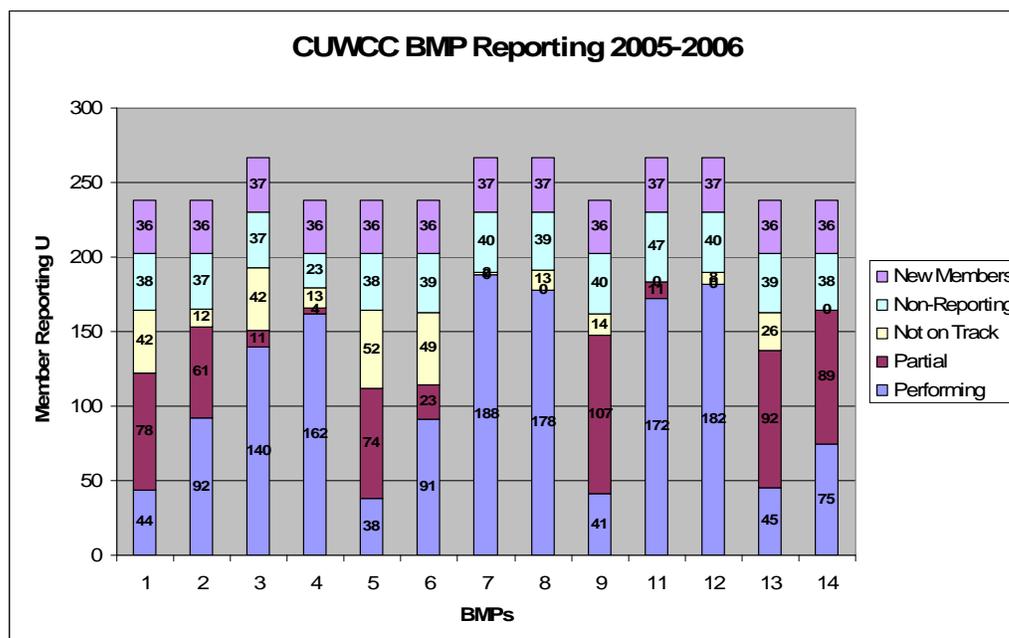
2007 marks the end of a ten-year reporting period during which each CUWCC member had committed to voluntarily complete implementation of all fourteen BMPs. Signing the Memorandum of Understanding (MOU) that created CUWCC made voluntarily completing all fourteen BMPs within ten years the policy of each signatory water agency. Significant

regulatory measures and third party litigation were set aside in the water wars of the early 1990's because of the stated intention to achieve the water efficiency promises made by commitment to the MOU. With the end of this ten year period upon us, and with new calls for water savings from the Governor and the legislature, it is important to look at how well we are doing.

There are some important caveats to this analysis. First, the scorecard only compiles information that has been reported by water providers and cannot *defacto* include information that has not been submitted. Second, a water provider may be doing conservation programs that are not part of the list of the fourteen best management practices, and therefore the agency might not have a platform for reporting that activity. Third and most important, a water provider may have legitimate grounds for a cost effectiveness exemption but it might not have performed that analysis and filed it with the CUWCC in an official exemption request. Thus, for these reasons, the Water Conservation Scorecard results are an initial compliance picture that will need more complete review in the long run.

Based on the available CUWCC reports, the Water Conservation Scorecard data currently shows:

- Only four water utilities successfully implemented all fourteen BMPs; only two completed all fourteen BMPs without declaring an exemption of some kind—City of Rohnert Park and City of Santa Rosa.
- About 15% of the water utilities did not report compliance data at all.
- Only 5 of 14 BMPs show more than 75% of water utilities in compliance.
- The chart below summarizes BMP compliance results:



The 2005-6 reporting period is the latest completed data that shows how well water utilities are doing in complying with the ten-year commitment; the full ten-year data from 2007 will be available at the end of the 2008 two-year reporting cycle. "New members" in the 2005-6 two-year cycle do not file, and are indicated in purple. "Non-reporting" members are shown in light blue. "Not-on-track" indicates minimal or no activity for that BMP reported by the agency; "Partial" indicates substantial effort toward compliance. However, "Performing" is the only category representing successful compliance to the voluntary goals established by becoming a signatory to the Memorandum of Understanding.

