

# RECLAMATION

*Managing Water in the West*

## **Coordinating Government Programs and Policies to Advance Water Use Efficiency in California**



**U.S. Department of the Interior  
Bureau of Reclamation  
Southern California Area Office  
Temecula, CA**

**December 2006**

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

# Coordinating Government Programs and Policies to Advance Water Use Efficiency in California

*prepared by*

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An electronic version of this report can be found at this website: [www.usbr.gov/lc/socal/wtrcons.html](http://www.usbr.gov/lc/socal/wtrcons.html)



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# Executive Summary

The Joint Statement of the Committee Conference Report 109-275 for Fiscal Year 2006 attached to the Bureau of Reclamation's (Reclamation) appropriation directed Reclamation to: "initiate a study to identify concurrent and overlapping government programs aimed at improving water resource efficiency."

In addition to identifying public and private financial assistance opportunities for water use efficiency programs in California, this study presents information about policies that support or conflict with water use efficiency measures; examples of successful Federal, State, regional and local strategies where collaborative interagency and stakeholder efforts have resulted in exemplary programs; and the results of the Water Use Efficiency Funding Survey.

Following are observations made as a result of this study and recommendations to funding agencies, fund seeking entities, and other stakeholders to improve the delivery of funds and the attainment of benefits associated with water use efficiency projects.

## Observation 1

Funding opportunities for water use efficiency projects continue to exist in various venues and at fluctuating levels. It appears, however, that more "gaps" than "overlaps" seem to be in the future for funding programs dedicated specifically to water use efficiency. Increasingly, water use efficiency programs must become integral components of the prevailing consensus-driven, integrated regional water resource management programs.

## Recommendation 1

To overcome the challenges associated with the funding and implementation of water use efficiency programs, *grant seeking agencies* will need to increase their efforts to:

- Employ regular searches of the Internet for the availability of funding and other grant-related information;
- Participate in the early stages of new grant program development when selection criteria and eligibility determinations are drafted;
- Seek funding from non-traditional sources such as the energy utilities as documented in the Agricultural Pumping Efficiency Program;

- Leverage funding from multiple sources to achieve multiple benefits, such as the Smart Controller program that improved landscape water use efficiency while reducing water quality problems associated with run-off;
- Form partnerships and participate actively with others in the region to develop mutually beneficial programs, including Integrated Regional Water Management (IRWM) program efforts; and
- Finance greater portions of water use efficiency projects through funds generated through conservation oriented rates. Present water use efficiency projects as capital improvement initiatives that may reduce or delay infrastructure and operations and maintenance investments.

## **Observation 2**

Funding agencies face considerable challenges throughout the project selection and implementation processes, particularly in the expeditious review and selection of proposals and the execution of contracts as well as the documentation of water savings associated with local projects. The often confounding challenge is to streamline, simplify, and shorten the process, while simultaneously strengthening data collection in terms of cost and benefit analyses at the front end as well the monitoring, verification, evaluation and reporting of results at the back end of the projects.

Acknowledging that funding agencies are often at the mercy of the enabling legislation or bond language that created the funding programs; staff and budget restrictions; the contracting requirements of control agencies such as the California Department of General Services; and their own agency's internal legal, administrative, and executive processes, there are steps that can be taken to ease some of the "pain" associated with the grant application, review, selection and contracting processes while still obtaining the data needed to justify the continuance of funding for water use efficiency projects. Many funding agencies are already moving in this direction, but more can be done.

## **Recommendation 2**

*Federal and State funding agencies* can expedite the process and better foster the achievement and documentation of water saving investments in local programs by multiplying their efforts to:

- Fully utilize websites to post availability of grants, accept proposals, send electronic mail notices, announce awards, etc.;
- Route contracts electronically, when possible, through the required approval units within the agency;

- Provide information early on, preferably in the proposal solicitation package, about standard contract language and required documentation needed for contract development and project performance;
- Provide technical assistance regarding economic analyses and data gathering and reporting prior to, during, and after the process providing a clear understanding of expectations;
- Lobby for sufficient staff and budget resources to provide technical assistance and project follow-up as key elements in the development of all funding program allocations;
- Honor the process, following all legal and administrative rules and regulations, while eliminating any unnecessary paper work and data collection;
- Establish a single point of contact within the agency for contractors for the entire project life;
- Adapt to changing conditions: review and revise the process from selection to encumbrance, contract development and execution to management and completion;
- Consider implementation of statewide programs such as rebate programs and marketing campaigns that take advantage of economy of scale and may lessen the need for multiple contracts; and
- Initiate a Water Use Efficiency Funding Fair, with participation of Federal, State, and local funding agencies, similar to the Infrastructure Funding Fairs.

### **Observation 3**

Numerous Federal, State and local ordinances, rules, and regulations impede the implementation of water use efficiency programs. Local land use policies that restrict the use of low water using plants and plumbing codes are often the most troublesome. State and Federal laws that support water use efficiency, such as California's Model Water Efficient Landscape Ordinance, also need periodic review and updating to reflect changing patterns of water use and new technologies.

### **Recommendation 3**

To realize shared visions of a water efficient future among water suppliers, planners, regulatory agencies, regional water management entities, and stakeholders, funding agencies, grant seekers, and all proponents of water use efficiency can play an active role in reviewing existing policies and advocating for changes as needed. There is a need for *all water use efficiency stakeholders* to:

- Become informed about and participate in the processes of local land use planning; implementation of Codes, Covenants and Restrictions (CC&Rs); and other local and regional policies and regulations that affect water use efficiency;
- Form alliances to investigate special issues and tackle regional challenges in a timely and coordinated fashion;
- Keep in touch with developments at the State and Federal level and contribute toward the implementation of new programs such as the U.S. Environmental Protection Agency's (EPA) WaterSense program; and
- Seek the participation of planners, regulatory agencies, regional water management entities, and other stakeholders in the development of water use efficiency projects.

## **Observation 4**

There are actions that can be taken by all parties involved with water use efficiency that will contribute toward the betterment of these programs. The actions of a group of dedicated people can multiply the positive impact on these important programs. One individual with a passion for their work can also make a difference. Motivation and commitment, persistence and good humor, these and other positive personal attributes compose the human element that can make or break a program.

## **Recommendation 4**

*For all water use efficiency stakeholders, be prepared to:*

- Track and participate in the development of Federal and State legislation, regulation, and agency budgets regarding water use efficiency;
- Be a proponent of water use efficiency in general and conservation-oriented rate structures in particular;
- Promote standards for water efficient products and programs;
- Promote statewide public education, marketing, training and certification programs for water use efficiency; and
- Communicate, coordinate, consolidate, and cooperate.

# Introduction

Throughout California, Federal, State, and local agencies as well as other organizations and individual citizens have made considerable investments in water use efficiency measures over the past 20 years. A continued and renewed commitment to improving water use efficiency is essential for the future of the State, considering California's growing population and the increasing demands on the water supply.

Shining examples abound of efforts that demonstrate how organizations pool resources to gain multiple resource management benefits. Yet, opportunities exist to improve the distribution of funds and delivery of services by all parties involved in water use efficiency.

This study was conducted in response to the Fiscal Year 2006 Joint Statement of the Committee Conference Report 109-275 attached to Reclamation's appropriation. The Report directed Reclamation to: "initiate a study to identify concurrent and overlapping government programs aimed at improving water resource efficiency."

Following are the topics explored in this study:

- Public and private financial assistance opportunities for water use efficiency programs;
- Policies that support or conflict with water use efficiency measures among water suppliers, government regulators, and planning agencies;
- Examples of successful Federal, State, regional and local strategies where collaborative interagency and stakeholder efforts have resulted in exemplary water use efficiency programs;
- A summary of the Water Use Efficiency Funding Survey results; and
- Recommendations to funding agencies and fund seeking entities for the improvement of the delivery of funds and implementation of water use efficiency projects.

# Public and Private Financial Assistance Opportunities

*Creative financing of water use efficiency programs often entails seeking funding from multiple sources for projects that promise multiple benefits. This section will provide information about the sources of public and private funding and ideas about how to make the most of these resources.*

## Public Funding Opportunities

Reclamation and the California Department of Water Resources (DWR) provide the lion's share of funding dedicated specifically to water use efficiency projects in California. Reclamation's Water Conservation Field Services Program (WCFSP) emphasizes the importance of partnerships among Reclamation and water users, other Federal and State agencies, educational and research institutions and other interested parties to deliver water use efficiency improvements. Initiated in 1997, the WCFSP is implemented through Reclamation's Area Offices, building on the established relationship staff has with local water suppliers within their boundaries. Reclamation's Water 2025 Challenge Grant Program was initiated in 2004, focusing on meeting the growing challenges of providing water and reducing water-related conflict in the Western States. A listing of major Federal and California State funding opportunities for water use efficiency projects can be found in Attachment A.

At the State level, DWR and the State Water Resources Control Board (SWRCB) administer California's Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Proposition 50) funding programs, including Water Use Efficiency, Watershed Management, and the Integrated Regional Water Management Program.

On a regional level, water wholesalers in some cases offer financial incentives to their retail agencies to implement water use efficiency programs. The Metropolitan Water District of Southern California (MWDSC) provides funding to their member agencies for various programs from smart controller rebates to school water education programs.

Agencies with less apparent links to water use efficiency have funds that may be obtained through partnerships with other agencies. For example, landscape water use efficiency projects often result in reduced urban runoff due to improved irrigation efficiency. Agencies such as the Municipal Water District of Orange

County (MWDOC) took advantage of this connection to gain funding from a water quality agency, as described in Case Study Number One.

Similarly, a water district may team up with a local park district to apply for funding through the California Department of Parks and Recreation for improvements in their local parks' irrigation systems. Correspondingly, the California Integrated Waste Management Board (CIWMB) has recognized that water efficiency landscapes can also be "waste efficient." That is, less plant trimmings will need to be disposed of when the basic principles of water efficient landscapes are applied. On occasion, the CIWMB has co-sponsored conferences and supported other landscape water efficiency measures throughout California.

Likewise, local power utilities are often good partners for water use efficiency projects, since saving water saves energy. A good example of a program that integrates energy and water conservation is the Agricultural Pumping Efficiency Program, described in Case Study Number Two.

Another potential opportunity for implementing water use efficiency projects may come from the California Public Utilities Commission (CPUC). With energy prices again on the rise and with more widespread recognition of the close link between water use and energy use, the CPUC is considering "counting" the embedded (or "upstream") energy savings associated with water efficiency. That is, investor owned utilities regulated by the CPUC could include energy savings associated with reduced water usage in their energy efficiency portfolios. This could lead to significant additional investments in water use efficiency.

A dozen Federal agencies and scores of State and local agencies have various water management responsibilities. Reclamation, U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), EPA, U.S. Fish and Wildlife Service, U.S. Geological Survey, Federal Energy Regulatory Commission, Army Corps of Engineers, National Marine Fisheries Service, National Park Service, Bureau of Indian Affairs, and Western Area Power Administration are the major Federal agencies that affect water management in some manner. The employment of communication, consolidation, coordination, and collaboration strategies can reduce the occurrence of gaps and overlaps in this wide array of water management programs across Federal agencies as well as among Federal, State, and local agencies. The case studies in this report provide examples of how employing these important strategies can help funding agencies and grant seekers gain the utmost from available resources.

## **Electronically Seeking Grants**

The Internet has become the primary vehicle for funding agencies to notice the availability of funds, to receive and review proposals, and to announce awards. Web-savvy grant seekers have an advantage when it comes to receiving up-to-date communications regarding grants. A listing of helpful websites for grant

seekers can be found in Attachment B. These links are provided because they have information that may be useful to readers. Reclamation does not necessarily endorse the views expressed or the facts presented on these sites. Nor does Reclamation endorse any commercial products that may be advertised on these sites.

Federal agencies now have a website that is dedicated to Federal grant programs: [www.grants.gov](http://www.grants.gov). The 26 Federal agencies that award grants and cooperative agreements are required to post all competitive grant opportunities at this site. Users can now access information about, prepare proposals for, and submit all required documents in relation to all Federal government agency grant funding opportunities through this one web portal. This website also offers a subscription service that sends grant seekers electronic mail notices when new grant opportunities become available, based on a selected category of funding. Grants.gov is an evolution of the successful National Science Foundation's FastLane interactive real-time proposal processing system.

