



International Association of Hydrogeologists U.S. National Chapter Newsletter

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Editor: Leonard F. Konikow, U.S. Geological Survey
Reston, VA 20192

Phone: 703-648-5878 Fax: 703-648-5274 E-mail: lkonikow@usgs.gov



Message from the Chairman

I am very pleased to report that our membership has grown significantly during the past year. I would like to take this opportunity to personally welcome our new members. About 55 of the new members joined IAH through the alliance program with the Groundwater Resources Association of California (see separate news from GRA below). Please feel free to contact me or any other member of our executive committee if you have any comments, suggestions, or questions about IAH activities.

From the perspective of IAH, the alliance with California GRA has been a great success. If any of you are aware of any other state or regional groundwater organizations that might be interested in forming a similar alliance or partnership, please let me know.

The membership growth has been about 25 percent over the previous year, which is outstanding. However, there are a number of last year's members who still have not paid their dues for 2002, and if you are among these, I urge you to submit your payment as soon as possible. IAH has made this extremely easy to do by accepting payments by credit card over a secure server. You should have received instructions on doing this with your renewal notice. If you have any questions about payment, please contact our Secretary-Treasurer, Colin Booth.

Our total membership in the U.S. (a little over 300) is still low, however, relative to other U.S. ground-water or hydrogeological organizations. So I

believe that there are still a large number of people who would be interested and would benefit by joining IAH. If you know any hydrogeologists who are not members of IAH, please encourage them to join. As with renewals, IAH has made it very easy for people to join IAH over the internet. Simply go to the membership web page at: www.iah.org/member.htm. Membership is on a calendar-year basis. If someone joins mid-year, they will receive all back issues of *Hydrogeology Journal* for that year.

I am also very pleased to report that the Geological Society of America (GSA) has accepted the IAH/USNC as an Associated Society. Among other benefits, this will allow any member of IAH to pay registration fees for GSA Meetings at discounted GSA Member rates. This should also lead to closer cooperation between IAH and the Hydrogeology Division of GSA, as we have many interests in common. IAH/USNC would like to sponsor one or two special sessions at future GSA Annual Meetings, and I invite you to submit proposals or suggestions. These meetings will also provide a convenient venue for IAH/USNC to hold membership and (or) business meetings. More information about GSA can be obtained through their web site at: www.geosociety.org/. To begin this effort, IAH/USNC is organizing two special sessions at the next GSA Annual Meeting in Denver during Oct. 27-30, 2002. The topics include "Groundwater Depletion and Overexploitation: A Global Problem" and "Groundwater and Hardrock Mining." These are described in more detail below.

--Lenny Konikow

32nd Congress of IAH

The 32nd IAH Congress will be held in Mar del Plata, Argentina, in October, 2002. The overall theme is "Groundwater and Human Development," but the technical sessions will focus on a variety of technical and managerial groundwater issues. More details are available on the web site at:

http://www.mdp.edu.ar/exactas/geologia/iah2002/version_english.htm

The Congress will include Plenary Sessions on (1) Groundwater and human development; (2) Groundwater and Quality of Life; (3) Coastal aquifers: important natural hydrogeological structures; (4) The contribution of transboundary aquifers to equitable human development; (5) Can we manage groundwater quality ignoring the unsaturated zone? (6) Social, legal and institutional aspects focused on groundwater in Latin America; (7) A vision on groundwater resources in Latin America; and (8) Downstream of Downtown - Urban Wastewater As Groundwater Recharge. It will also include Workshops on (1) Hydrogeology of large plains; (2) Coastal aquifers; (3) Regional transboundary aquifers; (4) Groundwater monitoring: national networks; (5) Isotope methods for evaluation of aquifer vulnerability and sustainability; (6) Hydrogeological factors and human health; and (7) Natural Arsenic in groundwater--Experiences around the world. There will also be several organized field trips available, as well as pre-Congress short courses.

Mar del Plata is truly a beautiful city, with its coast, its hilly ranges, and its people. It has 47 km. of beautiful beaches, and moderate warm weather in October (temperatures in the range of 16 to 22 °C). You can enjoy sea trips, folk music and tango shows, as well as the typical treat of the Pampas: the Argentine barbecue. Interesting places await you after the Congress: the Patagonian coast and the southern whales, the magnificent Andes mountains, including the Aconcagua, the Iguazú Falls, and the Argentine northwestern provinces. The Conference Hotel is rated as the third best in Argentina (after two in Buenos Aires) and room rates are relatively inexpensive due to the current favorable exchange rate.