Despite the inadequacies of a voluntary compliance program, the fourteen Best Management Practices continue to be viewed as important actions for all water utilities, and are in dynamic evolution, not a static condition. In 2008, CUWCC has undertaken an extensive process to revise and refine several of the BMPs, to streamline the approach to all BMPs and to improve accountability and reporting methodologies. The major revision process is scheduled for completion December 2008. During the past fifteen years since its inception, CUWCC itself has developed strength and capacity to manage complex data that agencies submit, provide technical assistance and training workshops, produce high quality publications, create an award-winning website, conduct substantial research, manage implementation projects, and conduct collaborative forums for problem-solving. However, as a nonprofit, CUWCC has no authority to require BMP compliance or data reporting.

Using existing CUWCC data reports, the Water Conservation Scorecard also suggests that BMP reporting is an incomplete measure for assessing the success of water utilities and water use efficiency. Some overall observations are:

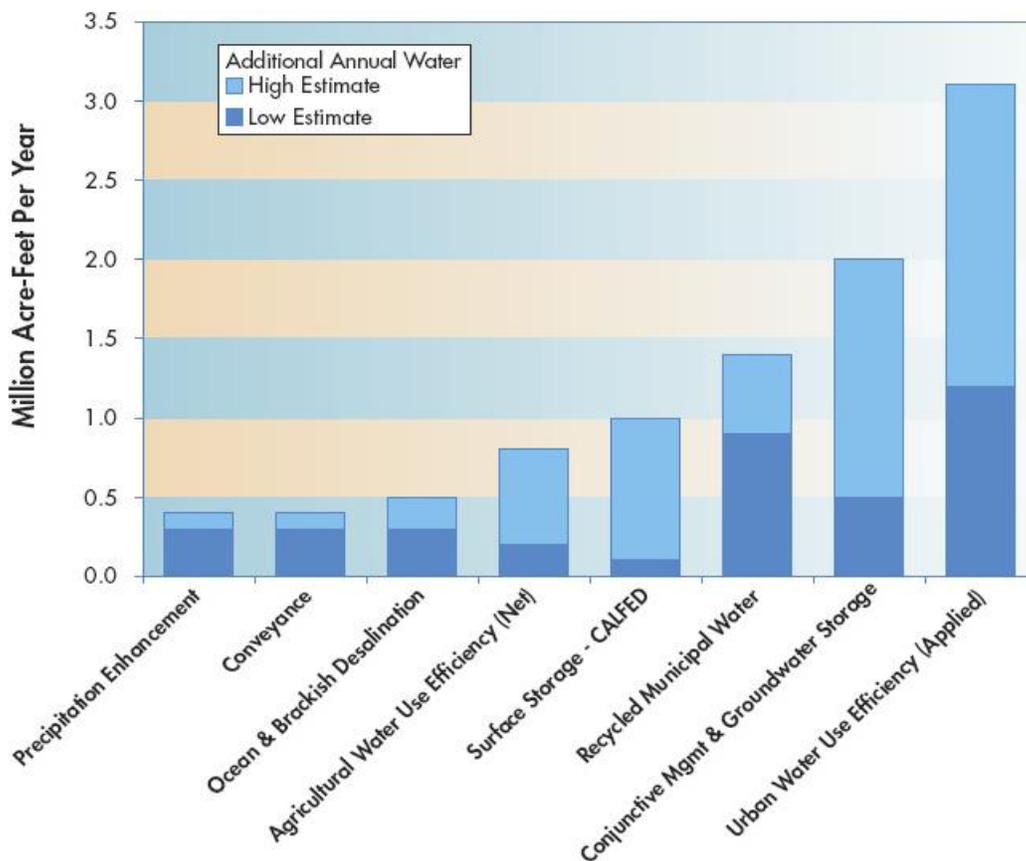
- Measuring BMP implementation does not easily convert to measuring water use efficiency savings. Many BMPs are non-quantifiable as to how much water they really save (public information programs, for example). Those BMPs that are quantifiable have been well studied and have been modeled by the CUWCC on the BMP reporting web site for their annual as well as cumulative water savings, based on data from the numerous field studies available. However, these cumulative savings numbers still represent a partial picture of water saved statewide..
- Data collection protocols differ among agencies; standardizing approaches is essential to ensuring that the data can be productively compared. Providing background data is currently not required as part of the BMP reporting process, and many agencies did not.
- Measuring statewide water efficiency based on the subset of 200+ CUWCC signatory agencies is not adequate. There are over 1000 water utilities in California, although many of them are very small agencies. Roughly 450 water providers are of a size greater than 3,000 connections or serving 3,000 or more acre-feet per year. The CUWCC signatories represent about half that that number but approximately 80% of the delivered water in the State (including both wholesale and retail agencies).
- A voluntary approach to fully implementing BMPs does not appear to have been compelling for all water utilities. Successful agencies appear to conserve due to local, intrinsic drivers, not statewide concepts of beneficial use of water.