The Federal Register has served for many years as the mechanism for posting notices concerning the availability of Federal grant programs as well as a notification of the release of many other Federal documents and announcements. Ten years ago, interested parties needed to check printed versions of the Federal Register daily in order to discover new financial opportunities. Sifting through the multitude of public notices was time consuming and tedious. The Federal Register can now be accessed via the Internet at: [www.gpoaccess.gov/fr/index.html](http://www.gpoaccess.gov/fr/index.html). Today interested parties can sign up to receive the daily Federal Register Table of Contents for free via e-mail as well.

Another specialized tool that is available from the Federal Government, including a search category for water management grants, can be found at: [www.epa.gov/watershedfunding](http://www.epa.gov/watershedfunding). This website offers users access to a database of approximately 100 programs offering financial assistance specifically geared towards watershed-related projects, including water use efficiency.

In California, the [www.getgrants.ca.gov](http://www.getgrants.ca.gov) website provides a central point to announce the availability of State grants. Unfortunately, it is under-utilized by State agencies and information is not updated regularly.

A better example is the system developed by SWRCB for their set of "Consolidated Grants." Their Financial Assistance Application Submittal Tool (FAAST) application and notification system allows an interested party to apply for grants as well as sign up to receive e-mail notifications on their whole set of funding programs. As part of this system, SWRCB has developed a standardized application form for their various funding programs, ranging from water recycling, watershed protection, municipal sewage, non-point source pollution, and Integrated Water Management. Their website is <https://faast.swrcb.ca.gov/index.html>.

Another source of information regarding the availability of State grant funds is provided through the California Financing Coordinating Committee. Their Funding Fairs offer a forum for the Department of Health Services, Department of Housing and Community Development, DWR, SWRCB, USDA, Rural Development, and the California Infrastructure and Economic Development Bank to provide information and answer questions about currently available infrastructure grant, loan and bond financing programs. For more information, their website can be found at [www.cfcc.ca.gov](http://www.cfcc.ca.gov).

Following are a few more websites that provide information about grant funding availability.

<http://www.usbr.gov/lc/region/scao/>: Reclamation's Southern California Area Office encourages and facilitates water use efficiency and assists agencies in meeting their demand for limited water resources.

<http://www.usbr.gov/mp/watershare/>: Reclamation's Mid-Pacific Region's Water Share website features Water Wise Gardens of California, information about demonstration gardens throughout the State.

<http://www.owue.water.ca.gov/>: DWR's Office of Water Use Efficiency and Transfers offers financial and technical assistance to agencies involved in water use efficiency. They host the California Irrigation Management Information System (CIMIS), a network of 120 automated weather stations that provide evapotranspiration information to help irrigation scheduling. Information about water recycling and desalination is also available through the office.

DWR provides daily news clips about water issues throughout the State and includes public notices on the availability of DWR grant programs as well as links to announcements of grant awards. One may subscribe to *California Water News* by sending an e-mail to:

[http://listhost1.water.ca.gov/mailman/listinfo/water\\_news](http://listhost1.water.ca.gov/mailman/listinfo/water_news).

[www.cuwcc.org](http://www.cuwcc.org): The California Urban Water Conservation Council (CUWCC) offers a wide array of information and services in addition to notices regarding grant availability, including a Virtual Home Tour of the Water Saver Home, product news, publications, and technical resources.

[www.agwatercouncil.org](http://www.agwatercouncil.org): The Agricultural Water Management Council posts notices of grant availability as part of their goal to achieve greater agricultural water management efficiency.

[www.awwa.org/waterwiser/watch](http://www.awwa.org/waterwiser/watch): The American Water Works Association clearinghouse for water conservation offers research results, a calendar of

conservation events, links to other water conservation information, and product information.

[www.ecivis.com](http://www.ecivis.com): A popular site for local governments seeking Federal, State and foundation grants. They offer a “Grants Locator” service as well as three levels of training and certification for grant seekers and managers. They claim that 90 percent of grant writers write grants without any formal training. There is a fee for their services.

A note of caution to grant seekers: Recent investigations have found that some companies offering seminars on how to obtain Federal grants make misleading claims. For example, the National Grants Conferences (NGC), now in partnership with the Trump Institute, charges individuals \$999 to provide information about obtaining Federal funds to start a business or invest in real estate. Federal agency representatives from the Census Bureau and the Small Business Administration contend that the programs mentioned by the NGC are not actually available for direct funding to individuals. (John Mullin and Jonathan Kaminsky, “Firm’s claims for grants get legal scrutiny,” *Sacramento Bee*, 5 July 2006, A1.)

## Electronically Seeking Data

Agency websites also offer a wealth of information that can be helpful to a prospective grant applicant. DWR’s 2004 Water Use Efficiency grant program funded 45 urban projects at \$16.8 million and 27 agricultural projects at \$11.2 million for a total of \$28.1 million. As advertised in the Proposal Solicitation Package, 75% of the funding went toward implementation projects (Part A) and 25% went to research and development projects (Part B). The staff report regarding the selection process and the proposals submitted by all applicants are posted on the DWR website.

If an organization is interested in applying for a landscape water use efficiency project grant in the next round, information gleaned from the previous round could be very useful. In this case, 19 out of the 45 urban projects funded were landscape water use efficiency projects. Here is a breakdown of the number of landscape water use efficiency project applications submitted and funded:

<b>General Landscape Project Type</b>			
	<b>Submitted</b>	<b>Funded</b>	<b>% that were funded</b>
Implementation	14	10	71%
Research & Development	28	9	32%
Total	42	19	45%

<b>Specific Landscape Projects Funded by Type</b>	
Irrigation system improvement	10
Education, promotion	3
Demonstration gardens	3
Equipment retrofit studies	2
Plant research	1

For the next round of funding, applicants could make some general assumptions regarding what to expect based on the results of the last round, assuming that program priorities remain constant. The odds in favor of winning implementation grants would be much greater with competition for research and development projects being more intense. Irrigation system improvements were the most favored types of projects funded in 2004 and probably would continue to be since the documentation of water savings is quite straightforward. Unless a demonstration garden is located in a disadvantaged community or promised to produce solid data related to water savings, the likelihood of receiving funding would be low.

New funding sources often surface as old sources, such as Proposition 50, dry up. This makes keeping up with agency websites and other electronic resources especially important. One of the 13 initiatives that was passed by voters on California’s November 2006 ballot may boost available funding for water use efficiency projects. California’s Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) authorizes \$5.4 billion in general obligation bonds to fund projects relating to safe drinking water, water quality and supply, flood control, waterway and natural resource protection, water pollution and contamination control, State and local park improvements, public access to natural resources, and *conservation efforts*.

## **Other Public Funding Strategy Options**

Whereas most public funds for water use efficiency projects are awarded through competitive processes, occasionally agencies have some funds that can be spent for particular purposes. During the more bountiful budget years, agencies may have funds that they can use for projects such as science-related research that will support the overall water use efficiency program. This is especially true at the end of an agency’s fiscal year.

In order to expend Federal dollars, an activity must be “authorized” by an act of Congress and then “appropriated” in the Federal budget. Authorization for the

funding of some water use efficiency programs in California comes from several sources, such as Public Law 108-361 for the California Bay Delta Program (CBDA). A program can have authorization, but no funding in a particular year's Federal budget. Agencies can lobby their legislators to request an appropriation under a particular authorization for a general category of projects.

Or, organizations have also been known to go directly to their legislators to set aside or "earmark" funds in the Federal or State budget for specific projects within their districts. Restrictions on this type of funding were introduced in the 2006 Congress. Others influence the initiative process with pork barrel-type clauses included to benefit their own purposes through political or financial means. These paths are more difficult to discover, more circuitous, and at times riskier than the standard competitive bidding approach, but may be productive under certain circumstances.

## **Private Funding Opportunities**

The bulk of funding from private sources, 85 percent, comes from individual donations. The remaining 15 percent comes from foundations established for specific purposes. Most noteworthy, in June 2006, the Bill and Melinda Gates Foundation and Warren Buffett joined forces to dedicate their massive fortunes to the prevention and eradication infectious diseases throughout the world. With \$31 billion of Buffett assets added to the Gates Foundation's \$31 billion, \$2.8 billion is now available annually for these charitable causes.

While Bill Gates "talks obsessively about the need to be willing to fail, and to learn from mistakes", the Gates Foundation has built performance measurements into all its projects and is prepared to axe those projects that do not come up to scratch. ("The new powers in giving," *Economist*, 1 July 2006.)

As part of this joint venture, the Gates Foundation will need to spend \$3 billion annually beginning in 2009 to meet their contractual commitment. This will put additional pressure on the grant making process as well as the accounting system. With four people in the Gates Foundation making the funding decisions that impact ten percent of all foundation dollars, this concentrates power to an extent not seen before.

The Gates Foundation will continue to focus their philanthropy on education and global health while adding a new area, global development. With efforts to improve agricultural efficiency being one of the global development measures, there may be opportunities for international agricultural water use efficiency programs to compete in this venue. (Stephanie Strom, "Gates foundation dilemma: How to spend it all," *New York Times*, in the *Sacramento Bee*, 13 August 2006, A-6.)

While no such remarkable resources are available specifically for water use efficiency projects, there are some private funding sources dedicated to environmental efforts such as water use efficiency. Organizations such as the Northern California Grantmakers are dedicated to using “philanthropy to advance the common good.” Their website, [www.ncg.org](http://www.ncg.org), provides information on California foundations and philanthropy. Organizations may find private funding for short term, innovative projects, but it is not likely they will obtain long term, general support for ongoing projects from these sources.

# Policies That Affect Water Use Efficiency Measures

A maze of Federal, State and local rules and regulations impact, both positively and negatively, the ability of agencies and individuals to implement water use efficiency measures. This section describes some of the challenges faced by water use efficiency enthusiasts as well as the institutions that promote these activities.

## “NIMFY”: Not in My Front Yard

This section demonstrates how local land use policies restrict or promote water use efficiency in the City of Sacramento, California; Loomis, California; Albuquerque, New Mexico; Castle Rock, Colorado; and Salt Lake City, Utah.

Often, local planning, building, and nuisance abatement codes have been on the books since the inception of the local government. At times, these ancient CC&Rs are used by nuisance abatement and code enforcement officers to protect public safety, preserve the property values of a neighborhood, prevent urban blight, or simply to respond to a cranky neighbor's complaint.

Unfortunately, the enforcement of a good number of these local codes, old and new, impedes the implementation of water use efficiency measures. As an example, the charter of the City of Sacramento forbids the installation of residential water meters. As home to two of California's mightiest rivers, the Sacramento and the American, the founding fathers believed that the bountiful water resources of the community should be freely accessible to city residents. It took many years for the State of California to pass legislation overruling this charter, recognizing that measuring water and charging water users based on volume is an essential element of good water management.

Another section of Sacramento's City Code has recently come under fire. In 2004, Section 17.68.010, Landscaping Requirements, was used to respond to a neighbor's complaint about a front yard vegetable garden next door. Since that section of the code requires that front yards be “landscaped, irrigated, and maintained with primarily low ground cover and turf,” the vegetable growing homeowner was cited with code violations of more than \$800. The case was later excused, but a community-based movement was born to revise the code. A public meeting was held June 14, 2006 to present proposed revisions to the code. Community members raised issues related to the proposed revisions including the arbitrary nature of the percentage of the front yard dedicated to vegetables, the

four-foot plant height limit, and the preference for turf, a high water using plant. Several attendees emphasized the need for well maintained, water efficient gardens and how this particular code section was in conflict with the Urban Environmental Accord entered into by the City. (Ralph Montano, "Some digging in for a fight: draft ordinance limits growing of vegetables in front yards," *Sacramento Bee*, 22 June 2006, A15.)

In the Town of Loomis, a foothill community to the east of Sacramento where developers are attempting to blend mansions with boutique agriculture, primarily carefully manicured vineyards, local officials have attempted to establish CC&Rs that would ban livestock from the development. They have run into trouble with the town's conflicting policy that says horses and other farm animals are an essential part of Loomis' agricultural heritage and must be permitted on land with agricultural zoning. (Bob Shallit, "Mansions, ag rules clashing in Loomis," *Sacramento Bee*, 22 June 2006, D-1.)

