

Addressing Water for Agriculture in the Colorado River Basin

What We Heard from Ag Producers and Ag Water Managers

Researchers at the seven land grant universities of the Colorado River Basin utilized a USDA grant to reach out to Colorado River Basin agricultural producers and water managers through interviews and a survey and GIS mapping to find out:

What are the pressures on agricultural water in your area?

What are you doing about those pressures?

What other ideas do you have for actions that could be taken?

How can land grant universities help?

Farmers across the Colorado River Basin are feeling uncertain about the security of their agricultural water supply and its future—especially where production conditions make it more difficult to raise crops profitably and in areas where proximity to urban areas inflates land and water values. In areas with year round production of high value crops there is less pressure to sell land and water for urban uses and more young people are staying in farming.

Contributions

Ag water users want to safeguard irrigated agriculture and remind the public of the many contributions of irrigated agriculture, which include:

- Secure food supply
- Local and regional economic strength
- Open spaces and wildlife habitat
- Cultural heritage

Pressures

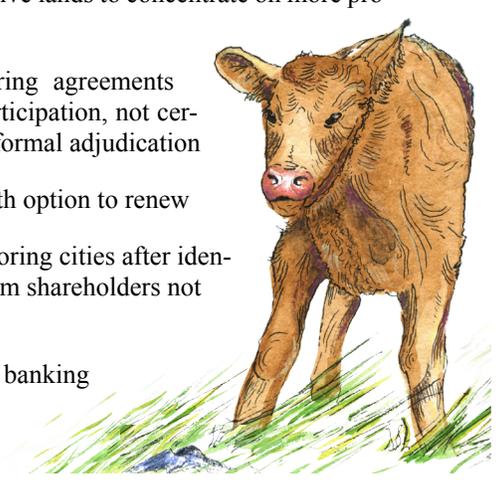
Pressures across the basin include:

- Drought—reliability of Colorado River water supplies
- Urban—expansion onto ag lands, water removed from ag for transfer to cities
- Environmental/Recreational/Regulatory—instream flows, endangered habitat protection, water quality requirements, obstacles to additional storage
- Groundwater availability and groundwater/surface water conflicts
- Tribal rights
- Fragmentation of ag lands— smaller parcels, new owners with limited knowledge of ag water management
- Increasing age of farmers/high capital costs for new generations to enter farming

Actions Being Taken

Responding to pressures is taking many forms, some proactive, some reactive, some even with later regret. Ag producers and water managers are experimenting, trying to take actions that are the most likely to leave future options open. Reported responses include:

- Overcoming obstacles to complete storage projects, in some cases including hydroelectric generation
- Using federal and state funds to make agricultural delivery system improvements for increased yield while reducing salinity in the Colorado River and improving fish habitat
- Taking advantage of proceeds from ag/urban transfer agreements to implement on-farm irrigation efficiency improvements
- Selling water from the least productive lands to concentrate on more productive plots
- Negotiating temporary water sharing agreements during drought, including tribal participation, not certain whether they will last without formal adjudication
- Signing ten year leases to cities, with option to renew
- Entering into contracts with neighboring cities after identifying a pool of water available from shareholders not using their water
- Experimenting with informal water banking arrangements between local users



Looking to the Future

Most of those we interviewed and surveyed expressed at least a cautious optimism for the future. Here are some additional ideas that surfaced as having potential to best deal with pressures:

More Storage--Collaborate with Conservation Groups for Mutual Benefit

Additional storage of water supplies in times of plenty to counter drought is seen as critical. Some believe the only way to overcome regulatory and cost hurdles is to collaborate with conservation groups to build and refurbish properly sized and sited storage that benefits the environment as well as agriculture. "Stored water can be released downstream gradually for irrigation flexibility and fish habitat," said one farmer.

Irrigation and Delivery System Improvements—Counter Disincentives and Spread the Cost to All Beneficiaries

Though the same water is used multiple times in agriculture, most agree there are ways water can be conserved in agriculture. But existing economic and legal frameworks can pose disincentives and need to be addressed. Also, modernizing 100 year old infrastructure is expensive. If water conserved in agriculture is to be used elsewhere, those benefitting should pay for the improvements. Farmers also want to be sure that cities conserve water first before coming to agriculture for their water.

Water Sharing Agreements Tied to Drought

Rotational fallowing and other methods to keep farmers farming while leasing some of their water for transfer to other uses have limited appeal to ag producers and water managers we interviewed and surveyed. More palatable is the idea of mutually beneficial water sharing agreements—where cities use ag water during drought but keep it available to farms in normal years.

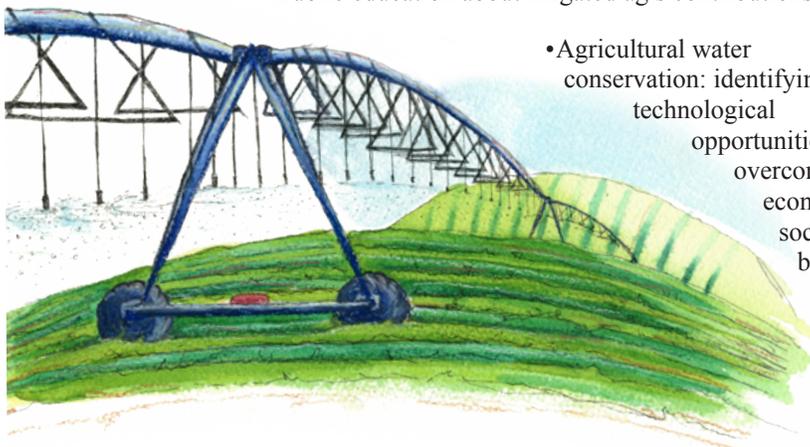
Building Relationships for Mutual Benefit Solutions

Many are beginning to work with other sectors--environmental, tribal, and urban—to find common ground instead of fighting it out in the courts. The time required is frustrating to many, but some say that generating even a small success quickly can build group confidence for more difficult challenges.

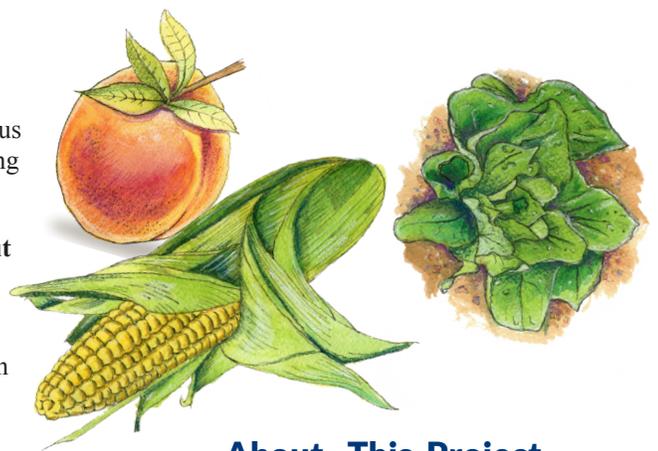
How Can Land Grant Universities Help?

Topics for research, pilot projects, education, and other initiatives that could help ag face pressures on its water include:

- Multiple-stakeholder negotiation tools
- Strategies to reduce barriers to entry for young farmers
- Public education about irrigated ag's contributions and pressures



- Agricultural water conservation: identifying technological opportunities and overcoming legal, economic, sociological barriers (new project at Colorado State University)



About This Project

This project was funded by USDA's National Institute of Food and Agriculture and led by researchers at Colorado State University, in cooperation with water institute directors and faculty at land-grant universities in the seven Colorado River Basin states as follows:

Colorado State University, Colorado Water Institute
Reagan Waskom, Peter Leigh Taylor, MaryLou Smith, Faith Sternlieb, Julie Kallenberger, Troy Bauder, Denis Reich

University of Arizona, Water Resources Research Center
Sharon Megdal

University of California, California Institute for Water Resources
Doug Parker

New Mexico State University, New Mexico Water Resources Research Institute
Sam Fernald

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David Kreamer

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David Stevens

University of Wyoming
Ginger Paige

In addition to the interviews and survey discussed here, a GIS mapping effort was undertaken. Explore the maps and learn more about the interviews, the survey, the university partners, and the new project on ag water conservation here: <http://www.crbagwater.colostate.edu> or contact MaryLou.Smith@colostate.edu.