.California water use efficiency as a whole has improved in the past two decades, though very unevenly. Some utilities have very successful programs, and fortunately many of those are large urban water purveyors and/or wholesale water suppliers. Examples are the cities of Los Angeles and San Francisco, where the same quantity of water is used now as twenty years ago despite dramatic population growth. But many mid-size and smaller utilities have been lagging; some entire regions

have shown little progress in applying water use efficiencies, like the Central Valley areas. Outdoor landscape conservation has lagged behind indoor conservation measures, and yet landscaping constitutes a growing 50-75% of water use, depending on location in the state (marine vs. inland, north vs. south, etc.). Recent studies are showing that often new homes are using more water than older homes, in spite of modern, efficient fixtures mandated by plumbing codes. Water is following wealth, with the market offering lush landscaping, huge houses, pools, hot tubs and water amenities as part of its display.

Meanwhile, non-locally derived water supplies are becoming less reliable. Ecosystems, like the Delta, are suffering from multiple stressors and are likely to receive more water for restoration, sustainability and resiliency. Historic planning assumptions pertaining to water supply availability from entire watersheds, like the Colorado, are subject to increasing skepticism about their long term accuracy; combined with uncertainties associated with climate change, the notion of “firm yield” is becoming a practical fiction. Demands for additional environmental water are being made in Federal Energy Regulatory Commission (FERC) dam re-licensing processes. The revelation that about one-fifth of California’s electric energy consumption is used to supply water, with one-third of California’s gas consumption used to heat that water, has finally productively married energy efficiency with water efficiency. Reducing the Greenhouse Gas (GHG) footprint of providing water supply becomes another driver under AB 32. The drivers for conservation are significant and compelling. Consequently, expectations of improved BMP compliance and movement to the next generation of BMPs and accountability is reasonable, an appropriate step in the right and necessary direction if we are to meet the demands of growing population while preserving California’s economic and environmental vitality.

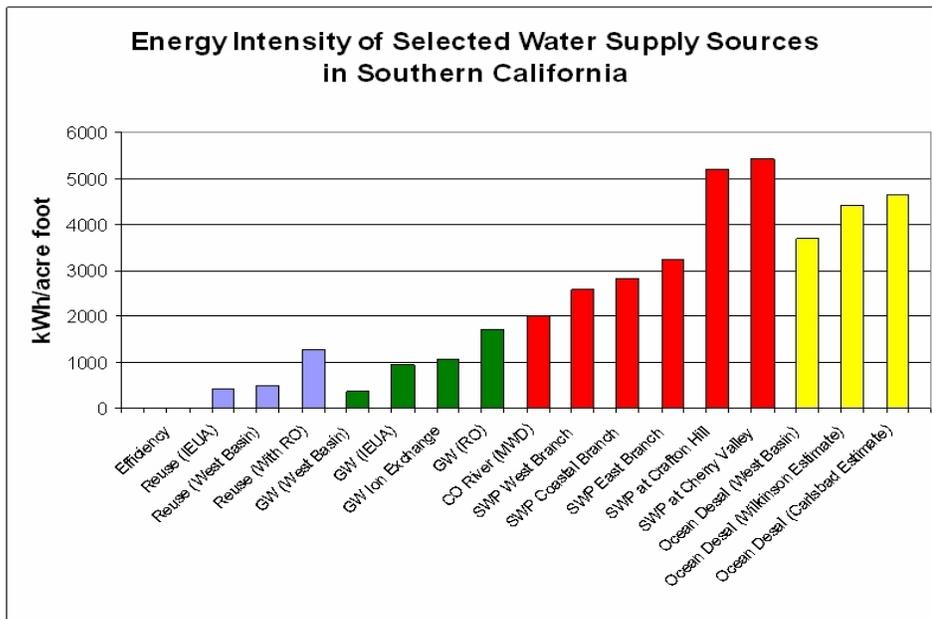
The potential for more water conservation has been well assessed and is considerable. Department of Water Resources (DWR) has compiled the statewide potential for water conservation as well as almost all other resources in Bulletin 160-2005. The chart cited below from Bulletin 160 shows that the most available capacity among all resource areas is water conservation. DWR used cost estimates of no more than \$230-522 per AF for 3.1 million acre-feet (AF) of available conservation, shown in the chart below from DWR Bulletin 160.