"Ranchettes," upscale residential units on several acres of land in rural areas are encroaching on farm and ranch land from California's Sierra foothills and Central Valley to the slopes of the Colorado Rockies and western Montana's big-sky country. Ed McMahon of the Urban Land Institute observes: "Essentially, it's the suburbanization of the American West." Mike McCoy of the University of California, Davis estimates that "at the current rate, two-thirds of land developed by 2050 in the Central Valley's eight top farm counties will be ranchettes or other very low density housing." (John Ritter, "'Ranchette' buyers take a slice of rural West," *USA Today*, 6 October 2006, 17A.)

Also in Loomis, a restrictive property owners association's policy that was in conflict with the County General Plan had a very negative effect on a resident native plant enthusiast. While the County General Plan stated that the primary goal was to preserve and protect the natural environment as much as possible and to maintain the rural character of the area, the homeowner's association rolled fines into the homeowners' monthly assessment because of the natural, low water using landscape that they installed in 2002, citing that it was not in keeping with the lawn-intensive appearance of the rest of the development. The fines were \$10 per day with that rate potentially rising to \$100 per day, at the discretion of the association. Next, the homeowners were threatened with a lien on their property and a possible non-judicial foreclosure. The homeowners, disheartened by the experience, sold their dream house and moved out of the community. ("Foreclosure looming over homeowners natural landscape," *AHRC News Services*, 4 September 2004.)

According to industry reports, six million California residents are ruled by homeowners associations in over 30,000 individual associations. For many of these residents, the homeowners association controls the landscape water use. For others, the homeowners association controls the water use of common areas, including parks, slopes, walkways, and other landscaped area. In 2006, the

California Legislature passed Assembly Bill 1881 to forbid the restriction of native plants or other low water using plants by property owners associations.

While people choose native plants and other low water using plants for many reasons, native plant gardening has significant benefits for water use efficiency. Gardens planted with locally-adapted native plants can minimize the use of irrigation water. This can be particularly significant in reducing peak season water demand, since these plants require very little water in the summer when water demand is usually the highest.

Persistent and widespread anecdotal reports indicate that well-maintained landscapes with native or other low water using plants are actively discouraged by many local governments and boards of directors of common interest developments. Local planning or design review boards may refuse to approve landscaping plans with unfamiliar plant species. Local code enforcement officers may cite homeowners for “weeds” of excessive heights. Homeowners’ associations with design review have been among the most egregious offenders. These neighborhood quasi-governments can assess fines and place liens on properties planting the ‘wrong’ plants.

The effect of random enforcement actions multiplies its chilling effect on the landscaping industry, where apprehension about regulatory hindrances results in additional pressure to constantly offer the safest, most mainstream plant selection that will not engender any controversy.

In 2004, Albuquerque, New Mexico adopted an ordinance that prohibits property associations, both residential and commercial, from requiring mostly high water-use grass in yards. The intent was to ensure that all property owners can choose to plant a xeriscape if they wish. Up to 20 percent can be planted in high water-use grass. Legitimate public interest: avoiding environmental damage caused by over-pumping Albuquerque's ground water supply, was justification for this action. (“Albuquerque halts requirements for turf,” *WaterWiser*, American Water Works Association, <http://www.awwa.org/waterwiser/watch/> April, 2004, accessed 7 July 2006.)

As part of Castle Rock, Colorado’s ongoing campaign to reduce water consumption, home owner association leaders could face a \$1,000 fine and risk arrest if they penalized home owners who want to use less grass and more drought-tolerant plants. Colorado State law prohibits new developments from mandating irrigated turf or banning xeriscaping. Castle Rock's ordinance applies to existing communities as well. (J. Bunch, “Prospects greener for lawn alternatives in Castle Rock,” *Denver Post*, 9 Nov 2004.)

After four years of drought, the mayor of Salt Lake City, Utah and many of his neighbors have gotten into the act, converting their lawn-dominated front yards to a native plant gardens. The city is in the process of updating an ordinance that

requires all front yards be completely covered with flat green grass. Mayor Rocky Anderson observed, “Five or six years ago, nobody had these types of lawns here. But I think having the native plants is reflective of the identity of our place. We’re in a desert and maintaining our identity can be extremely beautiful, too.” Within the next ten years, he anticipates that xeriscapes will be standard in Salt Lake City, if only because they are so much more affordable. He said that after he planted his, his water bill dropped 65 percent. (Melissa Sanford, “Salt Lake City Moving Toward Less Thirsty Lawns,” N.Y. Times, August 25, 2006, p.A-7.)

## **Landscape Ordinances**

California’s Model Water Efficient Landscape Ordinance (Model Ordinance) and local landscape ordinances institutionalize the design and installation of water efficient landscapes.

While some ordinances have a deleterious effect on water use efficiency efforts, State and local ordinances can foster efficient water management, especially in times of significant growth or water shortages.

The City of Petaluma, California, under a ‘de facto’ building moratorium because of a potential water shortage, has proposed an ordinance that would restrict lawns and thirsty plants to 30 percent of landscaping on commercial and residential properties, including existing single family homes. This would reverse decades of encouraging lawns at new commercial sites. (Tobias Young, “Petaluma proposes limits on lawns; water shortage fears spur proposal to set restrictions on landscaping projects,” *Santa Rosa Press-Democrat*, 6 June 2006.)

On a broader scale, DWR adopted the Model Ordinance in June 1992. Local agencies had until January 1993 to adopt the Model Ordinance, adopt their own ordinance, or issue legal findings that they did not need an ordinance. If no action was taken, the Model Ordinance automatically went into effect.

The Model Ordinance contains provisions to promote water efficient landscapes including:

- establishment of a water allowance at 80 percent of Reference Evapotranspiration (ET<sub>o</sub>);
- minimum irrigation efficiency of 62 percent’
- appropriate selection and groupings of plants;
- encouragement of planting of trees and native plants;
- appropriate landscaping for fire safety in fire prone areas;
- separate irrigation valves for hydrozones;
- separate water meters for landscape;
- installation of automatic irrigation controllers and rain shut-off devices;

- irrigation systems designed to avoid runoff and overspray;
- no overhead sprinklers in median strips;
- monthly and annual irrigation schedules specifying estimated water use,
- grading plan;
- routine landscape maintenance and water management practices;
- irrigation audits conducted every five years;
- requirement of soil tests and three inches of mulch in non-turf areas;
- the use of recycled water whenever possible;
- conservation information to all new homeowners, and
- one model home to demonstrate conservation principles.

In March of 2001, Western Policy Research issued a report sponsored by the California Urban Water Agencies called “Water Efficient Landscape Ordinance (AB 325): A Statewide Implementation Review.” Researchers found that nearly 90 percent of new development between 1992 and 1999 took place in agencies that had adopted a water efficient landscape ordinance. There was a general consensus that since the Act was implemented, landscape designs have been improved using drought tolerant plants, better quality and more efficient irrigation systems and increased ease of water budgeting and irrigation design facilitated by computer software.

Their survey of 140 cities and 11 counties indicated an inconsistency in standards, implementation and post-construction follow-up. Some of the weaknesses cited were lack of follow-up after construction is completed and disregard of irrigation and maintenance schedules resulting in over-irrigation. They identified ‘maintenance’ as the weakest link in the design, installation, and maintenance scenario. (Anil Bamezai; Robert Perry; Carrie Pryor, “Water efficient landscape ordinance (AB325): A statewide implementation review. A report submitted to the California Urban Water Agencies,” Western Policy Research, Santa Monica, CA, 2001.)

To encourage the adoption of local ordinances that are more stringent than the State’s Model Ordinance, the Coachella Valley Water District (CVWD) offers local planning agencies technical assistance in plan review and site inspection if they adopt a standard local ordinance that they proposed. The Low Desert regions of the Coachella Valley are fast growing communities where the CVWD finds the standard amount of water offered in the Model Ordinance could result in the design of landscapes that would use nearly 60 inches of water per year, more than the region can afford under present and future conditions. Thus, they request local agencies adopt a lower water budget than that of the Model Ordinance.

California will soon be updating the Model Ordinance, in response to enabling legislation (AB 1881) that will implement recommendations of the 2005 California Landscape Task Force Report, *Water Smart Landscapes for California*. Local agencies will be required to adopt local ordinances that are at least as effective as the Model Ordinance, as part of this revision.

The Public Policy Institute of California released their report in July 2006: *Lawns and Water Demand in California* by Ellen Hanak and Matthew Davis, emphasizing not only the importance of land use planning, but also the that of conservation oriented rate structures in relation to landscape water use efficiency.

The authors find that water pricing is an overarching tool for providing incentives for landscape water use efficiency. They quote recent studies that indicate water is a more “elastic” commodity and that consumers are more sensitive to water prices than previously thought, and that pricing can be an especially important outdoor conservation tool.

Hanak and Davis observe that some of the biggest growth pressures in the coming decades will be in hotter inland areas with larger, single family lots than the two major metropolitan coastal regions that are showing an increase in multi-family residences. This results in homeowners using two to three times more water outdoors in hotter inland climates than those in coastal areas.

While some developers continue to build houses on large lots, often referred to as ranchettes, many are moving toward the “McMansion” approach: large houses on small lots, or condominiums. In the fast growing six county Sacramento region, about 40 percent of new-home sales in 2005 involved houses on lots smaller than 4,000 square feet, according to the Gregory Group. Five years ago in El Dorado, Placer, Sacramento and Yolo counties it was a mere 1.5 percent. This trend reflects one of the key changes in the housing supply that the Sacramento Area Council of Government’s “Blueprint” promotes: higher density housing. (Jim Wasserman, “Those incredible shrinking backyards: Builders squeezing big homes on ever-smaller parcels,” *Sacramento Bee*, 26 July 2006.)

Another trend that is being embraced by planners, water suppliers, environmentalists and builders is the “Green Building” movement. These eco-friendly developments emphasize energy and water use efficiency, natural over chemical, recycled materials, and renewable resources. “There’s a lot more consumer interest. It’s starting to be a groundswell,” says Calli Schmidt, a spokeswoman for the National Association of Home Builders. A McGraw-Hill Construction survey in March 2006 predicted that green building would reach a “tipping point” next year and that two-thirds of builders would be building green homes. (John Ritter, “Building ‘green’ reaches a new level,” *USA Today*, 27 July 2006).

In support of this movement, the Federal government, 15 states and 46 cities require new public buildings to meet the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards. Water suppliers can ‘jump on the bandwagon’ of progressive programs such as this and insure that water use efficiency is built in from the start.

## **U.S. Environmental Protection Agency's New Policies**

EPA has recognized that reductions in water demand can lead to the deferral or downsizing of water and wastewater capital projects. New policies have been put in place that underscore the importance of water use efficiency for managing infrastructure needs. Since 2003, both the Clean Water State Revolving Funds and the Drinking Water State Revolving Fund, the main source of ongoing capital assistance to the nation's water and wastewater utilities can be used for water efficiency measures. (*Alliance for Water Efficiency: Issues and Options draft report to the U.S. EPA, 2006.*)

Another major supporting action taken by EPA is WaterSense, a new water efficiency program launched on June 12, 2006. The program aims to raise awareness about the importance of water efficiency; ensure the performance of water-efficient products; and provide good consumer information. WaterSense product labels will identify products and services that perform at least 20 percent more efficiently than their less efficient counterparts. More information about the program can be found at EPA's website: <http://www.epa.gov/watersense>.

## **The Plumbing Code**

Plumbing codes, building codes, and related standards govern many water efficient products. The CEC adopts Appliance Efficiency Regulations that set standards for 21 categories of appliances, including energy and water standards for washing machines and dishwashers. Amending plumbing codes at the State and Federal level is difficult. New technologies, such as non-water consuming urinals, face an uphill battle as special interest groups try to protect their share of products and services in that particular market segment. Yet, the adoption of effective standards results in significant water savings, as demonstrated by the implementation of low flow toilet standards.

Unfortunately, some code provisions result in excessive water use, or inadvertently result in the abandonment of water efficiency practices. For instance, the California Graywater Standards, adopted in 1993, intended to promote the safe use of residential graywater systems. The complexity of the standards, instead, discourages the legal use of graywater for landscape irrigation in California.

