

Southwest HYDROLOGY

The Resource for Semi-Arid Hydrology

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Rural Water

Southwest Hydrology
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Southwest HYDROLOGY

The Resource for Semi-Arid Hydrology

A bimonthly trade magazine for hydrologists, water managers, and other professionals working with water issues.



From the
Publisher

We're pleased to announce that *Southwest Hydrology* received an Award of Excellence from the 2006 APEX (Award for Publication Excellence) national competition sponsored by the editors of *Writing That Works*.

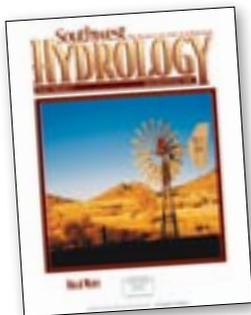


Rural communities across the Southwest face many of the same water-related challenges as their urban counterparts: aging infrastructure, increasing demand due to growth, compliance with ever-more-stringent water quality standards, and providing a hedge against drought. However, meeting these challenges may be more difficult in a rural setting, as rural communities generally have fewer water resources to choose from and groundwater supplies may not readily be supplemented by a surface water source. Rural communities also have fewer financial and human resources to draw from, including water expertise. They must comply with all state and federal regulations, but have relatively little authority themselves. The open space and low population density that makes rural life attractive limits options for central water and sewer systems. Further, these communities suffer from economies of scale: when an urban provider needs to add a new arsenic treatment system, for example, it has many more customers over which to distribute the fixed costs. And the addition of one new subdivision may be insignificant to a metropolis, but a huge shock to a small community water system. Are there any solutions? A few, as presented in this issue's feature articles.

We also bring you our second-ever crossword puzzle in this issue, created by our editor, Mary Black, especially for Southwest Hydrology readers. Let us know how you like it, and check our website for solutions if you get stuck!

Thanks to all the contributors to this issue, and to all our advertisers. Without their support, this publication would not exist.

Betsy Woodhouse, Publisher



Cover photograph: Near Elgin in southern Arizona, by Alex Carpenter.

Correction

The article "Predicting Runoff and Erosion with WEPP" in the July/Aug issue of *Southwest Hydrology* incorrectly stated that the WEPP model is new. In fact, it was developed in 1995.

Southwest Hydrology

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Southwest Hydrology welcomes letters and contributions of news, project summaries, product announcements, and items for The Calendar. Send submissions by mail or email as shown below. Visit www.swhydro.arizona.edu for additional guidelines for submissions.

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Arizona Hydrological Society, 2004 Lifetime Achievement Award Recipient - Gary G. Small

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Rural Water

Water issues in the rural Southwest are growing along with the population, and this issue of *Southwest Hydrology* looks at the unique water challenges faced by rural communities. In the area of water resources, feature articles address funding and leadership challenges in rural communities, the effects of Arizona's legislation on protecting rural water supplies, and movement in New Mexico toward regionalization (or simply banding together). In the water quality arena, the articles cover the impacts of the new arsenic standard on small providers, the contaminants that are showing up in individual and small system wells, and efforts to help farmers in rural California protect their groundwater.

16 Rural Water Systems Work Hard to Deliver Quality Product

Victoire S. Chochezi

Rural water systems must excel at many tasks with only limited resources: conserving and managing water resources, meeting regulatory challenges, upgrading aging infrastructure, and obtaining adequate funding for these efforts.

18 Regionalization of Rural Water Systems in New Mexico

Matthew Holmes

Rural communities in New Mexico are finding strength in numbers by regionalizing their small water systems, creating economies of scale, and jointly hiring water experts. Their challenge is to collaborate yet maintain individual control.

20 Arizona's Adequate Water Supply Program: Is It Adequate for Rural Areas?

Jim Davis

The 1980 Groundwater Management Act requires the state's most populous areas to demonstrate an "assured" water supply. Rural areas, which need only to declare "adequacy," are left largely unprotected; many are now experiencing groundwater overdraft.

21 Sustainable Water Supply Legislation

Shirlee Rhodes

A new Arizona law requires community water systems to develop water conservation and drought preparedness plans. Many rural communities have limited resources for preparing these plans, but they're getting some help from ADWR.

22 Mesa Rats Unite for Community Water

Dawn Kohorst

When the BLM declared Klauer Spring contaminated with bacteria, local Taos, NM-area homesteaders banded together to form a water association and drill a community well, in the process encountering substantial groundwater and the opposition of local ranchers.

24 Impacts of Arsenic Standard on Small Water Systems

Ramesh Narasimhan and Don Conroy

The new national standard for arsenic in drinking water disproportionately impacts small water systems, many of which have not previously operated treatment facilities. What options are suited to small systems, and how much might they cost?

26 Evaluating Water Quality: Individual and Small Systems in Arizona

M.M. Karpiscek, C.P. Gerba, R. Marrero-Ortiz, and K.R. Riley

Non-disinfected small water systems are common in the rural Southwest, and increasing numbers of septic tanks can contribute to groundwater contamination. An ongoing study is assessing the prevalence of bacterial and viral pathogens in small water systems and individual wells.

28 Agriculture and Water Quality on California's Central Coast

Alison Jones, Mary Bianchi, and Larry Harlen

Much of rural California is farmed, and water quality impacts from these operations are a concern. The Central Coast Water Board is helping area farmers develop individual water quality management plans and implement practices to protect water quality.

Publishing **Southwest Hydrology** furthers SAHRA's mission of promoting sustainable management of water resources in semi-arid regions.



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