

2002 Farm Bill Has Options for AZ

The 2002 farm bill provides a potential new funding source through its land retirement programs to support environmental and water conservation efforts in Arizona. Although Arizona traditionally has not gained much from these programs, recent developments could place the state in a more favorable funding position. This could be a timely opportunity since the new bill provides increased funding for land retirement programs.

The U.S. Department of Agriculture has supported land retirement programs since the 1930s. The programs' original intent was to manage supply, support prices and control soil erosion. Another strategy was to require farmers who received price support payments to take a certain percentage of their acreage out of production. Qualification for payment depended upon what crops a farmer grew.

In the mid-80s, a Conservation Reserve Program was established to take environmental advantage of idled agricultural land. Under the CRP, farmers receive annual per-acre rental payments from USDA in exchange for idling highly erodible or other environmentally sensitive cropland from production for 10-15 years. Participation is based on a com-

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The effects of the ongoing drought dominate state water affairs, with officials hoping that El Niño will provide some much needed relief during February and March. Above is Horseshoe Dam, the upper most structure on the Verde River, now high and dry. Gone is Horseshoe Lake, with only a remnant of the Verde River now meandering in its old stream channel. Despite what the photo seems to show, water is still being released downstream of the dam. The outlet works are blocked from view by the hill in the bottom-left of the photo. The photo was taken in July, but the same conditions currently prevail. (Photo: Central Arizona Project, Phil Fortnam)

Q & A With Herb Guenther, New ADWR Director

In announcing Herb Guenther's appointment as director of the Department of Water Resources, Governor Janet Napolitano said, "There has never been a more important time in our history to have a water resources manager who knows his stuff, and Herb does." The following exchange is from of a recent Question-and Answer session between Herb Guenther and Joe Gelt, editor of the Arizona Water Resource newsletter.

JG: What are your priorities as new ADWR director?

HG: The absolute first thing is to restore some reasonableness to the budget. We are cut well beyond where we should be to represent the state on regional water interests. It has always been my thought that ADWR should be a priority agency. And I thought they were — or I thought we were before I got here — and when I took this job I was absolutely amazed that the agency had been cut that severely.

JG: Weren't you aware of the situation as a member of the Arizona Legislature?

HG: I had no idea, even as a member of the appropriations committee, even as someone who works regularly with the ADWR. I think there must have been some miscommunication between the executive branch and the legislative branch. This agency was being supportive of the governor's position and marching along like a

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good soldier. Had the Legislature known we certainly would have changed things because I know many members of both houses feel very strongly that Arizona's water is Arizona's future.

JG: Will you be reaching out to inform people about the situation?

HG: I am already doing that and plan to continue and enhance that effort. This is one of the earliest priorities. I am not a shy person, and this is extremely important to Arizona's future. I have had meetings with chambers of commerce, realtors, environmental groups, water resource agencies, and they are starting to understand the jeopardy we face.

JG: What will be your approach with the Legislature?

HG: I am asking the Legislature to reconsider its position on ADWR, to recognize the cuts we have taken to date and the staff layoffs. They also need to recognize we are not meeting our mandated responsibilities, much less the unmandated responsibilities such as negotiations on Colorado River issues and Indian water rights settlements.

JG: Some say your former status as a lawmaker will limit your dealings with the Legislature since it is illegal for a former legislator to lobby former colleagues for one year after leaving office. Is this going to be a problem?

HG: Some people think so, and others don't. The chief council to the governor says it is not. I am not lobbying for compensation. I am lobbying on behalf of a principle, and that principle is a public body. To do my job, I have to be able to effectively communicate the concerns of this executive agency with the Legislature.

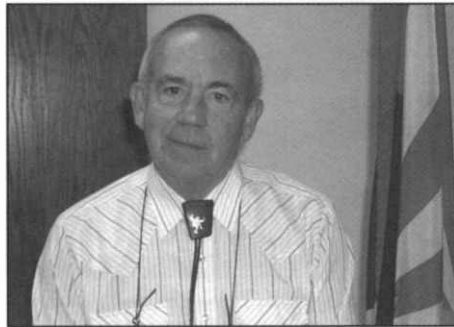
JG: Do you have other financial strategies aside from approaching the Legislature to benefit the agency?

HG: Yes, we are going to try to make the well drilling program self-funding, and the legislation is in place for this session. The fee on the notice of intent would be raised from \$10 to \$150.

JG: What are some major concerns that await action?

HG: First of all, we have done away with most of our enforcement activities as a result of the budget cuts. I hate to keep tying it back to the budget, but that's the way it is. We can't gain voluntary compliance unless we are out there with a threat to enforce.

Areas of concern include enforcing pumping limitations within AMAs and/or other commitments regarding the Third Management Plan. Another area is the inspection of facilities we are charged with permitting as well their oversight, such as recharge facilities. Those are areas in need of review, and we are not doing it. We absolutely must get back to enforcement.



ADWR Director Herb Guenther

JG: What will be done about unmandated commitments such as rural water?

HG: That seemed to have died on the vine, and we are going to kick that off again. We are going to try to restore the Rural Water Initiative funding that provides community and agency grants. I think the future of rural Arizona, its prosperity and its potential for growth, depends upon identifying available and alternative water supplies. We need the baseline data to know where we are and where we need to go. We need to keep our USGS presence in rural areas, to develop the hydrological reports that define the limitations of the existing supplies.

And we also need to involve the AMA cities in these discussions because they obviously have walked this mile before and will be able to offer advice and assistance.

JG: Will any new organizations or advisory groups be formed to address rural water affairs?

HG: No, not formal organizations, but instead I would hope it would be informal groups. AMWUA (Arizona Municipal Water Users Association), along with several cities,

have expressed interest in being involved. They feel somewhat threatened because they have the infrastructure to serve their communities, and rural Arizona has not. They fear rural areas will look to cities to fund their infrastructure requirements, and they want to explore alternatives to that.

JG: Will any action be taken on the recommendations from the Governor's Water Management Commission

HG: I had agreed, as a member of that commission, that whatever we had as an end product that was consensus, I would run the legislation on it. I introduced legislation last year, and it very quickly became apparent that we did not have consensus or that the consensus had changed. I have no plans to bring it up again for legislative action. So right now those recommendations are dead in the water.

JG: Can any of the recommendations be implemented without legislative action?

HG: I think there are probably some things we can glean from the recommendations. I have not had staff look at that lately because the agreement was going to be all-for-one and one-for-all, and I hate to be the one to decide how to split the baby. But, yes, I assume some of those recommendations could be implemented by rule or simply by departmental policy. We will eventually get there when I have the time to sit down with the commission staff to discuss those issues.

JG: What will you be doing about drought planning?

HG: The governor plans to reinstitute the drought task force. With ADWR as the chair, we will try to expedite the review process. We will utilize agencies that were members of the task force and include additional agencies such as Homeland Security, the Arizona Indian communities and the Legislature.

We are reinstating the process, but it is going to have a different emphasis and probably a longer term planning objective. We will try to do a quick review of potable water supplies in communities that are most threatened and develop a plan to mitigate early drought impact. We will look at all water needs, including those of livestock and

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Water Vapors

“Whiskey’s for drink’n; water’s for discuss’n”

One of most oft encountered water clichés of the all time is “Whiskey’s for drink’ing; water’s for fighting about,” its priority only challenged by the old chestnut, “Water flows up hill to money.” One would hope that in these more civilized times water is drunk with greater frequency than whisky, and that fighting has ceased — or at least has become less physical. Perhaps in these more civilized times water might even be an issue of community interest, with water laws and public policy attracting public concern and scrutiny.

An Arizona Republic poll might lead one to believe that the public has sat up and taken notice of water issues. In the spring, the paper conducted its 2002 election issue poll, to gauge what issues were on the public’s mind as the voting season approached. Of the 601 registered voters polled, 61 percent said they were very concerned about water quality and availability, with another

Los Angeles: Land of Mighty Rivers

“In Europe, cathedrals were often built on rivers; here in L.A. architect Jose Rafael Moneo considers the Hollywood Freeway a modern day river all its own, and with other artists who contributed to the art and landscaping marvels, he has created our newest landmark.” *From official brochure describing L.A.’s newly constructed Cathedral of Our Lady of the Angels.*

31 percent indicating they were somewhat concerned about the issue. Water ranked third, after the well-being of children and crime, on a list of 13 issues.

The poll’s results were intended to identify the season’s hot political issues, presumably to influence those seeking state office to take up the banner of a popular cause. How can water not be part of the

campaign dialogue when the poll showed that it is very much on the public mind?

Water falls by campaign trail

“State Water Woes Barely Surface as Campaign Issue” was the headline on an Oct. 28 Arizona Republic news story. Published four months after the election poll and about a week before the election, the story discussed what must have already been evident to many people. Water did not make much of a campaign splash.

What is to be made of this? Was the public considerably less worked up about water issues than the poll indicated? Were politicians just not responsive to the public interest? Or did water as a political concern just fall by the wayside, nudged aside by other distractions of the campaign season?

The Republic story provides one explanation: “Water experts say drought or rural water projects just aren’t flashy enough to break through the clutter of Indian casinos, the budget crisis or any of the other ‘sound-bite’ issues that propel campaigns.”

At some level, however, it would seem that the public does indeed have water on its mind, at least the importance of the issue is recognized. Yet, it might not be a seasoned and entrenched interest, one that would insist on political accountability. Clearly more needs to be done to educate and inform the public about water issues to ensure wise personal and political decisions.

WRRC offers water education

The Water Resources Research Center is in the business of providing water educa-



Gao Chaoqun recently visited the University of Arizona’s Water Resources Research Center as part of his visit to this country to learn about the economic and political issues related to U.S. water management. Gao Chaoqun is an assistant professor in the Institute of Economics, Chinese Academy of Social Science in Beijing. He is a participant in the International Visitor Program sponsored by the U.S. Department of State and was hosted by the Tucson Council for International Visitors. (Photo: Joe Gelt)

tion and outreach to the people of Arizona. WRRC outreach program includes various activities such as this newsletter and other publications, workshops and conferences.

Work is now underway for a May 1-2 conference titled, “Local Approaches to Resolving Water Resource Issues: What’s Working, What Hasn’t Worked, and Building on Existing Efforts.” See Announcements, page 10 for additional details on the upcoming conference.



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News Briefs

AZ Feels Ripple Effect of California's Water Saving Rules

California's consideration of adopting statewide water use standards for washing machines may be a good water conservation deed, but it may be a deed with unwanted consequences to neighboring states. Manufacturers of non-compliance machines may attempt to dump their products on growth market areas of nearby states.

"And guess what. That's us," says Tom Babcock, Phoenix Water Conservation Coordinator. He fears the effect that such a California decision will have on Arizona's water conservation efforts.

Babcock's concern arises from experience with a previous California water saving strategy. California was in the vanguard in regulating flush standards for toilets, first adopting a 3.5 gallons-per-flush standard, then in about 1990 a 1.6 GPF. California was the first state to set these standards.

Manufacturers initially resisted the new standards since their enforcement would require that toilet makers reengineer their product to meet the stricter standards.

Babcock says, "Lots of manufactures got caught flatfooted because they ended up with products in warehouses that could not be sold in California which is a huge market area. As a result they transshipped their products to the closest growth markets which were Southern Nevada and Arizona."

When the 1.6 GPF toilets became law in California a large stock of 3.5 GPF toilets came on the Arizona market at very low prices.

Babcock says, "We were pushing for the 1.6 standard in Arizona. But builders would say they could buy a 3.5 GPF for \$30 so why pay \$100 for a 1.6 GPF?"

Babcock says his concern is that California will continue to officially adopt appliances as they become more water efficient, with the result that manufactures are going to end up with large inventories they can't sell in the state and will move them for sale in Arizona.

The solution is either to get each state or the federal government to adopt uniform standards for water-using appliances such as washing machines.

Babcock says, "We did the state-by-state approach with toilets with mixed results. States might adopt a standard but it is almost impossible for the state to enforce it. Someone can always import a product from another state and install it."

He says the preferred solution to the problem of non-compliance products is to have the federal government adopt uniform standards. Then the importation and interstate transit of the product can be controlled.

Water Management is Issue as AZ Rural Population Grows

In what is a demographic development with water resource implications, the U.S. Census Bureau reported that Arizona's rural population has greatly increased during the



Wickenburg street scene in rural Arizona. (Photo: J. Brooks)

past year. This further fuels the ongoing debate about the state's need to encourage water management in rural areas. The bureau reports that since the April 2000 census Arizona has grown by more than 325,000 people. Areas of fastest growth include, not surprisingly, Maricopa County, but also three rural counties, Santa Cruz, Pinal and Yavapai counties. The bureau reports that all these areas are growing at about the same rate, about 3 percent.

Officials report that much of the growth in Yavapai County is due to an in-

flux of retirees. Pinal County's population is increasing from population overflow from Maricopa and Pima counties.

In Arizona, urban water affairs have been an official priority, and many observers believe that rural water issues are due, if not overdue, for some attention. In response, the Arizona Department of Water Resources has initiated a Rural Water Resources Study program that, among other objectives, will research the availability of water resources in rural areas. (See page 9 for a discussion of DWR's Rural Water Resources Study program.)

Continued population growth in rural areas of the state is expected.

Awards Available to AZ Water Resource Students

Papers are being accepted for the first annual Central Arizona Project Award for Research, with a \$1000 award to go to a graduate student and a \$500 award to an undergraduate. Submitted papers should focus specifically on water issues affecting Central and Southern Arizona and the Colorado River. Focus areas can include legal, economic, political, environmental or water management issues. Students at any Arizona college or university are eligible. Students should submit a one-page abstract to vcampo@cap-az.com by May 23. For additional information check the CAP web site: <http://www.cap-az.com/> and click "CAP Award" under Public Information.

The Arizona Hydrological Society also is recognizing student achievement by awarding three \$1,500 student scholarships in 2003. The purpose of the awards is to encourage full-time students in hydrology, hydrogeology or any other water resources related fields at any Arizona university to excel in their area of study. Any junior, senior or graduate student who fits this category is qualified to apply for the scholarship. Scholarship applications must be submitted to Dr. Aregai Teclé, Northern Arizona University, School of Forestry, by June 30. Check the Arizona Hydrological Society web site for additional information: www.azhydrosoc.org

AZ Water Utilities Awarded Gold

In winning national awards for competitive excellence, two Arizona public water systems demonstrated that public sector utilities share certain performance criteria with the private sector. The City of Scottsdale Water Resources Department and the Tempe Water Utilities Department won 2002 Gold Awards for Competitive Achievement.

The Association of Metropolitan Water

Agencies offers the annual awards to recognize outstanding examples of competitive initiatives at the nation's largest drinking water systems. In 2002, it provided 16 Gold Awards nationwide.

The Scottsdale water department's award included recognition of its employee-driven improvement program that produced an organizational reengineering that allows the utility to maintain a customer-to-employee ratio of 1475:1. The utility also was noted for the management of its award-winning \$200-million Scottsdale Water

Campus, a state-of-the-art water and wastewater treatment complex.

Tempe's achievements included improving efficiency and competitiveness, with the result that high levels of service delivery were maintained while costs were contained. Also the utility established and maintained the lowest water and wastewater rates in the Phoenix area during the last three years. During the same period, staff was reduced more than nine percent by attrition and overall savings in excess of \$1 million were achieved for each of the past four years.

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wildlife. Lastly we will build a long-term drought plan involving shared resources, both federal and state, and possibly identify different thresholds for the declaration of a state emergency and federal disaster.

JG: Will there be any changes in the way the Groundwater Management Act is administered?

HG: Obviously the whole purpose of the GMA is to achieve safe yield in designated groundwater basins. We still have to pursue that. That does not mean we will not make changes as we go along because there is nothing sacred about the act except its goals, and I think those are secure. If there are changes that would make the act more functional or its safe-yield goal easier to achieve, we certainly would not hesitate to make those changes, with the input of the affected stakeholders.

JG: A change in administering the GMA may come as the result of an ongoing court challenge to the gallons per capita per day standard. Do you have any plans about options to adopt if the appeals court agrees with a lower court's decision to vacate and set aside the GPCD standard?

HG: No I don't, but I assure you there is not a problem this agency cannot resolve, in a compatible manner with other interested stakeholders. That has always been a belief of mine. We will work toward that end, solving problems in a way mutually beneficial to both the regulated community as well as to the regulating agency. If we need to revisit GPCD, we will revisit it. If it needs to be changed, we can change it.

JG: What Colorado River issues are on your agenda?

HG: In 1990, Arizona started negotiations to get California within its 4.4 million acre-foot allotment. Some very capable staff members of this agency put together both the interim surplus criteria as well as the foundation for the quantitative settlement agreement. We hope this good hard work and expertise will not have been wasted. We are still very strongly committed — call it tough love, or call it whatever you want — to California limiting its Colorado River use to its entitlement. We will help them achieve that goal in any practical way we can, without throwing the baby out with the bath water.

JG: Are there other interstate water concerns besides those involving California?

HG: Nevada is desperate and is hurt by the suspension of the interim surplus criteria. We either have to get the king's horses and king's men to put that quantitative settlement agreement back together or we are going have to do something else with Nevada.

New Mexico wants to work out an agreement with the Gila River Indian Community. The state of New Mexico has an 18,000 acre-foot CAP allocation and wants to negotiate an exchange agreement with the Gila River Indian Community for waters on the upper Gila River. That is going to be a little challenging because they want to do it within the framework of the Gila River water rights settlement.

JG: Is the Arizona Water Bank solvent, with sufficient water supplies and funding to keep it in business?

HG: Yes, there is sufficient water from the Colorado River to keep us busy this year. And, yes, there is adequate money for banking much of the water to meet present requests, including those from Nevada. But we have complicating factors. The governor's budget recommendation includes taking \$9 million from water banking funds to offset losses to the general fund. That is going to create a shift in priorities. It will not cause an immediate cessation of banking activities but will require a review of funding sources. Obviously, in the long term, this will impact the amount of water we can actually put into the ground.

JG: Are there any U.S./Mexico border issues in need of immediate attention?

HG: There are always issues. We are going to try to understand those issues better and hopefully open up a dialogue with Mexico and the International Boundary and Water Commission on potential solutions or lack thereof in resolving those problems.

JG: Any new initiatives toward that effort?

HG: Not that I have defined as of yet, but this is day 10 on the job. Just give me a chance to get my imagination working. We'll work in consultation with experts within this department and without, and you'll be amazed at what we can do to solve problems. ■■■



Guest View

AZ Takes Heed as California Struggles With Colorado River Woes

Herb Dishlip, assistant director for statewide planning with the Arizona Department of Water Resources, contributed this Guest View. Dishlip represents DWR in Colorado River negotiations.

To most readers of the Arizona Water Resource, water policy issues are an important part of our professional lives. While we may feel the general public should share our love for the water management business, we recognize that, barring an occasional flood or drought, the real world generally takes water for granted. Recent events in California, however, have created a big splash.

The fact that the national news media, including the New York Times and Wall Street Journal, have widely reported on the failure of Southern California's major water agencies to complete critical Colorado River agreements indicates this is not your everyday water issue. The Metropolitan Water District of Southern California boasts that if its service area were a country, its economy would be within the top ten in the world. A water shortage negatively affecting such an important economy could have implications beyond the borders of California, to create regional or even national effects.

The State of Arizona is much more than a casual observer of California's Colorado River planning process. Arizona and California share a long history of disagreement and conflict over Colorado River water issues. Even after years of litigation resulting in the 1964 *Arizona v California* Supreme Court Decree, California was able to extract a priority for her 4.4 million acre-feet relative to Arizona's 2.8 maf as a price of her political support for the Central Arizona Project. Interestingly, it is that compromise, which places the CAP at the greatest risk in times of declared shortage, that has most colored Arizona's position related to California's issues.

For years, Arizona's full use of her Colorado River entitlement was dependent upon completion of the CAP. Even after the CAP aqueduct system was built and capable of deliveries to Tucson, its capacity was not fully used. Realizing that there would be a buildup period for CAP, California continued to utilize water unused by Arizona or Nevada. Even as Arizona moved to take full advantage of its Colorado River water, California was not prepared to cut back to her 4.4 maf normal year entitlement.

Indeed, California did not even have an operating plan for reducing her reliance on about 800,000 acre-feet per year she had been accustomed to using. Per the California water priority scheme, MWD, with junior relative priority, would bear that reduction. While Arizona and the other Colorado River basin states felt legally secure in demanding a reduction in MWD diversions, we also feared a "train wreck" could result if MWD lost half its Colorado River water, without a known replacement supply. Political mischief might ruffle the Law of the River. Our 1968 CAP authorization experience taught us that having the law on our side did not always mean we overcome the huge California Congressional delegation's influence.

Arizona, in conjunction with other basin states, offered to negotiate a plan for river operations to allow California to step down from her over-reliance on the river. In return for the basin states' support, California was to develop a long-range plan to transfer water entitlement from higher priority agricultural water districts to MWD. California took on the challenge and put together a water use plan to conserve agricultural water through canal lining and other on-farm conservation programs. The linchpin to this plan was an agreement known as the Quantification Settlement Agreement or QSA.

While Arizona felt legally secure in demanding a reduction in MWD diversions, we also feared a "train wreck" could result.

With an acceptable plan formulated, Arizona, along with the other concerned states and the U.S. Department of the Interior, agreed to mainstem reservoir operations criteria known as the Interim Surplus Guidelines. These guidelines could allow California some additional water for a period of 15 years. The plan was a house of cards, with a number of agreements, regulatory rulings and environmental compliance actions necessary for the plan to stand. A fully executed QSA by December 31, 2002 would successfully satisfy all these requirements. Failure to meet this deadline would result in a suspension of the Interim Surplus Guidelines and an immediate reduction in California's water order to 4.4 maf, regardless of economic consequences.

The California water agencies were unable to execute the QSA by deadline. Accordingly, Interim Surplus Guidelines benefits were suspended, and California's water orders were immediately reduced to 4.4 maf. MWD's careful contingency planning in developing alternative supplies temporarily avoided the "train wreck," with no Southern California water shortages resulting. MWD, however, will unlikely be able to forestall the impact of the loss of Colorado River resources for more than a few years. California agencies will then likely return to the bargaining table and re-create a plan that can be successful.

Sitting on our side of the river, we can feel comfort that the compromise Arizona helped forge provides protection against California's failure to complete the QSA on time. We would be even more secure, however, if California is successful in putting her plan back in place and the Interim Surplus Guidelines are re-instated. Admittedly, the release of extra water for the 15-year period creates some risk to Arizona. On the other hand, the value associated with the certainty that will result from having a secure municipal water supply for Southern California is incalculable. ■■■



Legislation and Law

Much Ado About the Clean Water Act

The Clean Water Act has recently been getting its share of attention, with a U.S. Supreme Court decision and EPA announcements of new and proposed rules in the news.

Court Upholds CWA Use to Save Wetlands

A recent U.S. Supreme Court 4-to-4 tie vote affirmed that the Clean Water Act can be applicable when a wetland is deep ripped. The Supreme Court action was in response to a California developer's appeal of an appellate court decision that found him in violation of the CWA.

Deep ripping, a method of plowing increasingly used to fill in wetlands, uses long prongs that puncture soil to a depth of about six feet. This pierces the underlying clay layer that retains wetland water and makes the land more suitable for agriculture.

Federal officials claimed the action was in violation of the CWA. The CWA prohibits the "discharge of any pollutant" into U.S. waters. A federal attorney in the case argued that EPA is justified to consider deep ripping as discharging a pollutant into the wetland since the plow's seven-foot tines pull material from the wetland's underlying clay pan to the surface. Since EPA considers the top of the clay pan to be the wetland's vertical boundary, material from the clay pan comes from beyond the wetland boundary and thus can rightly be considered a pollutant.

An opposing attorney argued that Congress did not intend federal agencies to consider that dirt, mud and rocks churned up within a wetland were pollutants. Much of the argument focused on whether a plow can be considered a "point source" and whether material within a waterway can constitute the "addition of a pollutant" if redistributed within the same waterway.

This has been a closely watched case for its potential impacts on the authority of the federal agencies under the Clean Water Act. Conservation groups applauded the ruling but expressed anxiety about the uncertain status of laws governing wetland protection.

EPA Program OK's Water Quality Swapping

The U.S. Environmental Protection Agency announced a new National Water Quality Trading Program based on the premise that market incentives can be more effective than conventional regulations in reducing pollution runoff. The program calls for state and local municipalities to develop and implement water quality trading programs that allow polluters to trade, sell and buy pollution reduction credits.

Water quality trading, touted as a tool for achieving water quality, is a watershed approach that is based on voluntary partnerships at the local level. Trading becomes an option when one source has achieved greater pollutant reductions than required by federal and state regulations. The reductions over and above those required by regulations then become credits that can be used by another source to comply with a permit limit.

For example, a farmer may reduce sediment and nutrient run-

off by switching from conventional tillage to no-till, reducing the use of fertilizer, implementing a manure management plan and planting a buffer strip next to a stream. A municipal wastewater plant would pay the farmer to make these changes and could then use the credits to meet a phosphorus or nitrogen limit in its permit.

According to EPA water quality standards remain the same but the efficiency in implementing the standards increases and costs decrease. Other benefits expected to accrue from the policy include incentives for voluntary pollutant reductions, especially from unregulated sources; early reductions and more cost effective programs for restoring impaired waters; and encouragement of innovative solutions to complex and diverse water quality issues.

The policy has generally attracted broad support, even among some environmental groups. An environmental concern that has arisen, however, is that the policy will likely result in some waterways being traded away for the benefit of others.

In addition to releasing its final policy on water quality trading, EPA also announced support for 11 pilot trading projects including a program on the Lower Colorado River. The intent of the program is to develop a trading framework aimed at reducing high selenium levels in tributaries to the Lower Colorado River.

Rules Clarify Federal Wetland Authority

The Bush administration issued new guidance to clarify the authority of the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers over isolated, non-navigable wetlands. A 2001 U.S. Supreme Court decision raised questions about federal authority to protect such wetlands when it ruled on a case brought by a developer penalized for filling manmade ponds used as habitat by migratory birds.

In response to the recent directive, the EPA and Corps are instructing field staff that permits are not required under the Clean Water Act to impair wetlands located within a single state and not connected to any navigable waterway. Further, field agents are to check with agency headquarters for formal approval to assert jurisdiction over isolated wetlands crossing state borders.

According to the directive, field staff are to maintain jurisdiction over traditional navigable waters, their tributary systems and adjacent wetlands. At the same time, federal permit writers at the local level are cautioned of dubious legal authority for asserting jurisdiction over small streams and other waterways not used for shipping or commerce.

Further, the agencies said migratory birds using an isolated wetland cannot be the sole justification for requiring a federal permit for a pond, swamp or other non-navigable wetlands.

The directive outraged many environmentalists who fear the action will serve to repeal Clean Water Act protections for a large percentage of the nation's waterways. Bush officials claim the guidance, in fact, reaffirms federal authority "over the vast majority of America's wetlands."



Publications & On-Line Resources

Book Says Beware of Possible Hidden Costs of Groundwater Use

Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters, by Robert J. Glennon. Washington, D.C. Island Press, 314 pages. \$25 cloth.

There is no shortage of water problems in need of attention. What is needed is some way to attract notice to these problems, to promote public understanding, concern, even outrage and ultimately a commitment to resolving troublesome water issues.

The book, "Water Follies," is an effort along these lines. Author Robert Glennon focuses on the damaging effects of excessive groundwater pumping in various areas of the country. His would seem to be a formidable task, to capture the attention of a distracted public, already overburdened with messages and information, so that citizens actually take an interest in the workings of an aquifer and realize the perils of overdraft.

The book measures up to the challenge.



Robert Glennon's book, "Water Follies," is subtitled "Groundwater Pumping and the Fate of America's Fresh Waters." Above is a photo of the Santa Cruz River, circa 1890, before excessive groundwater pumping deprived this river segment in Santa Cruz County of its natural flow. What water now flows in the river near Tubac mostly comes from an upstream wastewater treatment plant. (Photo: Arizona State Library, Archives and Public Records, Archives Division, Phoenix, #97-6151)

At the outset, Glennon, the Morris K. Udall Professor of Law and Public Policy at the University of Arizona, lets his readers know that water affairs are not without their inviting incongruities. When he writes in the introduction, "Writing about water use, policy, management, and the law demands both a sense of irony and a sense of humor," the reader knows the volume in hand is not a textbook. That such authority figures as law and public policy are to be approached with irony and humor engages readers, many of whom may already share a suspicion of the vagaries of laws and policies.

The book is made up of various narratives or, if you will, stories, each with a plot of the hazards and follies of careless groundwater pumping. The action takes place in different parts of the country, from Maine to California and points in between, including Arizona's Santa Cruz and San Pedro rivers and Black Mesa.

Much of the dramatic effect of the stories depends on the incongruity between a decided course of action and its consequences. For example, McDonalds wants white, blemish-free french fries

of a uniform length. This means buying potatoes that are irrigated rather than dry-land farmed. To accommodate McDonald's potato preference, Minnesota farmers pump water adjacent to one of Minnesota's better trout streams. So much is willingly warged to accommodate a whimsical preference.

Irony approaches satire when Glennon tells of an incident in Florida in which the perceived solution to a problem is in fact the problem. The adopted solution to the problem of several lakes receding because of an overpumped aquifer was to pump more water from the aquifer to refill the lakes. This example leaves the reader aghast, uncertain whether it demonstrates hitting bottom or whether mismanagement this extreme transcends the usual run of miscalculations, to achieve a heightened, almost mythic status, provoking wonder as much as condemnation.

The narratives serve to emphasize that water problems arise in the course of human affairs, that water follies are ultimately human follies. This might seem an obvious point, but the narratives' range of coverage, including descriptions of local characters and regional details, brings the idea home with greater emphasis.

Further, Glennon lets us know that groundwater overdraft is a problem nationwide. Those of us living in arid and semiarid regions tend to claim ownership of water problems as part of our heritage. Glennon's book provides a service by reminding us that other areas of the country, even those with abundant rainfall, experience some of the same water problems we do, such as groundwater overdraft. (High Country News missed this point when it began its review of "Water Follies" with the head, "A Western water parable.") Knowledge of a shared burden, that we are all in this together, provides grounds for mutual understanding and concerted actions.

That the book has garnered national attention is testimony to more than its literary quality and its instructive narratives. With the widespread occurrence of drought and the increasing demand on the nation's water resources, water is increasingly billed as an important current affair. There is a need therefore for such books as "Water Follies." A book that takes on troublesome water issues with wit and verve, blending journalism and literary nonfiction and providing insightful and informative analysis of public policy, all done in a style to appeal both to the water professional and the non-professional, will likely find a receptive audience.

Excessive groundwater pumping is not the only water follies show in town. Other such water spectacles also are ongoing, whenever human callousness and disregard takes a toll on water resources. These water follies deserve the kind of attention Glennon's book devotes to groundwater pumping. 🏠

New UA Press Books Focus on Water

The University of Arizona Press has recently published several books devoted to Arizona and western water affairs: *The Politics of Western Water* by Stephen C. Sturgeon; *Border Oasis* by Evan R. Ward and *Fuel for Growth* by Douglas E. Kupel. The next issue of the Arizona Water Resource will provide brief reviews of these publications. For additional information about the books check <http://www.uapress.arizona.edu>



Special Projects

New ADWR Project Focuses on Rural Water Issues

Water supplies and drought are prime concerns

Rural water concerns are attracting increased attention in the state, and a new Arizona Department of Water Resources' initiative is one further indication of that growing interest. In undertaking its Rural Water Resources Study, DWR is complementing the activities of other ongoing efforts devoted to rural water interests.

Interest in rural water issues has built up over time, not having gotten the legislative push that projected urban water affairs into the spotlight. In establishing the DWR and Active Management Areas, the 1980 Groundwater Management Act raised urban water concerns to a state priority. The GMA generally did not address rural areas.

Now rural water affairs are getting their due attention for various reasons. Prime among them is the ongoing drought. In exposing the extreme vulnerability of rural areas to the vagaries of climate and their effects on water supplies, drought has served to boost official concern about rural water issues. Rural areas do not have the redundant water supplies available to urban areas.

Also, political factors are contributing to the emerging rural water movement. Although focusing on urban water issues, the Governor's Water Management Commission also acknowledged the water management needs of rural areas. Further, legislative interest is growing, with the governor, Rep. Tom O'Halleran and others taking leadership roles in espousing the rural water cause.

This is background to the RWRS as it undertakes the task of addressing a fundamental issue in Arizona's rural areas. The study will examine the availability of water supplies for future municipal and industrial growth and the ability of communities to withstand the effect of long-term drought. Other issues addressed include identifying conservation activities, impacts of exempt wells and effectiveness of current water management practices. The project involves collecting water-related information from varied sources and compiling a database and report.

RWRS was formally announced at the Arizona Rural Watershed Alliance in Globe last December. Kathy Jacobs' appointment to direct the project represents a personnel shift from generally urban water affairs to rural concerns. Jacobs was formerly the Tucson AMA director.

Jacobs says the project is made up of several phases, with phase one consisting of mailing out questionnaires. Three sets of questionnaires will be sent out, with one set delivered to about 1200 water companies outside AMAs, another set to planning directors of counties and tribes and a third set goes to incorporated jurisdictions, such as cities and town, located outside AMAs.

Jacobs says that with information obtained from the survey, "We will have a much better idea of the types of problems that exist and how consistent the problems and issues are across the state. We will be able to assess the level of drought concern and the types of assistance communities want from the state."

Jacobs adds, "We want to reassure people that the survey infor-

mation is not being collected for regulatory purposes. It is imperative that we get a good response to ensure that our database of issues and concerns is relatively complete. We are anxious for people to fill out the questionnaires."

The key to the success of the project will be gathering as complete information as is possible, to ensure that community concerns are identified and future water supplies determined. Local watershed groups were asked to participate in a related effort to identify and prioritize rural water issues at the Watershed Alliance conference in December. Several state agencies are also collaborating with DWR in developing the database, including the Arizona Department of Environmental Quality and the Arizona Corporation Commission. The Water Infrastructure Finance Authority Board, the Greater Arizona Development Authority and the Department of Commerce also will be asked for input.

Jacobs says the risk and vulnerability of rural communities will be examined to better prioritize the issues. Strategies that have been adopted or are under consideration in individual communities will be shared with other groups if it appears that the strategies may be helpful. In considering possible outcomes, Jacobs says, "We will probably be looking at an array of tools and new information to address the multiple issues across the state. Also, the project will be providing input to Rep. O'Halleran, who is conducting workshops and meetings throughout the state to collect information and boost interest in rural water issues."

Jacobs intends to have a status report completed by June, followed by a period of public comment, then a final report done in the fall. She says, however, that compiling the database is a project unto itself. "I see it as a living, growing thing, a separate but related effort. I am trying to involve as many agencies and jurisdictions in its development as possible. This is becoming a very big-picture, cooperative effort."

The project is intended to complement other rural water activities now underway within the state. For example, work is being coordinated with the Rural Watershed Alliance, an organization made up of representatives of 17 rural watershed groups. Tom Whitmer, Statewide Planning Manager of DWR, provides planning and technical support to these groups through the Rural Watershed Initiative.

Also, Linda Stitzer, another former Tucson AMA director, is participating in addressing issues in the rural parts of the state, including border and environmental issues. She also is coordinator of a study of the Upper San Pedro Basin to determine if statutory criteria have been met to designate the basin as an AMA.

The planned result of these coordinated activities is to come up with possible solutions to the water problems of rural areas. These would lay the groundwork for a possible legislative agenda being coordinated by O'Halleran and to be presented next year. ■



Announcements

AHS Calls for Symposium Abstracts

The Arizona Hydrological Society is soliciting abstracts for papers and posters to be presented at the AHS 16th annual symposium, to be conducted in Mesa, Arizona, Sept. 17 - 20, 2003. The title of this year's the symposium is "Sustainability Issues of Arizona Regional Watersheds." The Annual AHS Symposium is the premier event in the Southwest for professionals in hydrology and water resources science, engineering and public policy. AHS is soliciting project and research descriptions from hydrologists, geologists, engineers, planners, water policy and legal professionals and teachers. Abstracts relating to sustainability must be submitted by March 31. For the address to submit abstracts and for additional information check the AHS web site: www.azhydrosoc.org

RFP: Water Resources Research Act, 104(g)

The U.S. Geological Survey in cooperation with the National Institutes for Water Resources requests proposals for the National Competitive Grants Program (Section 104 g of the Water Resources Research Act), to support research on non-point source pollution, water availability and water use. Researchers at Arizona state universities are eligible to apply and must submit their applications through the University of Arizona's Water Resources Research

Center. Proposals can be for projects of 1 to 3 years in duration and may request up to \$250,000 in federal funds, with successful applicants required to match federal grant funds with non-federal sources. Proposals must be filed on the Internet <http://www.niwr.org/> by Mar. 21. The WRRC then has until Mar. 28 to review proposals and submit them to the National Competitive Grants Program. The RFP is available at <http://water.usgs.gov/wrri/news.html> or <http://niwr.org/NIWR>

This is a highly competitive funding source. Last year, however, James Field of the UA Chemical and Environmental Engineering Department was awarded \$137,448 for a two-year study of agricultural chemicals as a major nonpoint source of arsenic. His proposal was one of eight funded out of 75 submitted nationwide.

Contributors to Water Encyclopedia Sought

People knowledgeable about water are invited to submit information to include in the International Encyclopedia of Water.

The John Wiley & Sons Publishers encyclopedia web site (www.wileywater.com) lists more than 1500 entries, with each entry designated as either assigned or available. Contributors are invited to suggest additional entries. Instructions and information for contributors can be found at the web site. To search for entries within an area of expertise see "Category List".



Mark Calendars for WRRC Water Management Conference, May 1-2

In what promises to be the special water event of the season, the University of Arizona's Water Resources Research Center is sponsoring the conference, "Local Approaches to Resolving Water Resource Issues: What's Working, What Hasn't Worked, and Building on Existing Efforts." The statewide spring conference will be held May 1- 2 in Prescott, Arizona. Current state and regional water management strategies will be assessed, with new and emerging management needs and strategies identified. Speakers and attendees from across the state will be participating to foster a better understanding of the differences as well as the similarities in water resource challenges. Keynote presenters include Jonas Minton, Deputy Director, California Department of Water Resources, and Robert Glennon, University of Arizona Morris K. Udall Professor of Law and author of the widely acclaimed, "Water Follies."



Egret viewed against backdrop of drought stricken Watson Lake near Prescott. (Photo: The Daily Courier/Les Stukenberg)

More information will be forthcoming and will be posted on the WRRC web site (<http://ag.arizona.edu/AZWATER/>) and sent to our conference email list electronically. If you are not among the over 1,000 people on our email list and want to be included or if you do not have access to email but want to receive conference materials via U.S. mail contact: Terry Sprouse, Water Resources Research Center, University of Arizona, 350 N. Campbell, Tucson, AZ, 85721; phone: 520-792-9591, X 13; email: tsprouse@ag.arizona.edu

The spring event is the latest in a series of conferences sponsored by the WRRC. The intent of the series is to provide a forum for various state interests to discuss critical water issues.



Public Policy Review

by Sharon Megdal

To Be or Not to Be a Good Collaborator on Water Issues

Some "Be's" to heed when working with others



I recently spoke at the Verde Watershed Citizens' Groups Conference, which was organized by the Sedona League of Women Voters. About 85 people assembled on a Saturday in January to discuss how they can better coordinate and collaborate to resolve regional watershed issues. This type of effort is of great interest to me, not only in my current position, but as I reflect upon my past experiences, including serving

as executive director of the now-defunct Santa Cruz Valley Water District and serving on the State Transportation Board for six years. As I thought about what might be useful for this talk, I came up with a "Be" list for working collaboratively. This column is based on the comments I made at the conference.

- Be willing to compromise. Compromise is not a bad thing. The word processing thesaurus includes the following synonyms for "compromise:" cooperation, negotiation, concession, conciliation, finding middle ground, and give and take. Compromise is necessary when developing solutions to complex challenges.

- Be consistent and reliable. While positions may be modified and compromises accepted, consistency and reliability are essential when establishing positions. Once a tentative agreement has been reached, don't attempt to further advance your position. In addition, follow through is important to build trust. If you are representing others in a collaborative process and are unsure whether the entity/group will support a particular position, mention this up front.

- Be willing to put effort into forging alliances and partnerships. Along with helping you attract and leverage existing funds, alliances also increase your visibility as a participant/player at many different levels. The Arizona Rural Watershed Alliance, the Southern Arizona Water Users Association, the Water Conservation Alliance of Southern Arizona and the Northern Arizona Municipal Water Users Association are all organizations that have formed over the past several years. They have enabled their members to pursue programs that meet common needs and to articulate positions more forcefully than if articulated by individual members. Looking for efforts to collaborate with others can result in the often sought "win-win" outcomes. Several recharge projects in the Marana area, for example, benefitted from collaborative efforts. Several partnerships were developed, some including a privately held farming operation.

- Be mindful of institutional settings (e.g. the strictures of established laws and regulations) but recognize that it is possible, within reason, to change laws and regulations. It may be painful, time-consuming and sometimes expensive, but change may be necessary. An example of this is the effort to gain authorization for multi-jurisdictional water facilities districts. The need to facilitate the financing of water projects involving more than one water entity has been under

discussion for several years. The legislation introduced as HB2480 reflects a continuing effort at compromise. (See first bullet above!)

- Be patient and persistent. Most solutions to complex problems require considerable effort. Sometimes the "two steps forward, one step back" experience applies. Other times it may seem like you are going in circles. But if the circles are converging, progress is being made! It takes time to develop and implement plans, programs and projects, with the length of time dependent on a number of variables, including the complexity and funding requirements associated with the effort.

- Be careful what you ask for. For example, you might successfully gain legislative approval for a provision you believe will benefit your effort, only to find out later that the statutory provision impedes future progress. I believe this happened with the Santa Cruz Valley Water District. At the request of the district's board, statutory changes were made to the governance and financing structure of the district. These changes later raised concerns about the district's permanent formation and caused sufficient stir that the district was not permanently established. Another example is the Phoenix Active Management Area gaining statutory authority to establish a groundwater replenishment district, with mandatory membership for AMA water providers. The district, if formed, would have levied a property tax. This funding source was considered important to the success of the district, which, in turn, was viewed as important to the success of the region in reaching safe yield. The property tax concerned city councils, whose approval was a prerequisite to district formation. The district was never established.

- Be willing to put up resources, both monetary and in-kind. The scarcity of financial resources affects our ability to resolve physical resource challenges. Putting up resources is a sign of commitment to the effort and can help attract more resources. This is certainly true of the Rural Watershed Program authorized by the Arizona Legislature and many other successful efforts.

- Be inquisitive — ask questions. Some people are hesitant to ask questions, yet questioning can be very productive. The "no question is stupid" rule applies.

- Be a leader. The value of good leadership is well-recognized. Leading sometimes means taking risks by proposing ideas and project concepts that take some time to germinate.

- Be willing to work hard.

This 10-element "Be" list is by no means comprehensive. While many obstacles may exist to arriving at collaborative solutions to local, regional and statewide water challenges, examples of success are many. We can learn from the failures, the bumpy roads followed, and the successes of collaborative efforts. Sharing these experiences will be a significant part of the Water Resources Research Center conference scheduled for May. (See page 10 for information about the WRRC conference.) I hope to see many of you there! ■

Farm bill...continued from page 1

petitive bidding system, with bids ranked according to the environmental benefits to be achieved by retiring farm land and the cost of the rental payments.

The scope of the program expanded beyond mostly controlling erosion to include such activities as creating habitat for migratory bird species or controlling nitrates from entering water bodies. Annual payment rates are based on dryland soil productivity or local dryland rental rates. In Arizona, payments based on dryland rental rates were very low, with the result that few contracts were signed.

For example, in March 2001, there was one CRP contract in Arizona for 33 acres, with a rental payment of \$9 per acre. North Dakota, in comparison, has over 31,000 contracts on over 3 million acres. Clearly the program did not target irrigated agricultural.

A new feature of the 1996 farm bill was the Conservation Reserve Enhancement Program which provided states the opportunity to design, in cooperation with the federal government, their own CRP. CREP functions somewhat like a grants program, with states developing more flexible land retirement programs, which the federal government funds up to 80 percent.

George Frisvold, associate specialist in the University of Arizona's Agricultural and Resource Economics Department, says more and more states are tapping into this source. An exception, however, are states in the arid Southwest. He says, "There is nothing to stop them. It is a matter of setting up a palatable program. For Arizona, it is a possible untapped source of funds." Frisvold believes CREP might provide attractive options to farmers along the San Pedro or Santa Cruz rivers.

In the event that Arizona decides to apply for such funding, California and Oregon have broken ground that may help the state develop an appropriate case. Oregon submitted a CREP that authorized a grower to sign a lease with the state water authority whereby the grower would take irrigated water out of production, with the water then used for instream flow to preserve endangered fish.

USDA approved Oregon's program. Farmers then qualify for payments based on local rental rates for irrigated land.

California also designed a similar program in retiring rice acreage, with the water used to support wetland habitat. Participating farmers qualify for payments of \$165 per acre.

Frisvold says, "So instead of retiring land and only getting the dryland rental rate, a grower now might get irrigated rental rates for retiring land, with the water going into instream flow.

"These programs set the precedent of paying farmers irrigated rates to retire land and use the water for environmental purposes. The contracts with USDA are for 10-15 years."

To apply for CREP funding, the state, along with stakeholders, would develop a proposal to submit to the U.S. Secretary of Agriculture. The document would describe a proposed state plan for using CREP funds.

Since state government submits the proposal it is ensured that the proposed activities comply with state water law. For example, state law would have to consider instream flow a beneficial use of water. Otherwise water right holders might be abandoning their rights by allowing their water to be used for instream flow.

Also there is federal law to consider. For example, what problems would growers encounter in putting the water back in production after the 15-year lease expires? What happens if water used for instream flow creates habitat for an endangered specie? California is presently addressing some of these issues.

Frisvold say, "One of the benefits of CREP is that growers' may be more comfortable with a program administered by USDA than one administered by federal environmental agencies."

In what is a further indication of USDA's ongoing encouragement of conservation, the 2002 farm bill also includes a new surface water and groundwater conservation initiative. Funded through the Environmental Quality Incentive Program, the new program includes cost-sharing payments and incentive payments for producers to implement water conservation activities. ■■■



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