



Ground Water Expo

Las Vegas, NV - December 12-15, 2004

2004 NGWA Ground Water Expo to Provide Technical Information for Scientists, Consultants and Academics

The Ground Water Expo is set to feature a host of events for its technical audience when it takes place December 12-15, 2004 in Las Vegas, Nevada. Along with Interest Group sessions, there is a field trip to Yucca Mountain, the Darcy lecturer, and workshops designed to provide cutting-edge information.

Share Information and Exchange Ideas at Technical Sessions Hosted by NGWA Interest Groups

The mission of the NGWA Interest Group program is to share information and exchange ideas to advance the provision and protection of ground water. In pursuit of this mission, the technical portion of our Expo this year will be sponsored by 8 of our NGWA Interest Groups. With over 60 speakers, including some internationally known, nearly 40 hours worth of presentations, including in depth open-forum discussions on their topics, will occur. Each topical session, essentially like a mini conference, will be particularly stimulating with presentations and discussion directed at current issues of importance. These sessions are designed to engage participants in dialog about the many science, regulatory, public, political, and/or social aspects that are associated with the topical issues.

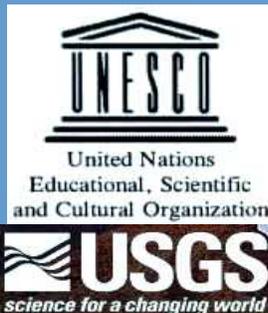
Interest groups presenting sessions at this year's Expo include:

- **Ground Water Availability** – This one and a half day session will discuss the pragmatic pathways to a sustainable future in water-scarce regions. The world's leading experts will assemble to discuss their efforts and supply real-world examples on characterizing natural systems, water-management principles, and cultural, socioeconomic and political forces affecting water availability. This international session has been sponsored by UNESCO with additional co-sponsorship by the U.S. Geological Survey and the International Association of Hydrogeologists. View the session presenters:

<http://www.ngwa.org/pdf/igsessionsgroundwateravailability.pdf>

- **Ground Water Modeling** – 16 presentations including opportunities for open-forum discussion will focus on the topics of visualization of ground water modeling results, ground water surface water interaction, innovative modeling techniques, and model optimization. View the session presenters:

<http://www.ngwa.org/pdf/igsessionsgroundwatermodeling.pdf>



Register now!

NGWA Educational Calendar

November 2004

[11/2 - 11/5 - Fracture Trace and Lineament Analysis: Application to Ground Water Resources Characterization and Protection](#)

[11/4 - 11/5 - Estimating Time of Remediation](#)

[11/11 - 11/12 - Environmental Economics for Ground Water Remediation: A Tool for Decision Making](#)

[11/11 - Understanding & Managing Perchlorates](#)

[11/15 - 11/16 - Remediation Conference: Site Closure and the Cost of Cleanup](#)

December 2004

[12/6 - 12/8 - Understanding Migration Assessment and Remediation of Non-Aqueous Phase Liquids \(LNAPL & DNAPL\)](#)

[12/6 - 12/7 - Fundamentals of Ground Water Geochemistry](#)

[12/8 - 12/10 - Applications of Ground Water Geochemistry](#)

[12/12 - 12/15 - NGWA 56th Annual Convention & Exposition](#)

January 2005

[2005 This Conference: Environmental Decision Making: Restoration versus Risk Reduction](#)

- **Geothermal Energy** – The focus of this session will be on the fundamentals and design of geothermal heat pump systems. Several case studies will be presented from projects in the United States, Canada and the Netherlands. Discussions surrounding issues associated with geothermal heat pump systems will be encouraged. View the session presenters: <http://www.ngwa.org/pdf/igsessionsgeothermal.pdf>
- **Internet Ground Water Data** – Presentations will focus on Internet applications and how agencies have made their ground water data available online. Discussion of issues will include education, data standards, data accessibility, Web-site redundancy, data security, software evaluation and funding. View the session presenters: <http://www.ngwa.org/pdf/igsessionsinternet.pdf>
- **Horizontal Wells** – Information presented will include horizontal well design and installation success and failures, a case study of horizontal wells for an open loop geothermal heat pump system, use of biodegradable drilling fluid for horizontal remediation wells, a case study for low-volume pulsed biosparging of hydrogen gas using a horizontal well, and an open-source program for fluid distribution along the length of horizontal wells. Come ready to discuss this technology. View the session presenters: <http://www.ngwa.org/pdf/igsessionshorizontal.pdf>
- **Microbial Ground Water Quality** – Water quality indicator organisms have been the subject of much discussion in recent years and the validity of the Total Coliform as an indicator test is increasingly being questioned. Presentations from this session will discuss various aspects of securing public health from ground water and will evaluate the distinction between microbial contamination of ground water versus the environmental occurrence of indicator organisms. New procedures to evaluate contamination will be presented. View the session presenters: <http://www.ngwa.org/pdf/igsessionsmicrobial.pdf>
- **Water Well Construction Regulations** – The Regulators Interest Group will provide a brief review of water well construction regulatory issues of concern to their states. Open forum discussion of issues for all interested parties is encouraged. View the presenters: <http://www.ngwa.org/pdf/igsessionsregulators.pdf>



2005 Ground Water Summit
San Antonio, TX
April 17-20, 2005

- [Get 2005 Ground Water Summit details.](#)
- Print the Summit's [Call for Abstracts](#) and [session descriptions](#).
- The call deadline is November 22.

Expo Sponsors



Geoprobe Systems
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 The official sponsor of the Expo's shuttle transportation service

- **Wellhead Protection** – Presentations will include aquifer vulnerability analysis as a valuable source water assessment tool, an innovative multi-variable approach to prioritizing potential contaminant sources, and conservative capture zones and general implications for well head protection programs. View the presenters: <http://www.ngwa.org/pdf/igsessionswellhead.pdf>

Dr. Allen Shapiro to Deliver Henry Darcy Distinguished Lecture

Dr. Allen M. Shapiro will deliver the Darcy Lecture on December 14. Shapiro, a research hydrologist with the U.S. Geological Survey in Reston, Virginia, will give a presentation titled “Recent Advances in Characterizing Ground Water Flow and Chemical Transport in Fractured Rock: From Cores to Kilometers.” The lecture will discuss fractured rock aquifers which provide water for domestic use, locations for isolating hazardous and toxic waste, and sites for foundations and infrastructure. The lecture series is made possible by an NGWA grant to the National Ground Water Research and Educational Foundation



More Than 40 Workshops Designed to Meet Your Educational Needs

More than 40 workshops will be held at the Expo on December 12, 13 and 15. They are open to all registered attendees. Among the technical titles this year are: Hydrolysis: Understanding and Predicting the Degradation of Organic Compounds in Water, Data Collection for Improved Site Characterization, Surface and Borehole Geophysics for Ground Water Applications, and Wireless Telemetry – Bringing Environmental Data to the Digital World.

Speaker listings for the Interest Group Sessions, information on the Darcy lecture series, field trip details, workshops, registration materials and more can be found at <http://www.ngwa.org/e/expo/0412126010.shtml>.



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For more information, visit the NGWA Web site: www.ngwa.org or call our Customer Service department at 1-800-551-7379.

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