



SERVICES, RESEARCH, & ACTIVITIES FY2008

Now in its eleventh year, the Water Conservation Alliance of Southern Arizona (Water CASA) continues to provide a means for member water providers to augment their individual conservation programs and to improve the region's overall water conservation efforts. Today, members include Community Water Company of Green Valley, Flowing Wells Irrigation District, Town of Marana Water Department, Metropolitan Water Domestic Improvement District, Town of Oro Valley Water Department, Pima County, Bureau of Reclamation, the Central Arizona Groundwater Replenishment District, and our newest member, the Town of Sahuarita. Water CASA is effectively using economies of scale to provide services to its members and their customers, is actively engaged in applied research to increase effectiveness of water conservation programs, and provides a strong voice on regional and state water resource management issues.

The Water CASA website: www.watercasa.org.

MEMBER SERVICES

WELCOME PACKETS (1997 - ongoing) Water CASA continues to provide its members with a variety of brochures and information pieces that are distributed within a Welcome Packet for new water customers. Water CASA has developed, and continues to update, the literature in these packets. Water use patterns are being tracked and analyzed to test the effectiveness of the Welcome Packet program.

CONSERVATION DEVICES (1997 - ongoing) Conservation devices are purchased in bulk, and divided among, Water CASA members. A good economy-of-scale example, Water CASA is able to purchase conservation devices at the lowest possible price by bulk ordering. The Bureau of Reclamation supports this program with \$10,000 annually toward the purchase of devices such as showerheads and faucet aerators that are included in Welcome Packets for new customers moving into older homes. Devices are also available to members' water customers on request.

DEMONSTRATION GARDENS (2001 - ongoing) Water CASA has a long-term goal to develop public, low-water-using demonstration gardens in the service area of each member. Installation of a garden for Metro Water has already occurred in two phases: first, a workshop to show proper installation and management of irrigation systems for xeric gardens and then a similar event to demonstrate appropriate planting,

establishment, and pruning of low-water-using plant materials. Flowing Wells Irrigation District has also installed a desert garden at their well site at a busy corner on Wetmore Rd.

INDIVIDUAL MEMBER SERVICES (1997 - ongoing) Water CASA assists each member with development of Best Management Practices in negotiation with ADWR and provides auditing services through our partnership with the UA Cooperative Extension Low4 Program. Additionally, Water CASA answers individual member requests for water and conservation information.

PUBLIC POLICY ADVOCACY

NATIONAL TESTIMONY TO IMPROVE WATER-USE EFFICIENCY AND CONSERVATION (2007) In October, Water Casa Director, Val Little, testified before the House Subcommittee on Energy and Environment on Research to Improve Water-Use Efficiency and Conservation. She shared input from Water CASA members in her testimony, highlighting the importance for policy makers to understand which areas in the country and which demographic profiles have the highest potential for increased water use efficiency. She also stressed that water conservation strategies need to factor human behavior into any technological solution; education and training for users and consumers should be a priority in any conservation measure. In addition, research efforts should focus on quantifiable water savings, rather than projected or modeled assumptions. Water CASA's input at this hearing will inform future national-level water conservation measures.

DROUGHT PLANNING (2006 - ongoing) In response to the requirements of AZ HB2277, Water CASA worked extensively with all its members, the City of Tucson and Pima County to develop drought management plans that satisfy the requirements of that legislation. We placed a high premium on this regional effort, recognizing the need for the public to have a clear, consistent message regarding stages and responses to drought from their water providers and governing bodies.

ADVOCACY FOR REVISED CONSERVATION REGULATION (2006 - ongoing) Early in 2006, the Department of Water Resources began a stakeholder process regarding revisions to the regulatory framework in the Third Management Plan. Water CASA has been extensively involved in this process and has provided a strong voice for the interests of our members. We are currently still in the midst of this process and we will continue to be active until the revised regulatory program is through the legislative process.

TAX CREDITS FOR WATER CONSERVATION SYSTEMS (2005 - 2012) In 2005, Water CASA worked with both political parties and both houses of the Arizona State Legislature to develop tax incentives for homebuilders and homeowners to increase the

utilization of residential graywater and harvested rainwater. The legislation was successful and provides a tax credit to those who plumb houses at the time of construction to capture graywater sources, and an additional tax credit for the installation of systems that make use of harvested rainwater and residential graywater. These incentives took effect January 1, 2007, and will be in effect for five years only. Water CASA is actively promoting this tax credit to its member customers and throughout Arizona.

RESEARCH

LOWER FLOWS PROGRAM (2006 - 2008) In August 2006, Water CASA began implementing a two-year Pima County Wastewater-sponsored program to reduce sewer flows and improve water conservation in specific targeted neighborhoods. Three Tucson neighborhoods were chosen for program implementation and a total of 300 residents elected to participate in the LOWER FLOWS Program. Nearly 450 high-water-using toilets were replaced with high-efficiency toilets (HETs) using 1.2 gallons per flush or less; low-flow fixtures were installed in these residences; and a graywater/water harvesting workshop was offered to interested residents in March 2008. Over time, post-program water use data for participating households will be compared to pre-program water use. Pre- and post- numbers will be used to measure water conserved as a result of this comprehensive incentive program.

ECoBA (2002 - 2005) In January 2006, Water CASA published the findings of its most ambitious research initiative to date. With funding from the University of Arizona, Bureau of Reclamation, Arizona Department of Water Resources, and Tucson Water, the ECoBA ([Evaluation of M&I Water Conservation Measures through Actual Water Savings & Cost/Benefit Analysis](#)) project, has been well received. This extensive analysis of actual water savings for a broad range of conservation measures, correlated with the costs to the utilities that implement them, and to the customers who derive benefits from the measure, had not been done for the field of water conservation. The outcomes of this effort is available to any water resource decision-maker, enabling them to increase the amount of water saved per unit of human and fiscal resources expended on water conservation efforts.

RESIDENTIAL GRAYWATER REUSE (1999 - 2002) Early in the formation of Water CASA, we identified residential graywater reuse as having huge conservation potential and chose to research this issue from the perspective of water quality, public health and overall efficiency of water use. Funded by ADWR and ADEQ, Water CASA completed a Residential Graywater Reuse Study in 2000. The Study determined that approximately 13% of single-family residences are making use of one or more sources of their graywater. Health risks associated with actual graywater systems were found to be within acceptable limits. The results of this study facilitated the Arizona Department of Environmental Quality's efforts to simplify the rules for residential graywater reuse and

to create rules based upon performance standards. New rules for residential graywater reuse became effective January 2001. See the [PUBLIC POLICY ADVOCACY](#) section for details of Water CASA efforts in the area of graywater reuse subsequent to these research efforts. Suffice to say that Arizona now has the most progressive graywater rules in the nation and is looked to as the model for other states.

DUAL METERING STUDY (2002 - ongoing) Exterior residential water use as a percent of overall use has never been accurately measured in the Tucson area, and the modeled estimates of exterior water use have proven increasingly inaccurate through time. Additionally, annual landscape water use has not been studied relative to the needs of landscape plants during the establishment, maturation, and climax stages. Water providers, regulators, and planners have repeatedly expressed the need for a study that accurately tracks indoor and outdoor water usage beginning with new construction and continuing for many years. In response to these data needs, Water CASA is in the midst of a 20-year project to install second meters in several single-family subdivisions. We are measuring indoor and outdoor water use in a variety of subdivisions: starter homes, mid-range homes, and high-end custom homes. Meters are already gathering data in 32 starter homes built in central Tucson. The second phase of the study will occur in a high-end development project in the Town of Marana. A third installation is planned for the service area of Metro Water.

WATER ON THE WEB (2003 - ongoing) Water CASA has successfully completed the Water on the Web pilot program, which enables members' customers to access their individual water consumption via the web. Piloted in the service area of the Community Water Company of Green Valley, the important component of this program is the ability to show the customer how their household water use compares to that of their neighbors. Water CASA believes this pilot program creatively and effectively promotes water conservation by showing individual customers whether they are thrifty or overly thirsty in their water usage through seasons, from year to year, and most importantly in comparison to similar households. The Bureau of Reclamation has funded this pilot program.

EDUCATION

CONSERVATION UNPLUGGED (September 2007) Improved opportunities for public and professional water conservation education have come to the forefront of Water CASA's agenda in the past year. In September 2007, Water CASA held a one-day conference, "Conservation Unplugged," in celebration of our ten-year anniversary. Presentations at the event focused on both the policy and practicalities of water conservation in our region.

CONSERVATION SHOWCASE (October 2008) Currently in the works is an upcoming "Water CASA Conservation Showcase" to be highlighted at the Southern Arizona Home Builder's Association's (SAHBA's) fall Home Show. Vendors of emerging technologies,

fixtures, desert-adapted plants, graywater and water harvesting systems, and much more will be on hand to share their products and knowledge with the 30,000 Home Show attendees this October. The Showcase is a great way for Water CASA and its partners to educate residents and local builders about new water saving products, innovations, and practices.

CAGRD HOMEOWNER OUTREACH (2007 – ongoing) In early 2007, the CAGRD and Water CASA developed a program to educate homeowners in CAGRD Member Lands and Member Service Area subdivisions about the CAGRD. As a first step in the project, Water CASA surveyed a sample of CAGRD households to discover how much knowledge member households have regarding the CAGRD and learn how to most effectively offer additional information to them. This research showed that 68% of those surveyed do not know their home is a member of the CAGRD and only 21% know that belonging to the CAGRD results in being assessed a fee on their property taxes each year. Surveyed CAGRD households also identified high interest in learning more about low-water using plants and appropriate irrigation settings as means to reduce their water use, with a preference for receiving information via mail or the internet. As a result of feedback obtained through surveys, Water CASA and the CAGRD are tailoring educational outreach to meet member households' needs and preferences. Most recently, we created conservation messaging for water providers to share information with their CAGRD member households. The messaging will be mailed and will educate customers about the CAGRD with the aim to increase homeowners' water use efficiency, lower their water bills, and help minimize the replenishment obligation of the CAGRD.

GRAYWATER GUIDELINES (2002 - ongoing) The results of Water CASA's Residential Graywater Reuse Study and subsequent change in Arizona' graywater regulations were the catalyst for developing "Graywater Guidelines", a booklet intended for homeowners and the general public. "Graywater Guidelines" presents information on what graywater is and how it can be used safely, as well as shows a variety of system designs, and provides other resources. A grant from the Central Arizona Project enabled printing of the booklet.

The popularity of "Graywater Guidelines" has led to the printing of it in Spanish. Copies of "Guía para la Conservación de las Aguas Grises" are currently available. More recently Water CASA has produced, at the request of the State Engineer, New Mexico's own Graywater Guide.

WORKSHOPS (1998 - ongoing) On an ongoing basis, Water CASA offers workshops on a variety of topics related to low-water-using landscapes and general water use efficiency. Topics include plant selection, irrigation basics, water harvesting and graywater reuse, and pruning techniques. The workshops are held throughout the Tucson area in the service areas of Water CASA members.

STAFF IN-SERVICE (2004 - ongoing) Water CASA has begun a series of training efforts for all staff of member utilities. They are often the most effective tool that the

Utility has to reduce water use by customers. The better they are informed about conservation methods and techniques, the more efficient water use becomes.

Project WET (Water Education for Teachers) Workshops (2000 - ongoing) Water CASA members periodically sponsor Project WET workshops for educators in their service areas. Project WET is an interdisciplinary, supplementary water education program for Arizona educators. Public and private school teachers, 4-H leaders, Boy and Girl Scout leaders, and other groups use Project WET resources and services as part of their curriculum for kindergartners through 12th graders.

COLLABORATION WITH JORDAN (2003 - 2005) Water CASA has an ongoing collaboration with the Center for the Study of the Built Environment, in Amman, Jordan, heading a team of water conservation experts from the University of Arizona. The team provides water conservation and appropriate plant material information to their counterparts in Jordan. The Association for Educational Development, the U.S. Embassy, and the Center for the Study of the Built Environment (CSBE) sponsors these trips to Jordan. In addition, Water CASA has shared the results of its Residential Graywater Reuse Study and has studied Jordan's centuries-old water harvesting structures and techniques as a result of this partnership.

NEWS ARTICLES & PRESS RELEASES (ongoing) Water CASA provides press releases and news articles on its activities and water conservation topics for use by the regional media throughout the year. These items are either used as is by local newspapers, adapted as features by the print media, or are used in Water CASA member newsletters to customers.

AWARDS

Recipient of the **BUREAU OF RECLAMATION COMMISSIONER'S AWARD**. Each year, the commissioner of the Bureau of Reclamation acknowledges exceptional efforts in the field of water conservation with the presentation of five awards for the Bureau's seventeen western states. In 2001, the Bureau of Reclamation presented Water CASA the Commissioner's Water Conservation Award for its water conservation efforts and activities.

Recipient of the first ever **GOVERNOR'S PRIDE AWARD** for Water Conservation. We were lauded for our innovative approaches to water conservation and impressive results in a rather brief period of time. "The program's goal of involving water companies with community members impressed the judges and earned the organization the award." The award committee also commended Water CASA for being instrumental in drafting water conservation ordinances for Pima County, studying graywater reuse in the Tucson area and promoting low-water-using landscapes.