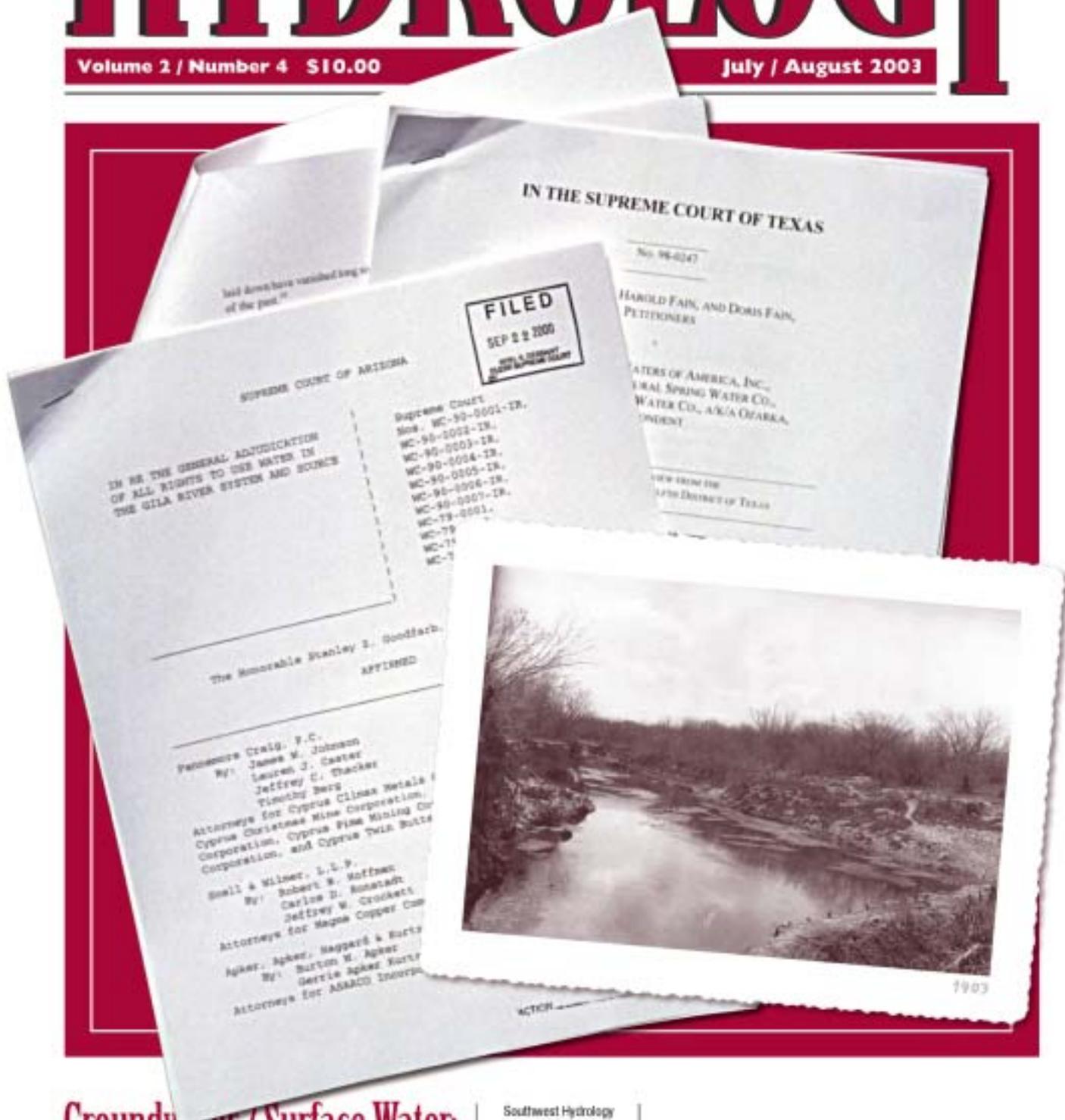


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The Resource for Semi-Arid Hydrology

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Groundwater / Surface Water:
Managed or Litigated?

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The Resource for Semi-Arid Hydrology

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



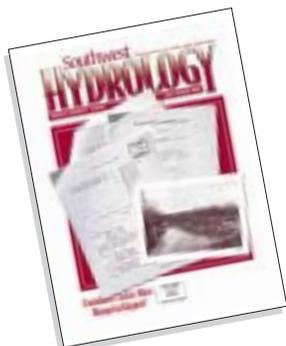
From the Editor

*How do we manage our interconnected surface water and groundwater systems? In most states, as separate systems. It is not difficult to see how this came about: surface water systems can more easily be observed and engineered; thus, regulation of this system developed earlier in history than that of the more complex groundwater systems. Yet the regulations have not kept up with our understanding of "hydrologic reality": The two systems are intertwined, and one cannot be managed effectively without consideration for the other. In recent decades, states have begun, in varying degrees, to recognize that reality, but political and other constraints make it a slow process. **Southwest Hydrology** thanks all the authors who contributed to this interesting and informative feature.*

*We'd once again like to emphasize that **Southwest Hydrology** is intended to be the product of all of you, our readers. We encourage you to contribute ideas and information. Upcoming features will cover remote monitoring techniques and applications, organic wastewater contaminants, the Colorado River Delta, and water as a commodity. If you know someone who could contribute in these areas, please let us know. In addition to the feature topic, we welcome any other news of interest to the hydrologic community – just give us a call or send an email.*

In addition to our feature authors, we'd like to recognize all the contributors to this issue, listed on the opposite page. Furthermore, we extend our deep appreciation to all of our advertisers, who are integral to the continued production of this magazine.

Betsy Woodhouse
Editor



From the Supreme Court of Arizona, the 2000 Gila IV decision (see pages 15, 16). From the Supreme Court of Texas, the 1999 Sipriano v. Great Spring Waters of America, Inc. ruling (see page 24). Photograph: Santa Cruz River near Tucson, 1903, courtesy U.S Geological Survey, Tucson.



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Editorial Contribution

Southwest Hydrology welcomes contributions of news, project summaries, product announcements and items for The Calendar. Send submissions to Southwest Hydrology, PO Box 65690, Tucson, AZ 85728; or email to mail@swhydro.com. Visit www.swhydro.com for additional guidelines for submissions.

Web Site

www.swhydro.com
Sharla Schuller, manager

Southwest Hydrology was founded with generous support from the Bunny Clutch.

Groundwater/ Surface Water: Managed or Litigated?

The “Law of the Biggest Pump” or laws for managed pumping? Water for the “first in time” or water for the streams? Can historic precedent be overruled? And, can “hydrologic reality” be legislated? This issue’s authors take a look at how surface water and groundwater are managed in the states of the Southwest, and more importantly, how historic precedent is slowly giving way to the technical realities of our greatest resource.

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14 Numerical Modeling Aids Evaluation of Pumping Impacts

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16 Interactive Groundwater/Surface Water Regulation in Arizona

Michael J. Pearce, Esq.

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18 Maximizing Conjunctive Use Opportunities in California: What’s the Holdup?

Scott S. Slater, Esq.

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despite professional and political enthusiasm for conjunctive use, institutional constraints continue to inhibit the full realization of its potential as a water management technique.

20 Regulation of Water Versus Hydrologic Reality in New Mexico

Peggy Barroll, Ph.D.

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Richard W. Harris, Esq.

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24 The Recent Evolution of Texas Water Policy and Law

Michael A. Gershon, Esq.

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