## Case Studies

Following are examples of successful Federal, State, regional and local strategies where collaborative interagency and stakeholder efforts are resulting in exemplary water use efficiency programs.

### Smart Controllers

MWDOC's Smart Controller Program demonstrates how an agency can leverage funding from multiple sources and achieve multiple benefits.

MWDOC wanted to install and test the effectiveness of "Smart Controllers" (weather-based irrigation controllers) in terms of water savings and reduced urban runoff. They enlisted "Study Partners" to help fund and conduct the project. Reclamation, EPA, SWRCB, CBDA, California Department of Pesticide Regulation (through the County of Orange) and MWDSC were major funding partners. Each agency had an interest in either reducing urban runoff or improving water use efficiency.

The 'hook' that MWDOC used to finance the water quality portion of the study was the regulatory responsibility of the County of Orange as the primary permittee on the Municipal Separate Storm Sewer System Permit issued by the Regional Water Quality Control Board. The County must meet the 'Total Maximum Daily Load' limit that establishes the amount of pollutants that can be discharged to Newport Bay. They were interested in how the project would reduce the quantity of runoff and improve the quality of the water that did run off.

The water supply-oriented funding agencies were interested not only in the potential equipment-related water savings, but also the educational and communication efforts tested in the study.

Weather-based controllers resulted in water savings of 41 gallons per day in typical residential settings and 545 gallons per day for larger dedicated landscape irrigation accounts. Reduction in runoff was 50 percent comparing pre-intervention and post-intervention periods and 71 percent in comparison to the control group. In terms of cost effectiveness, the study found that initial targets for program expansion should be large landscapes such as parks and street medians.

MWDOC was successful in obtaining funding from a wide array of agencies and integrating the goals and objectives of water supply and water quality programs

into a succinct project that demonstrated the multiple benefits of this water use efficiency project. Their report which was co-funded by Reclamation can be found at [www.mwdoc.com](http://www.mwdoc.com).

## **Agricultural Pumping Efficiency Program**

Bringing together funding and other resources of the CEC, CPUC, EPA, and Pacific Gas and Electric Company, the Center for Irrigation Technology at California State University Fresno has packaged the Agricultural Pumping Efficiency Program to save energy and water while improving water and air quality. This multi-level resource management program is accomplished through the installation and management of hardware: pumping plants, irrigation systems, and water distribution systems.

Funding will be available through 2008 for educational seminars, subsidized pump efficiency tests, and incentive rebates for pump retrofit and repair projects. One irrigation district that has taken advantage of this program is the Sutter Mutual Water Company in Sutter County, California. Sutter Mutual pumps about 200,000 acre-feet of water from the Sacramento River annually for crop irrigation. Reclamation District 1500 removes surface drainage water from the Sutter Basin and maintains the levees and the discharge pump station. Sutter Mutual received \$15,000 as an incentive grant from the program to repair a 48-inch diameter propeller pump that had been installed in 1940. Fred Schantz, Operations Manager for Sutter Mutual offers this testimonial: "We found the Program to be quite beneficial by improving pump efficiency and reducing operating costs." For more information about the program, see [www.pumpefficiency.org](http://www.pumpefficiency.org).

CUWCC's Pre-Rinse Spray Head Distribution Program is an example of an urban program that capitalizes on the water-energy connection. As a result of installing 16,975 spray heads at over 13,000 restaurants and other food service establishments throughout California in the first phase of the project, a water savings of 14,700 acre-feet of water and overall energy savings per spray head were 20.9 kWh/day/head for electric heating and 0.92 therms/day/head for gas heating. For more information about this program, visit [www.cuwcc.org](http://www.cuwcc.org).

## **Integrated Regional Water Management Planning**

Single purpose enabling legislation for funding programs, while focusing on finding remedies for an important problem, often restrict and limit the use of those funds. Single agencies working in a vacuum within a region that shares similar goals and objectives regarding water management often miss opportunities to attain maximum benefits in a broader context. The IRWM grant program is an attempt to overcome the difficulties of narrowly focused solutions to broadly based problems. The intent of IRWM program is to provide funding for a wide

array of water management activities that, when taken together, will benefit a locally defined region.

The concept of integrated water resource planning is not a new one. Agencies across the nation have recognized the benefit of assembling comprehensive strategic plans to insure the adequate supply and beneficial use of water resources. Preparing and implementing such integrated water resource plans at the regional level can produce additional benefits in terms of economy of scale and overall watershed health and productivity.

Chapter 8 of Proposition 50 offers up to \$500,000 in planning grants and \$25 million in implementation grants for IRWM projects. DWR and SWRCB jointly administer this program. This funding program intends to reward local agencies and stakeholders who form regional planning areas to employ various water management strategies to solve water management problems and plan for the future. These coalitions will serve to provide a reliable water supply, protect or enhance water quality, and achieve other regional and statewide priorities.

Presently, to receive a grant under this program, at least three local agencies, two of which have statutory authority over water management, come together to define a geographic region with shared physical, political, environmental, social and economic factors that result in effective, synergistic, and efficient water management planning. In other words, agencies within a region they themselves define that have common interests and common conditions are encouraged to work together to face water challenges on a regional basis.

Water conservation programs and projects are commonly addressed in three ways in IRWM *Plans*:

1. As a "water management strategy" to meet the objectives of the IRWM plan. Strategies include water conservation, water recycling, and desalination.
2. As a "task" in a work plan to collect additional data intended to support IRWM plan development. Example water conservation related tasks include: development and evaluation of baseline water demand projections, potential demand management opportunities, water demand alternatives, water conservation potential, and best management practices.
3. As a "program" in the context of UWMPs. UWMPs could be valid functionally equivalent plans or foundation planning documents and their existing water conservation objectives and programs are carried over into the IRWM plans.

The *Implementation projects* of IRWM plans addressing water conservation typically fall into 2 major categories: "recycled water and desalination" projects and "broader" water conservation programs. Here is a brief list of 'water conservation' projects found in the IRWM Step 2 implementation proposals:

1. Construct new or improve existing recycled water facilities.
2. Construct brackish groundwater desalters.
3. Expand recycled water distribution systems to deliver recycled water for urban landscape irrigation uses or directly to major irrigation customers.
4. Replace infrastructures to reduce system water losses (agricultural and urban).
5. Install high-efficiency irrigation systems (agricultural).
6. Install efficient irrigation controllers on both residential and commercial landscapes (urban).
7. Improve landscape irrigation distributions systems via customer rebates.
8. Implement large landscape conservation programs that include weather-based irrigation controllers, rebates, demonstration gardens, and public outreach.
9. Implement indoor and outdoor conservation programs that include rebates for irrigation equipment, clothes washers and toilets.

Water conservation and water recycling projects (in a suite of implementation projects) can help grant applicants claim to meet the program preferences of supporting and improving local and regional water supply reliability.

Likewise, the funding agencies give consideration to proposals that assist in meeting “Statewide Priorities” established by DWR and SWRCB. Water conservation and water recycling projects (in a suite of implementation projects) can help grant applicants claim these statewide priorities: reducing conflict between water users or resolving water rights disputes; implementation of recommendations of the Desalination Task Force or Recycled Water Task Force; and assistance in achieving one or more CBDA goals.

The Bay Area Integrated Regional Water Management Plan for the San Francisco Bay Area region, for example, includes 15 projects for implementation. The 17 participating agencies included three water use efficiency initiatives, six recycled water projects, two desalination projects, one regional intertie project, two ecosystem restoration projects, and one groundwater optimization project in their proposal.

All in all, water use efficiency projects are included in these IRWM planning and implementation proposals to add variety or to "round out" the suite of projects. The conglomeration of agencies and stakeholders that make up IRWM planning regions are impressive and extensive. This program requires 'real world,' formalized collaboration among entities that in the past seldom worked together on a regular basis.

Yet, there are concerns regarding the funding of water use efficiency projects through the IRWM process. Often, staff of water use efficiency units within agencies vying for IRWM dollars is not familiar with the IRWM programs and have not participated in the process. Active participation in the development of

IRWM planning and implementation and advocacy for water use efficiency projects can result in the direction of an appropriate level of funding for water use efficiency activities.

While “water conservation” and “water use efficiency” are listed as eligible project types that would protect communities from drought, protect and improve water quality and improve local water security by reducing dependence on imported water, when bundled together, water use efficiency often takes a back seat to other project types such as flood control programs, groundwater recharge, and non-point source pollution reduction. Local and regional decisions regarding the priority of the various projects determine the portion of funding directed toward each element.

The trend to include water use efficiency as part of a region’s overall integrated water management scheme continues. Unlike previous California water initiatives, Proposition 13 and Proposition 50, Proposition 84 of 2006 includes funding for water use efficiency only in the context of its role in the IRWM plan. One billion of the 5.4 billion dollars of Proposition 84 funding would go to the implementation of IRWM plans with water use efficiency being one of 11 fundable elements. A legislative bill (Assembly Bill 2406) was introduced in 2006 that would have dedicated \$20 million of Proposition 84 funding to urban water conservation programs and projects, but it failed to pass.

In addition to IRWM funding in Proposition 84, there are other potential water use efficiency funding opportunities:

- The Sustainable Communities and Climate Change Reduction chapter includes \$90 million for urban greening projects that reduce energy consumption, *conserve water* and improve air and water quality.
- Funding for local and regional park improvements (\$500 million) requires that projects be designed to provide for the *efficient use of water* and other natural resources.
- Planning grants and incentives (\$65 million) will be available to encourage the development of *regional and local land use plans that are designed to promote water conservation*.

For more information about the IRWM program, go to [www.swrcb.ca.gov/funding/irwmgp/index.html](http://www.swrcb.ca.gov/funding/irwmgp/index.html).

## **California Friendly and Water Smart Landscapes**

MWDSC’s California Friendly Landscape Program and the Southern Nevada Water Authority’s (SNWA) Water Smart Landscapes show how agencies can work with developers, planners, and community leaders to implement projects.

MWDSC maintains an ongoing campaign to reduce outdoor water use by switching to drought-tolerant plants and setting sprinklers correctly. Outdoor water use in southern California can account for 40 percent to 70 percent of a home's total water use. The agency set up a website, [www.bewaterwise.com](http://www.bewaterwise.com) and partnered with The Home Depot and others to highlight drought-tolerant plants and offer classes.

Gardening with native and low water using plants has a passionate and growing following, and is being actively promoted by agencies such as MWDSC with its multi-million dollar, EPA award-winning Heritage Garden and the umbrella California Friendly Landscapes programs. MWDSC has gone a step further by providing sample specifications for “California Friendly” landscapes for model homes along with a Hardware Resource List of high-efficiency clothes washers, toilet fixtures, and weather-based irrigation controllers.

A companion program called City Makeover engages local government in the movement to reduce outdoor water use while inspiring and educating the public on the beauty and usefulness of California native and other drought-tolerant plants, efficient irrigation techniques and sustainable design. Cities and counties are eligible to apply for funding to transform highly-visible public spaces into native and California Friendly landscapes.

One more complementary program tailored to the commercial sector is called Save Water, Save a Buck. Rebates are available to businesses, industry and institutional water customers for a variety of products such as toilets, urinals, high efficiency clothes washers, irrigation controllers, pressurized water brooms, and pre-rinse kitchen sprayers.

Reclamation provided funding during the pilot phases for these MWDSC projects. MWDSC invested another \$1.4 million in 2006 in their regional advertising services to promote the California Friendly program, in cooperation with the “Family of Southern California Water Agencies,” 26 cities and water agencies serving 18 million people in six counties. MWDSC’s board has authorized \$4 million every two years to be spent on pilot projects and the development of new conservation programs.

Another potential avenue for forming partnerships among agencies with similar goals could be pursued by teaming up a local water supplier with a water quality regulator, the power utility, and a tree planting association to develop a mutually beneficial program.