Yucca Mountain Heats Up

The emplacement of heat-generating high-level radioactive wastes in Yucca Mountain, if it is eventually licensed, will certainly impact flow and

transport in the vadose zone. For now, however, the heat is in the political arena.



On May 8, 2002, the House of Representatives voted to override the Governor of Nevada's veto and cleared the way for a Senate vote by July on whether DOE can apply for a license to operate Yucca Mountain as a geologic repository.

Secretary of Energy Spencer Abraham recommended to President Bush on February 14, 2002, that the Yucca Mountain site in Nevada be developed as the nation's first long-term geologic repository for high-level radioactive waste and spent nuclear fuel, claiming to rely on more than 20 years and \$4 billion in scientific study that demonstrates Yucca Mountain is scientifically and technically suitable for development. The following day, President Bush notified Congress that he considers Yucca Mountain qualified for a construction permit application, taking the next in a series of steps required for approving the site as a high-level radioactive waste repository.

On April 8th, Nevada Gov. Kenny Guinn (R) submitted his Notice of Disapproval to Congress, signaling the state's official objection to the proposed Yucca Mountain high-level nuclear waste repository site. As provided by the Nuclear Waste Policy Act of 1982, Congress has 90 working days to override the governor's objection by passing a resolution approving the site.

On May 8, the House of Representatives voted 306-117 to override the Governor's veto. The Senate held hearings on the issue during late May, and is expected to vote on a resolution to override Nevada's veto in early July. If the Senate agrees with the House, then the Dept. of Energy will be able to apply to the Nuclear Regulatory Commission for a license to operate the facility. If all goes on schedule, the geological repository would open in 2010 with an

intended capacity of 77,000 tons of radioactive material.

Much of the debate about the safety of the repository centers on hydrogeological issues and uncertainty and their effect on the reliability of predictions for 10,000 years into the future.



IAH Logo

The official logo for the International Association of Hydrogeologists (above, left) includes its initials in both the

English and French translations of the name of the organization (in French: “aih” for “*L’Association Internationale des Hydrogéologues*”). In the United States, however, this has caused much confusion because the initials of the American Institute of Hydrology (AIH) are identical, and many hydrogeologists assumed that the “aih” in our logo implied some type of affiliation with AIH, or even that we were AIH. To minimize the chances of such misinterpretation, we have modified the logo for use by the U.S. National Chapter by removing the “aih” initials (see logo on right and on cover of this newsletter).



Hydrogeology Journal

The IAH journal has been a continuing success under the superb editorial leadership of Cliff Voss. In the near future, the journal will be converting to an electronic method of processing manuscripts, including submission of manuscripts and the peer review process. This should reduce costs of manuscript processing and increase efficiency. It will make it easier for authors and editors to track progress of submitted manuscripts during the review process and allow for faster time from submission to publication.

The policy of devoting one issue per year to a special theme issue has been well received and will continue into the foreseeable future. In fact, the 2002 Theme issue on “Groundwater Recharge” (Guest Editors were Drs. Bridget Scanlon and Peter Cook) was so popular that the publisher increased production to meet demand. This theme issue included 14 papers devoted to this topic. The next two themes will be (1) Subsurface fluids and solid mechanics (Edited by Prof. Ove Stephansson, Royal Institute of Technology, Stockholm), and (2) Towards

sustainable groundwater management (Edited by Dr. Karin Kemper, World Bank, Washington, D.C.) If you have any suggestions for future theme topics, please submit them to Cliff (cvooss@usgs.gov).

