

## Ground Water Awareness Week March 16-22



The National Ground Water Association's annual Ground Water Awareness Week is March 16-22. Ground Water Awareness Week is cosponsored by the Groundwater Foundation, a nonprofit organization dedicated to educating and motivating people to care for and about groundwater.

Ground Water Awareness Week celebrates groundwater as a valuable and renewable natural resource. This year's theme is "Schedule Your Water Well Checkup," promoting routine annual maintenance checks for private water wells. State organizations, groundwater businesses, and individual groundwater professionals are encouraged to help secure the future of the groundwater resource and industry by informing their communities about groundwater and groundwater-related professions during Awareness Week or any other time of year. The sponsors suggest that making presentations to civic groups, local schools, youth groups, or any community organization can be a very effective means of helping consumers understand the role of groundwater in their everyday lives.

*For more information on planned activities, and ideas on how you can become involved, visit [www.ngwa.org/education/aware.html](http://www.ngwa.org/education/aware.html).*

## International Conference on Groundwater Use Nets Declaration

*W. Peter Balleau – Balleau Groundwater, Inc.*

The Symposium on Intensive Use of Groundwater (SINEX) drew 150 hydrologists from around the world to Valencia Spain, Dec. 10-14, 2002. The symposium was organized to discuss the net effect of using aquifers intensively as a water source and to answer misconceptions about the sustainable use of the groundwater resource.

The symposium produced a declaration for distribution to water-policy makers worldwide. The declaration states that the health and well being of hundreds of millions of people depends on groundwater, including people in demographic transition in developing countries. Aquifer storage serves to mitigate drought and supports the explosive productivity of the green revolution. It is the low-cost source of water in much of the world and can be self-supplied in most areas without government subsidy. Economic development for the foreseeable future requires the continued and expanded use of the groundwater resource.

However, intensive use of aquifers can cause problems with resource depletion, including external effects such as baseflow and wetland impact involving other users and the ecosystem, and can cause land subsidence.

The symposium declaration advises that the deleterious effects of intensive groundwater use must be anticipated and managed without improvidently abandoning the essential benefits of the resource.

The historical evolution of intensive wellfield use for municipal purposes, as presented by Ken Howard of the University of Toronto, invariably has led to a final stage of aquifer recovery of water levels and interrelated surface flows. Thus the depletion and ecosystem problems tend to be an intermediate phase in a longer cycle of eventual water excess from importation and effluent returns.

But where can water come from for growth while the third world catches up economically to the first world? According to conference presenters, the answer involves two sources: more groundwater and substitution of lower-valued uses for higher ones. The symposium learned that 97 percent of the economic product around the world relies on 5 percent of the water. Population and economics can grow a great deal by acquiring another 5 percent from the lower-valued water uses such as irrigated pastures.

The SINEX conference was co-organized by the International Association of Hydrogeologists (IAH), UNESCO, International Water Resources Association (IWRA), Food and Agriculture Organization, International Atomic Energy Agency, and the National Ground Water Association of USA in collaboration with the Spanish Chapter of IAH and IWRA.

Papers from the conference will be published by the International Association of Hydrologists in their Selected Papers series. The volume "Intensive Use of Groundwater – Challenges and Opportunities," by M.R. Llamas and E. Custodio, was released for discussion at the December meeting in Valencia. It was published by A.A. Balkema Publishers ([balkema.ima.nl](http://balkema.ima.nl)).

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## Upcoming Artificial Recharge Symposia



Organizations in both California and Arizona have scheduled spring meetings on artificial recharge. The Groundwater Resources Association of California, together with the U.S. Geological Survey, the California Department of Water Resources, and the International Association of Hydrogeologists, will hold a workshop on the technical and policy challenges of artificial recharge in California April 30 - May 1 in the South San Francisco Bay area, with an optional field trip on May 2. The workshop will provide presentations on the status of artificial recharge in California, including the intricacies and challenges faced to implement and manage artificial recharge projects, case histories, and the political and policy issues.

The 11th Biennial Symposium on Artificial Recharge of Groundwater, sponsored by the Arizona Hydrological Society, Salt River Project, U.S. Water Conservation Laboratory, and the Arizona Department of Water Resources, will be held June 5-6 in Tempe, AZ (the Phoenix area), with a field trip on June 7. Conference topics include conjunctive use, environmental benefits, legal and regulatory aspects, case studies, monitoring methods, natural recharge, public involvement, recharge methods, research and development, and water reuse.

Visit [www.grac.org](http://www.grac.org) for more information on the California meeting. Contact Jenny Bush at Clear Creek Associates, (602) 294-9600 for more information on the Arizona meeting.

## Cal State Sacramento to Hold American River Conference

California State University in Sacramento announced a Lower American River Science Conference to be held June 5-6.

The Lower American River is a unique resource of the Sacramento region, making important contributions to the economic, environmental and recreational

quality of the region. It is the most heavily used recreational river in California, and many public and private agencies are concerned with its welfare.

Factors affecting the health of the river include increased flood control requirements, population growth, rising pressure on water use, changing recreation patterns, new understanding of aquatic ecosystems, fish issues, flow management, and restoration projects.

The three concurrent sessions of the meeting will cover the following themes:

- Fish, including in-stream flow, fish biology and genetics, effects of dams, and surface water quality.
- Groundwater, including stream/aquifer interaction, contaminant plumes, ground water versus surface water basins, and conjunctive use.
- Weather, including forecasting extreme precipitation in the Sierra Nevada and implications for the American River Watershed.

Visit [www.cce.csus.edu/conferences](http://www.cce.csus.edu/conferences) for more information.

## NGWA 2002 Expo Shined in Las Vegas

The National Ground Water Association's (NGWA) Ground Water Expo, held in Las Vegas in December, set attendance and exhibitor records and featured a wide variety of events.

A record 5,561 people attended the expo, including 2,454 contractors and 278 exhibitors, 51 of whom were first-time exhibitors.

The expo included the Annual Conference and Meeting for the Association of Ground Water Scientists and Engineers (AGWSE). The theme of this year's meeting was "Linking Surface and Subsurface Hydrology—from Science to Technology." Excellent keynote presentations were given by Scott Bair, Cliff Dahm, David Pyne, Bridget Scanlon, Edward Sudicky, Garth Van Der Kamp, Ingrid Verstraeten, and William Woessner. David Hyndman delivered the 2002 Darcy Lecture. In addition, numerous "Technical Interactive Presentations," or enhanced poster presentations, and "Action Demonstration Sessions" were made during the course of the event.

Also at the meeting, the AGWSE Board established three new committees: an association-wide Emerging Issues Committee to identify and examine issues on the horizon that may affect NGWA members and groundwater; a Transboundary Aquifers Interest Group; and an Interdivisional Cooperation Committee that will focus on improved community among the divisions of NGWA.

An auction held to raise money for the National Ground Water Educational Foundation garnered nearly \$50,000 for the scholarship fund.

Visit [www.ngwa.org](http://www.ngwa.org).

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