A study conducted by Center for Urban Forest Research found that Glendale, California residents receive \$2.41 in environmental benefits for every dollar the city invests in the care and maintenance of city trees. Healthy trees improve air quality, lower summer temperatures, decrease the need for air conditioning, and reduce stormwater runoff. They also contribute toward increased real estate

values, provide neighborhoods with a unique identity, increase business income, increase community attractiveness, reduce stress, reduce crime and provide recreational opportunities. Glendale's trees intercept 1 million gallons of rain per year, reducing runoff. Mature mesquites intercept about 1,600 gallons annually, but only consume about 1,100 gallons through irrigation. Because the price of irrigation water is one-quarter the cost of controlling stormwater per gallon, the annual watershed benefit is over four times greater than the irrigation cost, \$7.70 vs \$1.85 per tree. (Peper, P. Geiger, J. Trees in Glendale are paying huge dividends. Center for Urban Forest Research. USDA Forest Service news release. February, 2005)

A program designed to plant trees that are appropriate for the local environment, to irrigate them efficiently, and to locate them where they would provide the most benefit in terms of capturing run-off and providing shade would go a long way toward meeting the various needs of several organizations. Funding could be sought from various sources as well.

The City of Los Angeles has launched a Million Tree Campaign in 2006. While a similar successful program “greened up” the more public, upscale parts of the City in time for the 1984 Olympics, this revived program is dedicated to low-income neighborhoods where a “poverty of green life” is most pronounced. There is an excellent opportunity for MWDSC’s California Friendly landscape program to complement the City tree planting program to the benefit of all.

SNWA offers Water Smart Landscape Rebates to their customers for changing out their landscapes as well as providing other assistance such as water efficient landscape designs for new homeowners. SNWA’s Water Smart Landscape Program, converting high water using landscapes to ‘xeriscapes,’ produced a 37 percent positive return, bringing in \$1.58 for each \$1.00 spent on rebate incentives, freeing up local water resources for immediate use. The average savings of 30 percent (96,000 gallons) annually were achieved by those who converted from turf to xeriscape. Residents applied 73 gal/sq ft/year to turf, 17.2 gal/sq ft/yr to xeric landscapes, a per unit area savings of 55.8 gal/sq ft/yr. Total yearly savings neither eroded nor improved across the years. The xeric ETo was about 33% of the ETo of turf. (Kent Sovocool, *Xeriscape Conversion Study Final Report to Bureau of Reclamation, U.S. Department of Interior, 2005.*)

For more information, visit MWDSC’s website at [www.bewaterwise.com](http://www.bewaterwise.com) and SNWA’s website at [www.snwa.com](http://www.snwa.com).

## **Productive Regional Alliances**

What works in one region does not necessarily work in another. In an attempt to foster regional cooperative efforts in terms of landscape water use efficiency, several consortia of planning agencies, water suppliers, and stakeholder groups

have come together to coordinate their activities, educate the public and provide incentives to stimulate actions.

The Inland Empire Landscaping Alliance (Alliance), Riverside County's Landscape Task Force, and Sacramento Water Forum's Landscape Committee demonstrate how collaboration among water districts, local planning departments, and the business industry and landscape communities can enhance water use efficiency programs.

The Inland Empire Utility Agency (IEUA) formed the Alliance to provide an opportunity for the development of voluntary, creative and coordinated approaches to landscape water use efficiency policies and programs within the communities of the Chino Basin. By improving landscape water use efficiency, they will help ensure a reliable water supply and increase the quality and sustainability of the communities' landscapes.

The Alliance was initiated by a local city council member and includes representatives from each of the seven city councils and six water agencies within the IEUA's service area.

The Alliance provides the following benefits to local agencies:

- support for the review, coordination and revision of landscaping related policies so that the region can speak a united voice on landscaping related policies;
- development of information to identify the long term cost savings along with the value of multiple benefits to the region from implementation of these practices; and
- access funding opportunities to support landscaping efficiency initiatives.

The Alliance has identified the following tasks to improve the region's landscape water use efficiency:

- Review existing city landscaping ordinances and policies and develop recommendations for coordinated region-wide ordinances;
- adopting new features in the State Landscape Task Force report where appropriate;
- Work with MWDC to develop a "California Friendly" designation for cities and lead southern California in being the first region to be designated as "California Friendly";
- Develop region-wide education and outreach programs to increase awareness of the importance of landscape water use efficiency and what can be done to improve landscape choices;
- Identify and develop a list of qualified professionals who can assist residents, businesses and government agencies plan and install water efficient landscapes;

- Develop programs for working with targeted constituencies including property owner associations, trade groups, schools and large commercial landscapes to improve water use efficiency;
- Identify water and related savings from conversion of median strips to efficient landscaping and conduct a pilot project to demonstrate the savings;
- Work with the California Nevada Cement Promotion Council to host a workshop on the use and installation of permeable concrete.

Similarly, Riverside County has spearheaded a task force to find ways to make their region's landscapes more water efficient. Likewise, the Sacramento region's Water Forum is proposing changes to local landscape ordinances in the Sacramento region that will help achieve consistency in requirements across the region; provide information and training opportunities; and increase communication and coordination among agencies, the building industry and the landscape industry.

## **California Bay-Delta Program Interagency Partnership**

The interagency partnership established and institutionalized in 2000 under the CBDA Water Use Efficiency Element provides an opportunity for Federal and State funding agencies to share resources, coordinate programs, and establish standardized grant application, review, and selection processes. The CBDA, Reclamation, DWR, SWRCB, and NRCS are the main agencies participating in the Water Use Efficiency effort.

During the first four years of the program, State and Federal agencies funded 122 urban conservation implementation, research, and education projects for a total of \$50.5 million. CBDA agencies funded 16 percent to 19 percent of urban conservation projects in this time frame with local agencies financing the remaining 81 percent to 84 percent.

The draft *Water Use Efficiency Comprehensive Evaluation: CALFED Bay-Delta Program Water Use Efficiency Element, April 2006* notes that “the combination of efficiency codes and implementation of regionally cost-effective conservation measures account for most of the water savings potential. While grant funding can augment the water savings from these two primary sources, it does not supplant it. Policies that combine aggressive local investment in cost-effective Best Management Practices (BMP) and non-BMP conservation measures with State/Federal grant programs to leverage additional local investment in conservation measures that individual water suppliers do not consider cost effective produce the greatest reduction in the rate of growth in applied water use.”

The report also raises the perennial problems associated with grant programs: lack of monitoring, tracking, and verifying project outcomes; insufficient data collection from grantees; and a need to establish standardized performance measures to evaluate success.

Some of the challenges in this program are the slowdown of the grant process because of increased levels of review; the unpredictable shifting balance of power among agencies; the legal and bureaucratic complications of interagency decision making; and a general perplexity on the part of the stakeholders as the grant processes evolve.

The benefits include the potential for increased communication and trust among agencies as they assisted in the review and selection of grantees for each others' programs; as they shared information more readily regarding new and emerging technologies and data; and as they established a more standardized approach to the grant process.

## **Environmental Quality Incentives Program (EQIP)**

EQIP targets current and pressing needs in the agricultural community. While the majority of an agency's grant program budget is dedicated to competitive grant programs, discretionary spending for a portion of an agency's budget is often available. For example, NRCS set aside \$10.3 million out of the \$43 million EQIP for 2006 to fund Dairy Stewardship.

The NRCS California State Conservationist Ed Burton has the authority to dedicate a portion of the funding of this program for specific purposes. The dairy industry appealed for assistance in meeting their water quality goals and regulatory requirements related to manure management. Burton responded positively to their request, providing the funding and accelerating the time frame so that contracted work could begin in the current growing season. (\$10.3 million for dairy stewardship through EQIP in 2006, Partners in Conservation, Spring 2006, Natural Resources Conservation Service.)

## **Regional Water Recycling Projects**

Water recycling projects are an important component of regional water management strategies. In concert with water use efficiency projects, a region can bolster its portfolio of water supply options, often reducing the region's need for imported water, by working together to coordinate the implementation of local water recycling projects. Two efforts stand out in this arena, the Southern California Comprehensive Water Reclamation and Reuse Study (SCCWRRS) and the San Francisco Bay Area Regional Water Recycling Program (BARWRP).

Reclamation, in cooperation with eight southern California water agencies, participated in the SCCWRRS from 1992 through 1999. This \$6 million study evaluated a long-range strategy for more effective development of water reuse programs in southern California. The study covered a six county area, exploring options to link available reclaimed water supplies with various demand points throughout the region. SCCWRRS identified a near-term recycled water market of over 450,000 acre-feet per year and has developed new methodologies and tools to develop, screen, evaluate, and implement recycled water projects from a regional perspective. Although individual projects were identified, in most cases more advanced project definition and further analysis would be required to determine feasibility. Many of the Project sponsors have since completed additional planning for their projects. For more information, visit Reclamation's website at: <http://www.usbr.gov/lc/socal/sccwrrs.html>.

In northern California, Reclamation, in collaboration with the DWR and seventeen San Francisco Bay Area water and wastewater agencies, joined to study the feasibility of using high-quality recycled water to augment water supplies and help the Bay-Delta ecosystem. BARWRP produced a Master Plan for regional water recycling. BARWRP determined that a regional approach to water recycling can assist in overcoming the barriers faced by individual agencies when developing projects on their own. These barriers include conflicting agendas between agencies, complex water rights issues, opposition from recycled water customers, existing regulations, allocation of costs and benefits, funding, and cost-effectiveness. BARWRP identified a near-term recycled water market of over 125,000 acre-feet per year.

For example, by approaching water recycling from a regional base and developing a long range, overarching plan, agencies can position themselves to be more competitive for funding under Reclamation's Title XVI program, the SWRCB Consolidated Grant Program, and the new funding that will be available through the recently passed Proposition 84.

# Survey Results

To gain the insight and recommendations from people working in the funding agencies as well as those seeking grants and others in the field, surveys were sent out in August 2006 to ascertain what could be done to improve the financing of water use efficiency projects and increase the benefits of these investments.

Participants received an electronic mail message with a website address that took them directly to the survey. Responses were collected and tabulated at SurveyMonkey.com.

Federal and State funding agency participants received one survey form while urban and agricultural water suppliers, non-profit organizations, and consultants involved with water use efficiency programs received another. (See Attachments E and F for a tabulation of results.)

Ten funding agency participants and 30 others submitted surveys. Following are highlights of the survey results.

## Responses from Funding Agencies

### Funding Program Development and Execution

Funding agency survey participants were asked to rate the various aspects of grant program development and implementation as “very easy,” “easy,” “neither easy nor difficult,” “somewhat difficult,” “very difficult” or “N/A.”

*The most frequent response to the questions regarding grant program development; proposal solicitation package and review process development; proposal review and selection; and contract development and management was “somewhat difficult.” “Project tracking and verifying results,” on the other hand, was most often rated “very difficult.”*

### General Concerns

Funding agency survey participants were asked to rate their general concerns regarding the funding of water use efficiency or other resource management projects in respect to their level of concern from “not concerned,” “slightly concerned,” “moderately concerned,” “very concerned,” “extremely concerned,” or “N/A.”

*The most frequent response to the questions regarding general concerns was “moderately concerned” with “lack of standardized monitoring and verification*

*procedures and performance measures” eliciting more “extremely concerned” responses.*

### **Additional Comments**

Funding agency survey participants were asked to provide further comments regarding the challenges, obstacles, and concerns related to the funding of water use efficiency projects. They were asked to consider the following questions:

- Are you getting your money’s worth from the projects you fund? If not, what can be done to improve the outcomes of your investments?
- What changes would you recommend for improving the funding processes?
- What could be done to speed up and streamline funding projects?
- Where are there gaps in the funding of water use efficiency projects?
- Where are the overlaps among funding programs for water use efficiency and other resource management projects?

*Written comments received expressed a need to streamline the funding process. Some noted a need for additional investments for funding agencies to monitor and verify project outcomes as well as a commitment from grant recipients to participate in this phase of their projects.*

Following is a sampling of the comments received reflecting the various experiences and opinions of the funding agencies.

- To improve the funding process, project selection schedules should be shortened; gaps and overlaps avoided through coordinated or joint or consolidated funding where feasible; consultation among agencies with grant programs is helpful for a coordinated process; collaboration is often constrained by agency limitations (rules, regulations, legislative requirements, legal requirements).
- Internal processes should be streamlined using available on-line database systems (FAAST) and contract agreement templates should be published in PSPs so that grantees know what they are getting themselves into.
- ... verifying and documenting water savings and determining fate of saved water are often difficult. For some projects it is expensive to conduct the kind of monitoring that is needed to verify project outcome. To improve program outcome projects with good potential for water savings must be selected and monitoring program must be required of all projects.
- We have done a fairly good job of determining expenditures and cost sharing but overall results have not been well quantified especially in the agricultural sector. To improve outcomes we need to have buy-in up front on recipient responsibilities as far as reporting and monitoring and better

oversight from the agencies on what has been going on in the field (regular field visits).

- Recipients look at targeting grant programs and agencies have made those programs flexible enough to provide funding for local benefits even though the program is suppose to provide wider public benefits. There are also conflicts between Federal and State criteria that allow recipients to go shopping for the most advantageous funding option which may subsidize recipients for projects that are fully or partially locally cost effective. A State and Federal water use efficiency workgroup has been meeting on a semi-regular basis. The biggest need is for policy makers and politicians to play a larger role in coordinating funding priorities and directing standardized criteria. Earmarks by legislators tend to result in the inconsistent to requirement to fund certain projects that do not meet the overall water use efficiency mission or funding criteria.
- Water Use Efficiency funding should be considered by the California Resources Agency as a component for preference/criteria for all types of projects such as trail improvements, park development, and recreation facilities. This would require education for all Resources Agency staff involved in financial incentive programs. There may also be other agencies that have funding programs that could benefit from education on including water use efficiency as a component and preference/criteria for funding, such as housing grants, and health and safety programs.

## **Responses from “Funding Partners”**

### **Grant Application and Project Implementation Phases**

Survey participants were asked to rate the various aspects of the process from grant application through project implementation as “very easy,” “easy,” “neither easy nor difficult,” “somewhat difficult,” “very difficult” or “N/A.”

*Overall, the surveys indicate that funding partners find the grant application and project implementation processes to be “somewhat difficult.” They find coping with time constraints, executing contracts within a reasonable time period, quantifying and documenting water savings and other benefits, and economic analysis requirements to be “very difficult.”*

### **Background**

Survey participants were asked to which of the following programs their organization had applied or assisted others in their application for funding of a water use efficiency project and from which they had received funds:

<b>Program</b>	<b>Applied for (%)</b>	<b>Received (%)</b>
Water 2025 Challenge	39	17
Water Conservation Field Services	48	43
Water Reclamation & Reuse (Title XVI)	7	9
Prop. 13: Water Conservation	87	65
Prop. 50, Chap. 7g: Water Use Efficiency	83	61
Prop. 50, Chap. 7f: Watershed Program	17	9
Prop. 50, Chap. 8: IRWMP	39	13
Consol. Grant Program (SWRCB)	2	9
Other	22	17

*While the data gathered through this survey question are not particularly illuminating, one observation can be made. Respondents have thus far been more successful in obtaining funding under the programs specific to water use efficiency, Water 2025, Water Conservation Field Services Program, and Propositions 13 and 50 water use efficiency programs, than under the Integrated Regional Water Management or Watershed Management programs.*

Survey participants were asked with which of the following entities their organizations maintained regular contact and collaborated on projects of mutual interest:

Water suppliers	91.7%
Local planning agencies	20.8%
Energy utilities	54.2%
Regional water quality control board	29.2%
Sanitation districts	37.5%
Waste management agencies	20.8%
Park districts	20.8%
Business community	41.7%
Environmental community	50%
Other community based organizations	29.2%

*Contact with local planning agencies, waste management agencies and park districts is less frequent, while it appears that significant networking with other organizations, especially other water suppliers, occurs quite regularly.*

Survey participants were asked whether they or agencies they have assisted ever received funding from private sources in support of water use efficiency.

No	87%
Yes	13%

*The two respondents who checked “yes” said they had received funding from the Hans Doe Charitable Trust and from a private water utility, as mandated by the California Public Utilities Commission.*

Survey participants were asked if there are any Federal, State or local regulations, ordinances or codes that restrict or hamper the implementation of water use efficiency projects in which they have been involved.

No	78%
Yes	22%

*The Plumbing Code restrictions related to toilet replacement programs and urinals were noted as impediments to water use efficiency measures.*

### **Additional Comments**

Participants were asked to provide further comments regarding the challenges, obstacles, and concerns related to the funding of water use efficiency projects. They were asked to consider the following questions:

- What changes would you recommend for improving the grant process?
- What could be done to streamline the process?
- Where are there gaps and overlaps in the funding of water use efficiency and other resource management projects?
- What types of assistance would be beneficial?
- Do you have a pet project that needs funding, but does not fit into any of the existing grant programs?
- Where do you go for information about funding availability?

*Recurring themes in this section were the need to simplify the grant process; speed up the selection and execute contracts; provide technical assistance for economic analyses and reporting project results; and clarify the goals and objectives of the programs. Several respondents observed that the Federal grants processes seemed to be easier to navigate and more accessible than the State funding processes.*

Following is a sampling of the comments received reflecting the various experiences and opinions of the participants.

- The process needs to be simple - no complex calculations, spread sheets etc. One-step with a quick turn around. One grant for which we applied took so long for the decision that some of the projects were completed without the funding. Some agencies will not even apply for some of the grants as they do not have staff with enough time or expertise to complete the application.

- Consider developing eligibility lists for grants with multiple funding cycles that allow qualifying organizations to submit the needed information once.
- Over the past few years we have observed that the time between project selection and kickoff of work has increased tremendously. This is largely due to bureaucratic delays in contracting and seemingly endless legal review. As a small contractor, this has caused many problems in our organization.
- The State of California grant requirements are becoming so onerous that it is almost not worth the money anymore. The Reclamation process is more streamlined and thus easier for applicants, and Reclamation is also more responsive and flexible during the contract negotiation stage.
- Make the process less political. It sometimes appears that receipt of a grant is more dependent upon political influence than it does on need and quality of project or application.
- We need direct help from the grantor during the application process (indeed - at every step) so we do not waste our time or theirs with a project that does not meet their true needs, agenda, or some complex calculations.
- Technical assistance with the economic analysis would be helpful. Technical assistance on the follow-up reporting end of implementing grant requirements would really be helpful. Getting the money is only one step: keeping up on reporting requirements and final reporting can be overwhelming.
- If a grant or plan (IRWM) is so long and complex that you need a consultant to do the work, then something is seriously flawed.
- Those agencies that have sacrificed and invested heavily in conservation with their own money are often 'punished' when we apply for grants as the remaining conservation work that we have to be do is relatively expensive. This makes us less competitive compared to agencies that have done relatively little, even though they had as much or more money than our agency. They are rewarded for their penury by receiving grants as they have done so little on their own that their projects are much more cost-effective.
- Overall, I think Reclamation grant programs are fairly easy to understand. Some of the associated paperwork can be burdensome. Although fully registered at Grants.gov, it is not a user-friendly site and one that I cannot easily explain to coworkers.

# Observations and Recommendations

In summary, this study has presented information about public and private financial assistance opportunities for water use efficiency programs in California; policies that support or conflict with water use efficiency measures among water suppliers, government regulators, and planning agencies; examples of successful Federal, State, regional and local strategies where collaborative interagency and stakeholder efforts have resulted in exemplary water use efficiency programs; and the results of the Water Use Efficiency Funding Survey.

Following are observations based upon this study and recommendations to funding agencies, agencies seeking funds, and other stakeholders to improve the delivery of funds and the attainment of benefits associated with water use efficiency projects.

## Observation 1

Funding opportunities for water use efficiency projects continue to exist in various venues and at fluctuating levels. It appears, however, that more “gaps” than “overlaps” seem to be in the future for funding programs dedicated specifically to water use efficiency. Increasingly, water use efficiency programs must become integral components of the prevailing consensus-driven, integrated regional water resource management programs.

## Recommendation 1

To overcome the challenges associated with the funding and implementation of water use efficiency programs, *grant seeking agencies* will need to increase their efforts to:

- Employ regular searches of the Internet for the availability of funding and other grant-related information;
- Participate in the early stages of new grant program development when selection criteria and eligibility determinations are drafted;
- Seek funding from non-traditional sources such as the energy utilities as documented in the Agricultural Pumping Efficiency Program;
- Leverage funding from multiple sources to achieve multiple benefits, such as the Smart Controller program that improved landscape water use efficiency while reducing water quality problems associated with run-off;

- Form partnerships and participate actively with others in the region to develop mutually beneficial programs, including IRWM program efforts; and
- Finance greater portions of water use efficiency projects through funds generated through conservation oriented rates. Present water use efficiency projects as capital improvement initiatives that may reduce or delay infrastructure and operations and maintenance investments.

(Please see ATTACHMENT D: Helpful Hints for Grant Seekers.)

## **Observation 2**

Federal and State funding agencies face considerable challenges throughout the project selection and implementation processes, particularly in the expeditious review and selection of proposals and the execution of contracts as well as the documentation of water savings associated with local projects. The often confounding challenge is to streamline, simplify and shorten the process, while simultaneously strengthening data collection in terms of cost and benefit analyses at the front end as well the monitoring, verification, evaluation and reporting of results at the back end of the projects.

Acknowledging that funding agencies are often at the mercy of the enabling legislation or bond language that created the funding programs; staff and budget restrictions; the contracting requirements of control agencies such as the California Department of General Services; and their own agency's internal legal, administrative, and executive processes; there are steps that can be taken to ease some of the "pain" associated with the grant application, review, selection and contracting processes while still obtaining the data needed to justify the continuance of funding for water use efficiency projects. Many funding agencies are already moving in this direction, but more can be done.

## **Recommendation 2**

*Funding agencies* can expedite the process and better foster the achievement and documentation of water saving investments in local programs by multiplying their efforts to:

- Fully utilize websites to post availability of grants, accept proposals, send electronic mail notices, announce awards, etc.;
- Route contracts electronically, when possible, through the required approval units within the agency;
- Provide information early on, preferably in the proposal solicitation package, about standard contract language and required documentation needed for contract development and project performance;

- Provide technical assistance regarding economic analyses and data gathering and reporting prior to, during, and after the process providing a clear understanding of expectations;
- Lobby for sufficient staff and budget resources to provide technical assistance and project follow-up as key elements in the development of all funding program allocations;
- Honor the process, following all legal and administrative rules and regulations, while eliminating any unnecessary paper work and data collection;
- Establish a single point of contact within the agency for contractors for the entire project life;
- Adapt to changing conditions: review and revise the process from selection to encumbrance, contract development and execution to management and completion;
- Consider implementation of statewide programs such as rebate programs and marketing campaigns that take advantage of economy of scale and may lessen the need for multiple contracts; and
- Initiate a Water Use Efficiency Funding Fair, with participation of Federal, State, and local funding agencies, similar to the Infrastructure Funding Fairs.

### **Observation 3**

Numerous Federal, State and local ordinances, rules, and regulations impede the implementation of water use efficiency programs. Local land use policies that restrict the use of low water using plants and plumbing codes are often the most troublesome. State and Federal law that supports water use efficiency, such as California's Model Water Efficient Landscape Ordinance, also need periodic review and updating to reflect changing patterns of water use and new technologies.

### **Recommendation 3**

To realize shared visions of a water efficient future among water suppliers, planners, regulatory agencies, regional water management entities, and stakeholders, funding agencies, grant seekers, and all proponents of water use efficiency can play an active role in reviewing existing policies and advocating for changes as needed. There is a need for *all water use efficiency stakeholders* to:

- Become informed about and participate in the processes of local land use planning; implementation of CC&Rs; and other local and regional policies and regulations that affect water use efficiency;

- Form alliances to investigate special issues and tackle regional challenges in a timely and coordinated fashion;
- Keep in touch with developments at the State and Federal level and contribute toward the implementation of new programs such as EPA's WaterSense program; and
- Seek the participation of planners, regulatory agencies, regional water management entities, and other stakeholders in the development of water use efficiency projects.

## **Observation 4**

There are actions that can be taken by all parties involved with water use efficiency that will contribute toward the betterment of these programs. The actions of a group of dedicated people can multiply the positive impact on these important programs. One individual with a passion for their work can also make a difference. Motivation and commitment, persistence and good humor, these and other positive personal attributes compose the human element that can make or break a program.

## **Recommendation 4**

For *all water use efficiency stakeholders*, be prepared to:

- Track and participate in the development of Federal and State legislation regulation, and agency budgets regarding water use efficiency;
- Be a proponent of water use efficiency in general and conservation-oriented rate structures;
- Promote standards for water efficient products and programs;
- Promote statewide public education, marketing, training and certification programs for water use efficiency; and
- Communicate, coordinate, consolidate, and cooperate.



# Attachment A: Water Use Efficiency Funding Programs

Grant Program	Funding Entity	Website Address	Contact Person	Electronic mail	Telephone	Eligible Entities	Eligible Projects	Funding- Total	Funding- per project	Cost share	Key Dates
<b>FEDERAL</b>											
Water 2025 Challenge Grant Program	Reclamation	<a href="http://www.grants.gov">www.grants.gov</a>	Avra Morgan	<a href="mailto:Water2025RFP@do.usbr.gov">Water2025RFP@do.usbr.gov</a>	303.445.2906	Irrigation and/or water districts, State agencies with water management authority, other water deliverers in western US	Physical improvement projects that will conserve water and improve water management	Varies by year based upon annual appropriation approved by Congress	\$300,000	50%	
Water Conservation Field Services Program	Reclamation Area Offices	<a href="http://www.grants.gov">www.grants.gov</a> or go to Reclamation's website for Area Office info: <a href="http://www.usbr.gov/main/regions.html">http://www.usbr.gov/main/regions.html</a>	Area Office staff			Water purveyors that receive water from Reclamation, tribes, universities, states, local governments and non-profit organizations	Water management, conservation planning, implement., demonstration of innovative technologies, public education, research	Varies by year based upon annual appropriation approved by Congress	\$100,000	50%	Applications due 2/2/2007 for So. Cal Area Office, 2/14/2007 for Mid Pacific Region
Water Reclamation and Reuse (Title XVI) Program	Reclamation Area Offices	<a href="http://www.grants.gov">www.grants.gov</a> or go to Reclamation's website for Area Office info: <a href="http://www.usbr.gov/main/regions.html">http://www.usbr.gov/main/regions.html</a> - Please see Title XVI Guidelines	Area Office staff			Agencies designated by Congress	Water reclamation and reuse: feasibility and construction projects	Varies by year based upon annual appropriation approved by Congress	Varies	Varies	
Environmental Quality Incentives Program (EQIP)	USDA Natural Resources Conservation Service	<a href="http://www.ca.nrcs.usda.gov">www.ca.nrcs.usda.gov</a>	Alan Forkey	<a href="mailto:Alan.Forkey@ca.usda.gov">Alan.Forkey@ca.usda.gov</a>	530.792.5653	Farmers and ranchers on eligible land	Address natural resource concerns	Varies by year based upon annual appropriation approved by Congress	Varies	50%	12/1/2006 for 2007 round
Nonpoint Source Water Pollution Control	US EPA	<a href="http://www.grants.gov">www.grants.gov</a> or <a href="http://epa.gov/region9">epa.gov/region9</a>	Audrey Shileikis	<a href="mailto:shileikis.audrey@epa.gov">shileikis.audrey@epa.gov</a>	415.972.3459	Public & private entities, non-profits, tribes, etc.	Implement State nonpoint source pollution control prog.	Varies by year based upon annual appropriation approved by Congress	\$20,000-300,000	40%	

CALIFORNIA STATE PROGRAMS											
Proposition 50, Chapter 7g: Water Use Efficiency Program	DWR	<a href="http://www.owue.water.ca.gov/finance/index.cfm">www.owue.water.ca.gov/finance/index.cfm</a>	Manucher Alemi	<a href="mailto:malemi@water.ca.gov">malemi@water.ca.gov</a>	916.651.9662	Public water districts, local agencies, tribes, non-profit organizations, universities, State & Federal agencies	Water use efficiency projects that will provide benefits to the Bay-Delta	\$15 million urban, \$20 million agric.	Varies	Varies	Part 1 apps due 12/21/2006
Proposition 50, Chapter 7f: Watershed Program	DWR	<a href="http://www.watershedrestoration.water.ca.gov/watersheds/">www.watershedrestoration.water.ca.gov/watersheds/</a>	Kristyn Miller	<a href="mailto:dplah2o@water.ca.gov">dplah2o@water.ca.gov</a>	916.651.9621	Local agencies, special districts, non-profit agencies, Federal agencies, universities	Watershed assessment, planning, capacity building & implement. of local/regional watershed plans demonstrating direct benefits to the Bay-Delta	Pending	\$50,000-\$400,000	Desired, not required	Next round tentatively scheduled for 1/2007
Proposition 50, Chapter 8: Integrated Regional Water Management Program	DWR/SWRCB	<a href="http://www.swrcb.ca.gov/funding/irwmgp/index.html">www.swrcb.ca.gov/funding/irwmgp/index.html</a>	Tracie Billington	<a href="mailto:tracieb@water.ca.gov">tracieb@water.ca.gov</a>	916.651.9226	Public agencies, non-profit organizations	Projects to protect communities from drought, protect & improve water quality, reduce dependence on imported water	\$380 million	\$50,000 planning, \$25 million implement	25% plan, 10% implement	Summer, 2007, may be merged with Prop 84 funds
Consolidated Grant Program	SWRCB	<a href="http://www.waterboards.ca.gov/funding/cg_fullproposals.html">www.waterboards.ca.gov/funding/cg_fullproposals.html</a>	Erin Ragazzi	<a href="mailto:enragazzi@waterboards.ca.gov">enragazzi@waterboards.ca.gov</a>	916.341.5733	Varies, public agencies and non-profit organizations eligible for most programs	Non-point source pollution control, urban stormwater, integrated watershed management projects	Varies	Varies, \$250,000-\$5 million	20-25%	Clean Beaches applications due 1/31/2007, no new round scheduled for consolidated
Proposition 50, So. Cal. Projs. To reduce demand on the Colorado River	DHS	<a href="http://dhs.ca.gov/ps/dwem/Prop50/default.htm">dhs.ca.gov/ps/dwem/Prop50/default.htm</a>					Projects to meet drinking water standards, reduce Colorado River water use	\$260 million	\$50,000-20 million		Pre-apps due 2/27/2007
Proposition 84	DWR, SWRCB, DHS	<a href="http://www.waterboards.ca.gov/funding/index.html">http://www.waterboards.ca.gov/funding/index.html</a>	Pending		Pending	Pending	Sustainable communities, statewide planning, IRWM, etc.	\$5.4 billion	Pending	Pending	No schedules yet
Agricultural Pumping Efficiency Program	Center for Irrigation Technology	<a href="http://www.pumpefficiency.org">www.pumpefficiency.org</a>	John Weddington	<a href="mailto:jweddington@csufr.esno.edu">jweddington@csufr.esno.edu</a>	800.845.6038	Owners of non-residential electric or natural gas utility account that pumps water for agriculture, landscape, or municipal purposes	Installation and management of highly efficient hardware for pumping plants, irrigation systems, and water distribution systems	\$5 million, 2006-2008	50% of project cost	50%	Continuous app. Submission through 2008

## Attachment B: Websites for Grant Seekers

[www.grants.gov](http://www.grants.gov): 26 Federal agencies that award grants and cooperative agreements are required to post all competitive grant opportunities at this site.

[www.gpoaccess.gov/fr/index.html](http://www.gpoaccess.gov/fr/index.html): Access the Federal Register daily and receive the Federal Register Table of Contents for free via e-mail.

[www.epa.gov/watershedfunding](http://www.epa.gov/watershedfunding): Access to a database of approximately 100 programs offering financial assistance specifically geared towards watershed-related projects, including water use efficiency.

[www.getgrants.ca.gov](http://www.getgrants.ca.gov): Provides a central point to announce the availability of California State grants.

[faast.swrcb.ca.gov/index.html](http://faast.swrcb.ca.gov/index.html): System developed by SWRCB for their set of “Consolidated Grants.” Their FAAST application and notification system allows an interested party to apply for grants as well as sign up to receive e-mail notifications on their whole set of funding programs.

[www.cfcc.ca.gov](http://www.cfcc.ca.gov): Another source of information regarding the availability of State grant funds provided through the California Financing Coordinating Committee.

[www.usbr.gov/lc/region/scao/](http://www.usbr.gov/lc/region/scao/): Reclamation’s Southern California Area Office encourages and facilitates water use efficiency and assists agencies in meeting their demand for limited water resources.

[www.usbr.gov/mp/watershare/](http://www.usbr.gov/mp/watershare/): Reclamation’s Mid-Pacific Region's Water Share website features Water Wise Gardens of California, information about demonstration gardens throughout the State.

[www.owue.water.ca.gov/](http://www.owue.water.ca.gov/): DWR’s Office of Water Use Efficiency and Transfers offers financial and technical assistance to agencies involved in water use efficiency.

[listhost1.water.ca.gov/mailman/listinfo/water\\_news](http://listhost1.water.ca.gov/mailman/listinfo/water_news): DWR provides daily news clips through *California Water News* about water issues throughout the State and includes public notices on the availability of DWR grant programs as well as links to announcements of grant awards.

[www.cuwcc.org](http://www.cuwcc.org): CUWCC offers a wide array of information and services in addition to notices regarding grant availability, including a Virtual Home Tour of the Water Saver Home, product news, publications, and technical resources.

[www.agwatercouncil.org](http://www.agwatercouncil.org): The Agricultural Water Management Council posts notices of grant availability as part of their goal to achieve greater agricultural water management efficiency.

[www.awwa.org/waterwiser/watch](http://www.awwa.org/waterwiser/watch): The American Water Works Association clearinghouse for water conservation offers research results, a calendar of conservation events, links to other water conservation information, and product information.

[www.ecivis.com](http://www.ecivis.com): A popular site for local governments seeking Federal, State and foundation grants. They offer a “Grants Locator” service as well as three levels of training and certification for grant seekers and managers. There is a fee for their services.

## Attachment C: Acronyms

Alliance	Inland Empire Landscaping Alliance
BARWRP	San Francisco Bay Area Regional Water Recycling Program
BMP	Best Management Practice
CBDA	California Bay-Delta Authority
CC&Rs	Codes, Covenants and Restrictions
CEC	California Energy Commission
CIMIS	California Irrigation Management Information System
CIWMB	California Integrated Waste Management Board
CPUC	California Public Utilities Commission
CUWCC	California Urban Water Conservation Council
CVWD	Coachella Valley Water District
DOI	U.S. Department of Interior
DWR	California Department of Water Resources
EPA	U.S. Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
FAAST	Financial Assistance Application Submittal Tool
IEUA	Inland Empire Utility Agency
IRWM	Integrated Regional Water Management (Plan or Program)
LEED	Leadership in Energy and Environmental Design
Model Ordinance	California Model Water Efficient Landscaping Ordinance
MWDOC	Municipal Water District of Orange County
MWDSC	Metropolitan Water District of Southern California
NGC	National Grants Conference
NRCS	Natural Resources Conservation Service
Proposition 50	California's Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002
Proposition 84	California's Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006
Reclamation	Bureau of Reclamation
SCCWRRS	Southern California Comprehensive Water Reclamation and Reuse Study
SNWA	Southern Nevada Water Authority
SWRCB	State Water Resources Control Board
USDA	U.S. Department of Agriculture
UWMP	Urban Water Management Plan
WCFSP	Water Conservation Field Services Program

# Attachment D: Helpful Hints for Grant Seekers

## Make it easy for reviewers to fund your project:

- Know the funding agency, review their website, analyze previously funded projects.
- Know the proposal package: consider the program's basic goals, key words, numbers, and selection criteria.
- Meet or exceed when possible any cost share requirements.
- Identify and recruit partners and other participants and contributors for your project.
- Organize the proposal carefully: make it clear, easy to read and fit the proposal neatly into one of categories offered.
- Offer new twists, with the caveat that the project is still recognizable, quantifiable, and measurable against other projects.
- Use the funding agency's formats and forms whenever possible.
- Employ a catchy title.

## Make it difficult for reviewers to reject your project:

- Deliver the proposal early.
- Respect page limits.
- Double check signatures, numbers, spelling, attachments, paper copies, electronic copies, etc.
- Learn from previous rounds, proposal reviewer comments, and other successful projects.

