A few thoughts on our first five years:

The intention was always clear

We started out with a practical idea: to offer solutions in groundwater science based on our collective expertise — a blend of strong capabilities, project coordination skills, and extensive statewide experience; and to offer these solutions in an honest and straightforward manner — communicating, simply and clearly, with water purveyors, drilling contractors, laboratories, policymakers, regulators, water managers, lawyers and other stakeholders.

From there, we grew a company of professionals with multidisciplinary expertise, and a reputation based on our track record and our way of doing business. And while we take this time to celebrate our first five years, and look forward to the challenges of the next five, our intention hasn’t aged one bit.

Offering comprehensive, hydrogeologic services in five integrated areas:

Groundwater Development — extensive knowledge of and experience with well drilling technology, borehole evaluation and well design, plus an Arizona well driller’s license

Groundwater Modeling — technical abilities combined with interpretive skill acquired through five decades of collective team experience in creating and interpreting models

Hydrogeologic Investigations — focused application of hydrogeological analyses to resolve groundwater issues, address regulatory concerns and water rights issues, or support water resources planning

Environmental Services — resolving problems in a cost effective and timely manner by integrating scientific, technical, analytical and legal capabilities, with proven relationships with regulators

Mining Support — clarifying communications, streamlining permitting, and helping companies develop positive relationships with environmental agencies

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The USGS recently reported that agriculture accounts for 80 percent of the combined groundwater and surface water withdrawals in Arizona, California, Nevada, New Mexico, and Utah. In recognition of this substantial use, we look at trends and technologies in irrigated agriculture—covering about 14 million acres in these five states—to see how farmers are adapting to the pressures of drought, increased competition for water, concern for the environment, and urban growth. Farms provide us with a safe, domestic food supply and can act as a water supply buffer during droughts: points to consider as increasing amounts of farmland are converted to residential subdivisions.

The Southwest Hydrology Advisory Board recently celebrated its one-year anniversary and welcomed new members Mike Alter (Clear Creek Associates), David Bolin (Orange County Water District), Chuck Graf (Arizona Department of Water Quality), Karl Kohlhoff (HDR Engineering), Nabil Shafike (New Mexico Interstate Stream Commission), and Bob Turnbull (Roscoe Moss Company). Many thanks to departing members Peggy Barroll (New Mexico Engineering), Nabil Shafike (New Mexico Interstate Stream Commission), and Bob Turnbull (Arizona Water District), Chuck Graf (Arizona Department of Water Quality), Karl Kohlhoff (HDR Engineering), Nabil Shafike (New Mexico Interstate Stream Commission), and Mario Lluria (Salt River Project). All current members are listed at right.

If you’re looking for job or a new employee, be sure to visit the Jobs page on our Web site. It has become very active in recent months, and employers can directly post announcements of any length for no charge.

Finally, we thank all the contributors to this issue and the advertisers who sponsor it, and urge all of you to send us your news and ideas for future issues.

Betty Woodhouse
Publisher
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- Upper Los Piños water quality trends
- AWRA Dialogue identifies top policy concerns

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- Perchlorate reference dose set
- DOE to move radioactive waste away from CO River
- ADEQ escapes extinction
- Water rights for CO kayakers
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- Sacramento Bee busts Hilmar Cheese
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Arizona NEMO focuses on nonpoint source projects and outreach

Software Review
MODFLOW-2000 and packages, reviewed by Eileen Poeter

The Calendar

Inside This Issue

21st Century Irrigated Agriculture
Agriculture accounts for the greatest single water use in the Southwest. Demands for water by growing urban areas, environmental and recreational interests, and industries, combined with many recent years of drought, create competition for water that is greater than ever. How are farmers coping? New technologies allow improved efficiency in irrigation and for moving water through irrigation districts, but salinity remains a growing problem. Higher-valued crops are being planted to offset increased water and monitoring costs. The ag-to-urban movement impacts not just our food supply, but also our water supply. Our feature articles discuss these and other aspects of agriculture in the 21st century.

Perspectives of a 21st Century Vegetable Farmer
Tom Beda
California’s rural San Luis Obispo County has seen many changes in 40 years. An area farmer describes the increased competition for water and land, technological advances in irrigation, crop changes, new environmental regulations, and how all these factors are impacting the region’s economy and lifestyle.

EBID: Water Management, Measurement, and Drought
Henry Magallanes and Valerie Beversdorf
Elephant Butte Irrigation District in New Mexico has continued to deliver irrigation water while coping with prolonged drought by adopting new technologies and management practices. Innovative methods measure flow and deliveries, with data tracked on the Internet.

Efficiency and Innovation at Westlands Water District
Russ Freeman
The total available water in the Westlands Water District of central California is less than the district requires. Area farmers and Westlands are working to improve water use efficiency by investing in improved irrigation systems and using new technologies to monitor ET and soil moisture.

Is Irrigated Agriculture Sustainable? The Battle to Counteract Salinity
Clinton Williams
Irrigation-dependent farmers in the Southwest face considerable challenges, such as leaching excess salts without depleting water supplies, growing more salt-tolerant crops, and coping with lower-quality water from wastewater facilities and salting water from drought-depleted reservoirs.

Controlled-Environment Agriculture: A Sustainable Option
Gene Giacomelli, Nadia Sabeh, Paula Costa, and Merle Jensen
Crop yields can be dramatically increased when crops are grown in greenhouses with tight controls on air and root temperatures, light, water, plant nutrition, and climate. Is this our farming future?

Solving Water Needs in the Pecos River Basin
R. King and E. Sims
The Pecos River Settlement Agreement calls for the New Mexico Interstate Stream Commission to purchase agricultural land and water rights in order to ensure sufficient flow into Texas. As a result, the market for farmland and water rights in the targeted irrigation districts has shifted.

Water, Growth, and the Future of Agriculture
Grady Gammage Jr.
What are the ultimate costs of converting central Arizona’s remaining agricultural land to residential and urban use? Farmland can mitigate the urban heat island and provide a water supply buffer in times of drought.

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