Geological Society of America Annual Meeting

Groundwater Depletion and Over-exploitation: A Global Problem

The volume of fresh groundwater in storage has decreased significantly during the past century, but the magnitude and global impacts are uncertain. This session focuses on the magnitude and effects of groundwater mining, methods to quantify depletion, U.S. and international case studies, status and future trends, global impacts, and management solutions. Detrimental environmental side effects of overexploitation include reduced groundwater discharge to springs, streams, and wetlands, water-quality & salinity degradation, and land subsidence. The magnitude of worldwide depletion of groundwater in storage may be so large as to constitute a measurable contributor to sea-level rise, but the magnitude of depletion is poorly documented worldwide. The management concept of “sustainable development” may offer a viable approach to dealing with overexploitation of groundwater resources, but its implementation has been largely subjective and sometimes arbitrary. This session is being organized by Lenny Konikow and Lois Ongley.

Groundwater and Hardrock Mining

The Rocky Mountains of the western United States have tens of thousands of abandoned, inactive, and active sites related to precious-metal mining. Mining activities often resulted in mobilization of and transport of associated heavy metals that can pose a significant threat to aquatic communities in mountain streams. Oral and Poster papers are solicited on all related topics. Mike Wireman, Carol Russell, and John Moore, U.S. Environmental Protection Agency, Region 8, Denver, CO are the organizers.

In addition to these two IAH sessions, the overall Hydrogeology Program at the 2002 Annual GSA Meeting will also include many other sessions of interest to groundwater specialists. More information on the overall meeting is available at: <http://www.geosociety.org/meetings/2002/>. The abstract deadline for electronic submissions is July 16.



Groundwater Resources

Association of California

by Vicki Kretsinger

GRA/IAH Cooperative Programming /Joint Membership Program

The Groundwater Resources Association of California (GRA) and IAH developed an allied partnership in 2001 and launched a Joint Membership Program beginning in 2002. IAH has been a cooperating organization with GRA for two events thus far in 2002, including the short course "Principles of Groundwater Flow and Transport Modeling" and the Symposium "Perchlorate and NDMA." Upcoming cooperative programs for 2002 include the GRA Annual Conference, "Sustaining Groundwater Resources: The Critical Vision," another offering of the Groundwater Modeling short course, and two additional Symposia, "Biodegradation of MtBE" and "Nitrate in Groundwater: Sources, Impacts and Solutions."

IAH members interested in learning more about GRA, or the programs in which IAH is participating with GRA as a cooperator, please check the GRA web site at <http://www.grac.org>. For those who are interested in the particulars of the GRA/IAH Joint Membership Program (particularly for possible development of similar programs in other states for the purpose of broadening awareness of IAH), please check the GRA web page (see "Support GRA" tab and Membership), or for a PDF file discussing the option, see http://www.grac.org/IAH_GRA.pdf.

Short Course on "Principles of Groundwater Flow and Transport Modeling," September 2002

This 3-day course, offered by the Groundwater Resources Association of California (GRA) with the University of California Cooperative Extension/Groundwater Hydrology Program, and in cooperation with IAH, introduces the conceptual principles and practical aspects of groundwater flow and transport modeling. The course objective is to provide a solid understanding of the principles, methods, assumptions, and limitations of groundwater models, as well as

hands-on experience with the planning, preparation, execution, presentation, and review of a modeling project. It will also include an overview of various software programs and accompanying pre- and post-processing programs. The second half of the course features hands-on exercises based on the USGS MODFLOW flow model, and MT3D, a widely applied fate and transport model. The course will be held in the San Francisco Bay Area, California in September 2002. Check the GRA web site at <http://www.grac.org> for more details or to reserve a seat.

Nitrate in Groundwater: Sources, Impacts and Solutions, November 12-13, 2002

The GRA, in cooperation with IAH and other organizations, invites you to its Symposium, "Nitrate in Groundwater: Sources, Impacts and Solutions" in Fresno, California. Source identification, management, basin-wide monitoring programs, discerning long-term trends, treatment technologies, and land use policy issues will be featured. The nitrate problem is growing. Landowners, growers, wastewater treatment plant operators, ranchers, and planners are becoming increasingly aware of the role of urban wastewater management and agricultural land use practices for successful nitrate management. Innovative programs in land use planning, outreach to encourage pro-active agricultural practices, and increasing awareness among groundwater users have made inroads to addressing the nitrate problem. Improvements in nitrate source identification techniques applying stable isotopes of nitrogen, hydrogen and oxygen, together with new analytical chemistry techniques to identify chemicals associated with different nitrate sources, lend a new level of sophistication to sorting out groundwater contamination by nitrates. For more information on the program and submitting an abstract (**deadline is July 1, 2002**), see the web site at <http://www.grac.org>