An independent study conducted by Pacific Institute in 2003 entitled “Waste Not, Want Not” concluded the available conservation was 3.5 million AF, using existing technology and a \$600 per AF investment cap. Pacific Institute has noted that since their report a number of new technologies have been developed which make their estimates more conservative, like evapo-transpiration (ET) controllers for landscape irrigation. On the other hand, some of the conservation potential stated in 2003 has since been captured. Pacific Institute noted in their comprehensive report: “The availability of good data is a major constraint to comprehensive assessment of conservation potential.” However, it is increasingly clear that conservation represents the greatest potential for increasing our water supply, and is generally the most favorable option in its costs and benefits.

POWER has defined seven challenges to water utilities in order to improve water use efficiency in California. POWER believes that water conservation is our first priority in the order of water resource options, and that it is our duty to first use water well and achieve excellence in efficiency and beneficial use. POWER believes that we can not only attain the Governor’s stated goal of 20% reduction in per capita consumption by 2020, but that we can significantly surpass that goal, and in so doing our quality of life will be enhanced. Our local, state, and global environment will be improved; our personal and community economies will be healthier; and our relationship to where we live will be enriched. To accomplish excellence fully, we will have to change how we think about making our choices. An example is to integrate the energy intensity

imbedded in water into the analysis of costs and benefits, and to incorporate greenhouse gas emission analysis as well. An integrated approach to valuing our resources will make conservation potential even more attractive, as shown by the chart below developed by Dr. Robert Wilkinson of UCSB.



Our good fortune is that water resource options with the least energy intensity are the most abundant. These new analysis tools will help us make the right choice--- focus on conservation and re-use first. The good news is we have plenty of opportunity.

POWER developed the Water Conservation Scorecard to help us reflect on how well we are doing, and to challenge us to make the right decisions for continual improvement. Additional information and source data are available on a special website for this project. Examples of agency excellence in conservation are also presented on the site to point the way. Please visit: www.cawaterpolicy.us

Understanding the Conservation Scorecard Matrix:

Elements of the Scorecard		Lessons learned; changes for the future										
Column A: Member Reporting Unit Only retail members of CUWCC are included in the Scorecard. A wholesale agency scorecard is available at: www.cawaterpolicy.us .		CUWCC membership constitutes approximately about a quarter of the water providers in California. CUWCC membership is voluntary, with the exception of urban water agencies that have federal Central Valley Project (CVP) contracts which require compliance with the CUWCC BMPs.										
MOU Date: Agencies signed the CUWCC MOU on this date.		Pre-1997 agencies committed to full compliance by 2007.										
Column BMP 1-14 Best Management Practices (BMP) 1-14 were established in 1991, revised in 1997, and are continually refined over time. For definitions, see www.cuwcc.org/memorandum.lasso or see background source data and more complete descriptions for the Scorecard at www.cawaterpolicy.us . The symbol key is: <div data-bbox="181 766 652 1071" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Legend</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #e0e0e0;">Performing</td> <td style="text-align: center;">●</td> </tr> <tr> <td style="background-color: #f08080;">Partial</td> <td style="text-align: center;">◐</td> </tr> <tr> <td style="background-color: #fff0f0;">Not on Track</td> <td style="text-align: center;">○</td> </tr> <tr> <td style="background-color: #fff0f0;">Not Reporting</td> <td style="text-align: center;">⊗</td> </tr> <tr> <td style="background-color: #ffff00;">Exemption / ALAEA</td> <td style="text-align: center;">⊛</td> </tr> </table> </div>		Performing	●	Partial	◐	Not on Track	○	Not Reporting	⊗	Exemption / ALAEA	⊛	Note that BMPs 1, 5, 9, and 13 have notably low levels of compliance relative to the others (read vertically). This is unfortunate, since these BMPs are three of the four major quantifiable BMPs in the list of 14 and are the highest water savers. Some of this under-compliance may be due to an imperfectly structured BMP. But with that caveat, many of the leading water agencies were still able to be in compliance, and many others are in partial compliance. <ul style="list-style-type: none"> ● indicates that the agency has fully implemented the BMP ◐ not in compliance, but substantial effort being made ○ minimal or no effort is reported to comply with BMP ⊗ report was not filed ⊛ an exemption for cost/benefit, legal, or budgetary constraints, or ALAEA = a program is implemented which is “at least as effective as” the BMP requirement. The voluntary compliance approach has not been compelling. What factors can change this and bring BMP compliance more to the forefront?
Performing	●											
Partial	◐											
Not on Track	○											
Not Reporting	⊗											
Exemption / ALAEA	⊛											
GPCD_Res: indicates residential gallons per capita per day = total residential deliveries divided by population. .		GPCD by sector (here residential) may be a useful metric in horizontal comparisons of water agencies, though varying climatic regions, supply mix and source will need to be considered..										
GPCD_Res + CII: indicates gallons per capita per day = entire agency deliveries divided by population		GPCD by total agency delivery has been adopted by several states, and is used by the United States Geological Survey (USGS).										
Gal/Con/Day: indicates residential gallons per connection per day = total residential deliveries divided by number of residential connections		Gal./Connection/Day by sector (here residential) may be a useful metric in determining water budgets.										
Shading: the color scheme												
Red Columns BMP 1-14	Applies to BMP 1-14 columns. Cells are highlighted red when the water agency is not in compliance as described in the BMP definition. More detailed information on level of non-compliance, source data, and criteria is available at: www.cawaterpolicy.us or at the CUWCC web site http://bmp.cuwcc.org/bmp/default.htm	Red shading simply means that the water agency is not in compliance with the BMP, and has not fulfilled the voluntary commitment it made by signing the CUWCC MOU. By signing the MOU, agencies make it their policy to come into compliance by the ramping schedule provided in the MOU; extenuating circumstances can be addressed by either an Exemption or an ALAEA (yellow). Agencies should be able to meet their own voluntary policy commitments. Red shading indicates										

		conservation potential, where BMP compliance should result in more saved water.
Yellow	Applies to BMP1-14 where the water agency has claimed either an “exemption” (legal, cost effectiveness) or is implementing an “at least as effective as” (ALAEA) alternative to the specified best management practice. No verification is required for either “exemption” or “ALAEA” claims, although the reporting web site does report if documentation is provided for an exemption application. In addition, a water agency may provide an explanation of their ALEA program in a text box.	Yellow shading is a cautionary color, and here “exemption” and “ALAEA” claims are made by signatories with minimal requirements for substantiation. A claim is made by checking a box on the report with a text box provided for comment, A higher standard of reporting being required by CUWCC starting 2008, but there will still not be clear criteria or verification of self-declared claims for legal, cost/benefit, or budgetary exemption, or ALAEA.
Red Last Three columns	Applies to last three columns. At the bottom of the last three columns, consumption by agencies is averaged; pink shading in that column is applied to consumption numbers where agencies are using more than the average.	In each metric, there is wide variation in usage with broad geographic distribution. Additional information on the use of these metrics is found on: www.cawaterpolicy.us
Blank cells	In the last three columns, if the cell is blank there was either no data provided by the water utility, or inconsistent reporting by the water utility.	Good data is the basis for understanding and good decision-making. Consistent protocols and full reporting are necessary and should be required of all water purveyors.

Appended: POWER Conservation Scorecard Matrix: