



Conservation CONNECTION



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Study Identifies Water Management Opportunities

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Dr. David Sunding of the Center for Sustainable Resource Development at UC Berkeley

Financial incentives have a large and predictable influence on agricultural water use. This is one of the main conclusions from a multi-year study conducted by the Natural Heritage Institute with funding from Reclamation and assistance from the University of California. During this past spring and summer, Dr. David Sunding, the principal researcher on the project, has been presenting the study's results with the hope that by sharing this information water districts and other organizations can utilize the findings to help shape their water management programs.

The study included several farmer interviews and data collection on the Arvin Edison Water Storage District and Westlands Water District. With this information, Dr. Sunding's team of researchers were able to generate pilot projects that could provide financial incentives to district farmers. One of these projects, WaterLink, is a computer bulletin board that allows Westlands farmers to internally market water to other farmers which would re-allocate available water in the district. WaterLink also includes features such as electronic submissions of water ordering and district specific information, which were developed in response to water user requests. The district is considering incorporating several of the WaterLink's features into the district's current website.

The study also compared water markets and price reforms as incentives for improved water management. Pricing reforms such as tiered or increasing block rate pricing result in farmers restructuring their water use to the point where the price increases to the next tier or block. Allowing farmers to market water to other farmers results in more diverse outcomes. The researchers suggest that markets are probably a better system to encourage improved water management, and conclude that where scarcity of water exists, water markets have worked well and have been readily adopted.

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Articles, ideas, and suggestions are welcome, as are notices of upcoming events, meetings or activities. We reserve the right to edit material and publication is not guaranteed. Please send all material to Shani Lee at Svlee@mp.usbr.gov.



The *Spotlight* is on...



Charlie Pike

Charlie Pike, Regional Water Efficiency Manager for the Regional Water Authority (RWA), is a well recognized person in the water conservation community. As a Department of Water Resources (DWR) employee for 26 years, Mr. Pike gained a thorough understanding of the vital issues and challenges facing the future of water conservation. During his career at DWR, 17 years were with the Water Use Efficiency Office. Mr. Pike was key in developing several water use efficiency programs, including the Conservation Coordinator's Training, for which he was a developer and an instructor. The exposure and experience Mr. Pike has acquired over the years has laid the necessary foundation for him to assist the RWA in their water efficiency efforts.

The RWA, located in Sacramento, is a California joint powers authority that represents the interests of nearly 20 water providers in the greater Sacramento area. Formed in 2001, the RWA's mission is to "help its members protect and enhance the reliability, availability, affordability and quality of water resources." After only a year of existence, the RWA successfully implemented several regional water supply and water efficiency programs and services. The RWA's water efficiency program is designed to help local water purveyors implement best management practices on a regional basis and develop outside funding partnerships. After it's first successful year, the RWA continues to set future goals.

As the new Regional Water Efficiency Manager, Mr. Pike will aid the RWA in reaching it's water efficiency goals by implementing several outreach programs. Aside from the strong relationship the RWA has developed with area water users, Mr. Pike has been instrumental in developing several highly informative, yet fascinating education programs for the Sacramento area. From the water and energy messages that aired on 18 major AM and FM public radio stations to the *Sacramento Bee's* "Be Water Wise" contest for grades K-8, Mr. Pike's involvement has been beneficial to the entire community. Mr. Pike's creative juices don't stop flowing there. A proposal is in the works with the Sacramento Theatre Company, which would implement a multi-part skit program performed by professional actors with a focus on storm-water pollution and various other water issues. Mr. Pike eagerly anticipates the implementation of these programs.

Although Mr. Pike has a busy schedule with the RWA, he makes time to spend with his wife, to whom he has been married for 24 years, and their two sons. Mr. Pike is the proud father of Christopher, a recent graduate of Boston University and Russell, a junior at Oregon State University. Mr. Pike's sons share many of his interests, which include paddling, hiking, snow skiing, and photography.

Finally, Mr. Pike found time to write "*Paddling Northern California*," which was published in 2001 and it is now available at your local bookstore. The book describes over 65 of the region's best whitewater, flatwater, and ocean paddling trips and contains detailed maps.

Even though Mr. Pike has a full schedule, he insists that this is one of the most fulfilling positions of his life because he is now able to "practice what I preach while implementing water use efficiency programs on a local and statewide level."

You can reach Charlie Pike at 916-967-7692 or at cpike@rwah2o.org.

The San Francisco Bay-Delta Model



View of central San Francisco Bay

The San Francisco Bay-Delta Model (Model) sits on the North Bay shore in the city of Sausalito, California. Constructed in 1957 by the U.S. Army Corps of Engineers, the Model was used as a scientific research tool from 1958-2000 in order to test the impact proposed changes had on the Bay and related waterways.

Because the San Francisco Bay and Sacramento - San Joaquin Delta is a complex estuarine system, the Model has provided data to increase decision-makers knowledge on planned water projects. The Model was used to simulate currents, tidal action, sediment movement, and the mixing of fresh and salt water. Pollution, salt-water intrusion, and barrier studies

were a few of the important research projects that have been undertaken at the Model. The research department was closed in 2000, but the Model continues to operate as a public education center.

The mission of the Model has moved away from scientific research and more toward interpretation and education. The Visitor Center provides public programs that focus on water policy and environmental issues that are relevant to the San Francisco Bay and San Joaquin Delta regions. The Model also offers a unique and exciting opportunity for students to learn about the geography, topography, ecology, and the human and natural history of the San Francisco Bay-Delta. The dynamic nature of the Model offers exciting knowledge for all ages and if you are in the Sausalito area, please stop by and visit.



"Keeping It Clean" Exhibit

For more information, you can contact the San Francisco Bay Model Visitor Center at the following address: 2100 Bridgeway, Sausalito, CA 94965-1764 or by phone at 415- 332-3870 (recorded message) , 415- 332-3871 (office) or log onto the homepage at: <http://www.spn.usace.army.mil/bmvc/>.



Hot Tip....

Using a layer of mulch around plants reduces evaporation and promotes plant growth. Water retaining basins also allow water to be concentrated around the plants.

Proposal for CALFED Urban Water Certification

Certification Framework: Compliance Requirements

Retailers	< 3,000 connections	- None
	3,000 to 20,000 connections	- BMP report every 2 years
	> 20,000 connections	- BMP report every 2 years - MOU Compliance Review every 4 years
Wholesalers	< 3,000 AF/yr deliv.	- None
	> 3,000 AF/yr deliv.	- BMP report every 2 years - MOU Compliance Review every 4 years

- Direct/indirect connection to Bay-Delta only
- Water supplier refers to discrete service area
- Evaluate program after 8 years

The CALFED Water Use Efficiency Program is developing a certification program for urban water suppliers. This is an outcome of the CALFED Record of Decision which stated that "...CALFED Agencies will implement a process for certification of water suppliers' compliance with the terms of the CUWCC's MOU." A key element of urban certification is the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU). This is a broadly supported agreement specifying implementation criteria for 14 urban water conservation best management practices.

Water Supplier Participation, Schedule, and Compliance Requirements

The proposed framework lays a broad conceptual approach that could serve as a guide for the development of legislation. Participation in the certification program would be required only of urban retail water suppliers with 3,000 or more connections and urban wholesaler water suppliers with average annual delivers of 3,000 or more acre-feet that are directly or indirectly connected hydrologically to the Bay-Delta.

Retail water suppliers with between 3,000 and 20,000 connections would be responsible only for filing reports on Best Management Practice's (BMP) implementation. Retailers with more than 20,000 connection and wholesalers with more than 3,000 acre-feet annual delivery would be responsible for filing reports and being in compliance with the terms of the MOU. The table above provides summary of the proposed conceptual framework's key elements

Compliance with the MOU may be achieved by 1) implementing applicable BMP's or 2) seeking variance for "at least as effective actions" or 3) cost-effectiveness exemptions. The intent of the framework is to embed and build on the MOU's inherent flexibility.

For more information/update on urban certification, please check the CALFED web site at:

<http://calfed.ca.gov/>.

What Districts are Doing...

The City of Roseville and Water Recycling

Reprinted with permission of the *Roseville Reflection*

As Roseville grows, will there be enough water to serve city homes and businesses? California's water supply is a limited commodity; however, as demand increases, the supply remains constant. That's why Roseville is using recycled water for golf course and landscape irrigation. Recycled water generated by the City's Dry Creek Wastewater Treatment Plant and the future Pleasant Grove Treatment Plant represents an existing source of water that can be used for landscape irrigation and industrial needs.

The City currently delivers recycled water to the Sun City golf course and street corridor landscaping, Woodcreek Golf Club and several city parks. Soon the Diamond Oaks Golf Course and three more City Parks will be irrigated with recycled water. Construction of a recycled water storage tank and booster pump station near Woodcreek Golf Club is underway to

expand the use of recycled water and make it more feasible for the customer use.

Last year the City delivered more than 1,000 acre-feet of recycled water. That's enough water to supply 2,000 households for the entire year. For every gallon of recycled water used for irrigation, a gallon of drinking water is saved. The City plans to deliver 1,400 acre-feet or 456 million gallons of recycled water per year by the end of 2003.

Recycled water represents a source of water that is clean and abundantly available and it's not subject to the unpredictability of Mother Nature. In fact, recycled water is abundantly produced even during drought.

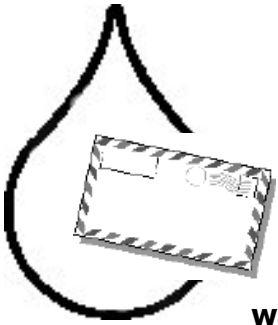
Please call 916-746-1752 if you have questions about Roseville's use of recycled water.

Continued from Front Page

The study also focused on determining what influenced the choice of on-farm irrigation technology in Arvin Edison Water Storage District. The researchers looked at two levels of technology: "traditional" which is less efficient; and "modern" which is more efficient and expensive. The technology a grower will choose depends on how the relative cost and water savings is balanced. If the water price is high, the value of saving water is large. The study also concluded that soil conditions influence irrigation technology. In areas with poor growing conditions such as on steep slopes or on sandy soils, modern technology increases grower profits and can open up new areas to cultivate. In good soil conditions, traditional technology may still be preferable from the farmer's point of view.

The study partners during this project were the Arvin Edison Water Storage District, the Westlands Water District, the San Luis Delta Mendota Water Authority, the California Department of Water Resources, the University of California at Berkeley and Davis, the National Heritage Institute, and the Bureau of Reclamation.

For more information about this study, please log onto www.conserveagwater.org



Conservation Talk

Q: I am thinking of investing in a high-efficiency clothes washer? Are they really as efficient as they claim?

A: The high-efficiency clothes washers on the market today can save a typical household approximately 7,000 gallons of water per year or more, and cut per capita indoor water use between 6% and 9% in single-family homes. Efficient washers also save large amounts of electricity and natural gas, with specific savings depending on a home's use of electricity or gas for its water heater and clothes dryer. Efficient washers carry the ENERGY STAR™ label awarded by the US Environmental Protection Agency and the Department of Energy.

Recently adopted Federal energy efficiency standards for residential clothes washers will require all new washers to operate as efficiently as today's ENERGY STAR models beginning in 2007. Currently about 20 water utilities are offering some form of rebate or voucher for high efficiency washers. SMUD, SDG&E, PG&E, and other energy suppliers also operate washer incentive programs that generally run independently of water agency incentives. The incentives offered by energy and water utilities, together with the possible suspension of the state's 5.75% sales tax, could bring a customer's incentives to \$200 or more and increase the share of efficient new washers to 25% or 30% of total sales.

This section was created for those that have questions pertaining to water conservation practices or water use efficiency matters. If there is anything that you would like to ask our water conservation specialists, please send an e-mail to svlee@mp.usbr.gov or send your questions in writing to the address on the front cover.

The Department of Water Resources is Now Accepting Applications for Water Use Efficiency Grants and Loans

DWR is now accepting applications for grants and loans provided by the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act (Proposition 13).

The Proposition 13 Urban Water Conservation Program funds feasible and cost effective urban projects to improve water use efficiency. During this funding cycle, a total of \$18 million in grants will be available for projects and up to \$5 million will be available for each capital outlay project.

The Proposition 13 Agricultural Water Conservation Program offers loans to finance feasible, cost effective agricultural projects to improve water use efficiency. Up to \$5 million is available for each capital outlay project and with a total of \$9 million being available for projects during this funding cycle.

For application packages, please log onto the DWR website at <http://www.owue.water.ca.gov/finance/> or contact Marsha Prillwitz in the Office of Water Use Efficiency at 916-651-9674.



CVPIA Corner

Technical Assistance at the 36th Annual Mid-Pacific Region Water Users Conference

The Mid-Pacific Region Water Users Conference is an annual conference attended by managers, directors, operation and maintenance personnel, consultants, and government agency representatives from districts served by the Bureau of Reclamation facilities in California, Nevada, and Oregon. This year's conference will be held at the Radisson Hotel in Fresno, California, January 22-24, 2003.

This year, the Bureau of Reclamation's Mid-Pacific Regional Water Conservation Office will be available to provide Annual Update assistance to water users and information about the Water Conservation Field Services Program. If you wish to take advantage of this assistance, please bring the appropriate materials. For more information about the Annual Update process please contact Jerry Townsend at 916-978-5223.

For more information about the 36th Annual Mid-Pacific Region Water Users Conference, please call 916-448-1638.

Contact Us...

USBR WATER CONSERVATION STAFF 2002



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Calendar Of Events

<p>URBAN CONSERVATION COORDINATOR LEVEL 1 CERTIFICATION TRAINING WORKSHOPS October 29, 2002 – October 30, 2002 Pasadena Water and Power, Pasadena, CA For more info, call 916-552-5885 Or log onto: www.cuwcc.org Pre-registration is required</p>	<p>2002 GROWER IRRIGATION SEMINAR SERIES: AGRICULTURAL IRRIGATION SYSTEM MONITORING AND CONTROL November 14 • 2002 Southern California Edison AgTAC, Tulare, California For more info, call: 559-278-5752 Or log onto: www.cati.csufresno.edu/cit Pre-registration is required: (800) 772-4822 ALL 2002 GROWER IRRIGATION SEMINARS ARE FREE OF CHARGE</p>
<p>21ST ANNUAL AGRIBUSINESS MANAGEMENT CONFERENCE October 31 • 2002 Radisson Hotel and Conference Center, Fresno, California. For more info, call 559-268-1000 Or log onto: www.cati.csufresno.edu Pre-registration is required</p>	<p>2002 ACWA FALL CONFERENCE "California Water In Changing Times" November 20-22, 2002 Disneyland Resort, Anaheim, California For more info, call: 888-666-2292 Or log onto: www.acwanet.com</p>
<p>INTEGRATED LANDSCAPE TRAINING FOR HOMEOWNERS November 2 & 23, 2002 & December 7, 2002 South Natomas Community Center, Sacramento, California Sponsored by Regional Water Authority For more info call, 916-967-7692</p>	<p>CUWCC PLENARY SESSION December 11, 2002 LA Dept. of Water and Power, Los Angeles For more info, call 916-552-5885 Or log onto: www.cuwcc.org</p>



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