## Plan ahead:

- Develop an agency/interagency grant seeking strategic plan: list potential projects, establish priorities, cultivate partnerships, share resources (consultant services, etc.) and establish timelines.
- Decide which are the most important projects to pursue for your agency independently and which ones would be better accomplished in partnership with other agencies and stakeholders.
- Gather basic data and be prepared to document standard agency profile, needs and potential benefits of projects.
- Have an 'elevator pitch', 30 seconds or two paragraphs describing your project, including what distinguishes your organization and project, ready at all times.
- Use photos and graphics to visually demonstrate potential and actual project benefits.

## Get to know the people who fund projects:

- Maintain contact with grant administrators: from front line staff to key decision makers, but don't make a nuisance of yourself.

- Know your elected officials: local, State, and Federal, and get them to know you.
- Consider grantors as partners, investors, and people.

Make connections:

- Attend workshops provided by funding agencies to solicit comments on draft proposal solicitation packages and to answer questions regarding final grant application packages.
- Participate and advocate actively for water use efficiency projects in the different venues where there are obvious and not-so-obvious benefits.
- Establish and maintain contact with others in your own organization as well as those in other organizations with similar or related interests.
- Seek 'directed funds' for high priority, innovative projects.

Look for common ground and complementary goals to establish partnerships with other organizations including, but not limited to:

- Cities, counties, special districts
- Park districts
- Planners
- Neighboring water suppliers
- Sanitation districts
- Transportation districts
- Energy utilities
- Regional water quality control board
- Waste management agencies
- Stormwater management agencies
- Business community: developers, landscapers, plumbers, etc.
- Environmental community
- Other community based organizations
- Water users

Expand your view of Water Use Efficiency and Resource Management to include connections with other programs:

- Integrated Regional Water Management Consortia
- Energy conservation
- Watershed management
- Waste management
- Water quality
- Recycled water
- Desalination of brackish water
- Ecosystem restoration
- Stormwater management
- Flood management
- Green building initiatives

- Global climate change initiatives

Establish a good track record:

- Produce and document results and costs.
- Do your share \$-wise.
- Appeal funding decisions judiciously.
- Comply with contract requirements in a timely fashion.
- Be creative, honest, polite, bold, confident, passionate and appreciative.
- Be accountable and trustworthy.
- Be persistent, don't give up, and remember that there is an element of luck involved in grant awards, no matter how good your proposal is.

Google for grants selectively:

- There are 11 million hits for “water conservation grants in California”, 8 million hits for “water use efficiency grants in California.”
- Add your name to e-mail list notices and visit funding agency websites often.

# Attachment E: Funding Agency Survey Results

Grant program development:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Abiding by legislative intent and administrative directives	0% (0)	10% (1)	10% (1)	<b>40% (4)</b>	<b>40% (4)</b>	0% (0)	<b>4.10</b>
Developing new regulations	0% (0)	0% (0)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	20% (2)	<b>4.13</b>
Complying with existing regulations	0% (0)	10% (1)	20% (2)	<b>50% (5)</b>	20% (2)	0% (0)	<b>3.80</b>
Establishing internal agency communication and agreements	0% (0)	20% (2)	10% (1)	<b>60% (6)</b>	10% (1)	0% (0)	<b>3.60</b>
Proposal solicitation package and review process development:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Managing data: proposals, reviews, website, notices	10% (1)	20% (2)	<b>40% (4)</b>	30% (3)	0% (0)	0% (0)	<b>2.90</b>
Records management: maintaining the paper trail	0% (0)	20% (2)	20% (2)	<b>60% (6)</b>	0% (0)	0% (0)	<b>3.40</b>
Including stakeholders in the process	0% (0)	10% (1)	<b>50% (5)</b>	40% (4)	0% (0)	0% (0)	<b>3.30</b>
Developing sequence of activities and timelines	0% (0)	20% (2)	<b>60% (6)</b>	20% (2)	0% (0)	0% (0)	<b>3.00</b>
Establishing priorities and selection criteria	0% (0)	20% (2)	30% (3)	<b>40% (4)</b>	10% (1)	0% (0)	<b>3.40</b>
Gaining management, executive, administrative & legal approvals	0% (0)	0% (0)	10% (1)	<b>60% (6)</b>	30% (3)	0% (0)	<b>4.20</b>

Proposal review:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Recruiting and training qualified reviewers	0% (0)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	20% (2)	0% (0)	<b>3.50</b>
Communicating with reviewers	0% (0)	30% (3)	<b>50% (5)</b>	10% (1)	10% (1)	0% (0)	<b>3.00</b>
Maintaining proposal review rules, confidentiality	0% (0)	20% (2)	<b>50% (5)</b>	20% (2)	10% (1)	0% (0)	<b>3.20</b>
Avoiding reviewers' conflict of interest	0% (0)	10% (1)	<b>60% (6)</b>	30% (3)	0% (0)	0% (0)	<b>3.20</b>

Proposal selection:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Resolving conflict and reaching consensus	0% (0)	10% (1)	20% (2)	<b>70% (7)</b>	0% (0)	0% (0)	<b>3.60</b>
Gaining management, executive, administrative, and legal approval	0% (0)	10% (1)	30% (3)	<b>40% (4)</b>	20% (2)	0% (0)	<b>3.70</b>
Noticing awards, processing appeals	0% (0)	<b>30% (3)</b>	<b>30% (3)</b>	<b>30% (3)</b>	0% (0)	10% (1)	<b>3.00</b>

Contract development and management:								
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average	
Contract negotiations	0% (0)	30% (3)	30% (3)	<b>40% (4)</b>	0% (0)	0% (0)	<b>3.10</b>	
Contracts processing and execution	0% (0)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	20% (2)	0% (0)	<b>3.50</b>	
Contract management: reviewing and preparing reports, site visits, authorizing payments, accountability	0% (0)	30% (3)	20% (2)	<b>50% (5)</b>	0% (0)	0% (0)	<b>3.20</b>	
Tracking projects, verifying results	0% (0)	20% (2)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	0% (0)	<b>3.70</b>	

## General Concerns

### Staff and other resources:

	not concerned	slightly concerned	moderately concerned	very concerned	extremely concerned	N/A	Response Average
Lack of trained staff	10% (1)	0% (0)	<b>60% (6)</b>	20% (2)	10% (1)	0% (0)	<b>3.20</b>
Lack of formal training for staff	10% (1)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	10% (1)	0% (0)	<b>3.10</b>
General lack of staff support, resources, funding	0% (0)	10% (1)	30% (3)	<b>40% (4)</b>	20% (2)	0% (0)	<b>3.70</b>

### Process:

	not concerned	slightly concerned	moderately concerned	very concerned	extremely concerned	N/A	Response Average
Complexity of process	10% (1)	30% (3)	<b>60% (6)</b>	0% (0)	0% (0)	0% (0)	<b>2.50</b>
Inflexibility of process	10% (1)	20% (2)	<b>50% (5)</b>	20% (2)	0% (0)	0% (0)	<b>2.80</b>
Inconsistencies, changes in process	10% (1)	20% (2)	<b>30% (3)</b>	<b>30% (3)</b>	10% (1)	0% (0)	<b>3.10</b>
Time constraints and deadlines	0% (0)	20% (2)	<b>50% (5)</b>	30% (3)	0% (0)	0% (0)	<b>3.10</b>
Lack of public involvement	20% (2)	20% (2)	<b>40% (4)</b>	20% (2)	0% (0)	0% (0)	<b>2.60</b>
Political influences	10% (1)	<b>30% (3)</b>	10% (1)	<b>30% (3)</b>	20% (2)	0% (0)	<b>3.20</b>

### Results:

	not concerned	slightly concerned	moderately concerned	very concerned	extremely concerned	N/A	Response Average
Lack of standardized monitoring and verification procedures	10% (1)	20% (2)	10% (1)	<b>40% (4)</b>	20% (2)	0% (0)	<b>3.40</b>
Lack of standardized performance measures	10% (1)	10% (1)	20% (2)	<b>40% (4)</b>	20% (2)	0% (0)	<b>3.50</b>
Insufficient data collected from contractors	0% (0)	<b>30% (3)</b>	10% (1)	<b>30% (3)</b>	<b>30% (3)</b>	0% (0)	<b>3.60</b>
Dissemination of project results	0% (0)	<b>30% (3)</b>	20% (2)	<b>30% (3)</b>	20% (2)	0% (0)	<b>3.40</b>

# Attachment F: Funding Partners Survey Results

Application phase:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Understanding proposal development and submittal directions	0% (0)	14% (4)	<b>43% (12)</b>	<b>43% (12)</b>	0% (0)	0% (0)	<b>3.29</b>
Understanding program policies and priorities	0% (0)	15% (4)	<b>46% (12)</b>	27% (7)	12% (3)	0% (0)	<b>3.35</b>
Covering cost of preparing application	4% (1)	<b>35% (9)</b>	15% (4)	27% (7)	19% (5)	0% (0)	<b>3.23</b>
Meeting expertise, technical data requirements	0% (0)	15% (4)	23% (6)	<b>50% (13)</b>	12% (3)	0% (0)	<b>3.58</b>
Training for staff	0% (0)	15% (4)	<b>35% (9)</b>	23% (6)	12% (3)	15% (4)	<b>3.36</b>
Hiring and retaining trained staff	0% (0)	8% (2)	20% (5)	<b>48% (12)</b>	12% (3)	12% (3)	<b>3.73</b>
Accessing resources, funding	0% (0)	4% (1)	15% (4)	<b>62% (16)</b>	15% (4)	4% (1)	<b>3.92</b>
Gaining support from management or board for proposed projects	15% (4)	<b>31% (8)</b>	15% (4)	27% (7)	8% (2)	4% (1)	<b>2.80</b>
Completing internal review and approval	4% (1)	27% (7)	<b>31% (8)</b>	27% (7)	4% (1)	8% (2)	<b>3.00</b>
Coping with complexity of grant application and administration process	0% (0)	4% (1)	12% (3)	<b>50% (13)</b>	31% (8)	4% (1)	<b>4.12</b>
Coping with inflexibility of process	0% (0)	11% (3)	22% (6)	<b>41% (11)</b>	22% (6)	4% (1)	<b>3.77</b>
Coping with inconsistencies, changes in process	0% (0)	15% (4)	30% (8)	<b>37% (10)</b>	11% (3)	7% (2)	<b>3.48</b>
Coping with time constraints	0% (0)	0% (0)	30% (8)	<b>33% (9)</b>	<b>33% (9)</b>	4% (1)	<b>4.04</b>

Contract phase:							
	very easy	easy	neither easy nor difficult	somewhat difficult	very difficult	N/A	Response Average
Contract negotiations	0% (0)	16% (4)	<b>52% (13)</b>	16% (4)	12% (3)	4% (1)	<b>3.25</b>
Executing contract within a reasonable time period	0% (0)	15% (4)	27% (7)	19% (5)	<b>38% (10)</b>	0% (0)	<b>3.81</b>
Billing procedures, payment of invoices, reimbursement delays	0% (0)	15% (4)	27% (7)	<b>35% (9)</b>	23% (6)	0% (0)	<b>3.65</b>
Staying within budget	8% (2)	19% (5)	<b>35% (9)</b>	31% (8)	8% (2)	0% (0)	<b>3.12</b>
Staying within project schedule	4% (1)	4% (1)	31% (8)	<b>50% (13)</b>	12% (3)	0% (0)	<b>3.62</b>
Coming up with cost share	8% (2)	19% (5)	27% (7)	<b>46% (12)</b>	0% (0)	0% (0)	<b>3.12</b>
Data collection and reporting requirements	0% (0)	19% (5)	<b>42% (11)</b>	15% (4)	23% (6)	0% (0)	<b>3.42</b>
Quantifying and documenting water savings and other benefits	0% (0)	15% (4)	12% (3)	23% (6)	<b>50% (13)</b>	0% (0)	<b>4.08</b>
Quantifying and documenting costs	0% (0)	<b>31% (8)</b>	<b>31% (8)</b>	23% (6)	15% (4)	0% (0)	<b>3.23</b>
Environmental review components	4% (1)	8% (2)	<b>31% (8)</b>	27% (7)	19% (5)	12% (3)	<b>3.57</b>
Economic analysis requirements	0% (0)	8% (2)	19% (5)	31% (8)	<b>35% (9)</b>	8% (2)	<b>4.00</b>