Biodegradation of MTBE in Groundwater, October 17, 2002

GRA, in conjunction with the Santa Clara Valley Water District, and in cooperation with IAH and other organizations, will hold the Fifth Symposium in the Series on Groundwater Contaminants, "Biodegradation of MtBE in Groundwater" in San Jose, CA. MtBE has received national attention as a significant groundwater contaminant in recent years due to impacts to drinking water supply wells in Santa Monica, South Lake Tahoe, and many other areas in California and the U.S. The number of MtBE plumes is estimated at 10,000. The perception that MtBE is highly recalcitrant is changing. Recent and ongoing studies indicate that MtBE can be biodegraded in many subsurface environments. Consequently, there are many new and innovative treatment technologies that rely on biodegradation processes. This Symposium will showcase experts discussing current research, new technologies for in-situ and ex-situ biological treatment, and emerging regulatory requirements for demonstrating MtBE biodegradation approaches. Watch the GRA web site at <http://www.grac.org> for the upcoming program and registration details.

"ASK-A-GROUNDWATER SPECIALIST" Education Outreach Program Seeks Volunteers

GRA is seeking "Groundwater Specialists" to support our web site-based, "Ask-A-Groundwater Specialist" education outreach program initiated in December 2001. The objective of this program is to answer groundwater related questions posed by students and the general public. Questions have ranged from general water quality within a specific groundwater basin to drinking water quality and specific contaminants. We would like to increase our current pool of "Groundwater Specialists" so that we can expand the program to the education community. Questions submitted to the web site are then forwarded to "Groundwater Specialists," who in turn are expected to respond to the question within a few days. Responses typically take 5-to-20 minutes. Responses can also refer the inquirer to other references either on- or off-line. Become a "Groundwater Specialist"; sign-ups are being taken on the Education page (see the Resources tab) of GRA's web site <http://www.grac.org>.

"Sustaining Groundwater Resources: The Critical Vision," September 18-19, 2002

GRA, in cooperation with IAH, NGWA, AWWA, and other organizations, invites you to join us for our 11th Annual Conference and Meeting, "Sustaining Groundwater Resources: The Critical Vision" in Newport Beach, California. There are significant challenges now and in the future to address the expanding stresses on our water resources that are occurring through extraction, transfer, consumption, recharge interception, and supply diversion. These stresses dictate offsetting water resources management actions such as surface and subsurface recharge, in-lieu use, and conjunctive management to replenish water supplies and maintain the balance of the hydrologic system. The goal of the conference is to enhance and refine the vision needed to define and quantify critical groundwater issues and implement effective management approaches for sustaining groundwater resources. Conference speakers will be featured in a plenary assembly and also in concurrent sessions focusing on the following topics:

- ◆ Groundwater as a Component of the Natural Resources Infrastructure
- ◆ Sustainable Groundwater Management Strategies, Water Supply Assessment, & Optimization
- ◆ Reclaimed Water Management
- ◆ Recharge Management
- ◆ Wastewater Management and Emerging Contaminants
- ◆ Comprehensive Approaches to Groundwater Quality Characterization

Additional information is available at the GRA web site: <http://www.grac.org/annual.html>; the complete program and registration information will be available in June 2002. For more information, contact Kathy Snelson at executive_director@grac.org or Vicki Kretsinger, Conference Chair, at vkretsinger@lsce.com.

Geologist Licensing Deadline Approaches **June 30th marks end of no-exam requirement in Washington state**

Since July 2001, people practicing geology or advertising geologist services in Washington state are required to get a license from the Department of Licensing. This includes geologists working for businesses, state and local governments, non-profit organizations, or those who are self-employed.

Through the end of June, there is an opportunity to apply for a Washington state geologist license without taking the national Association of State Boards of Geology exam or the state-specific engineering geologist and hydrogeologist specialty exams. To qualify, applicants must meet these requirements:

- ◆ Minimum five years experience in geology or geologist specialty field
- ◆ Bachelor of Science degree in geology, engineering geology, hydrogeology or one of the related geological sciences, OR
- ◆ Educational equivalents, including completion of a minimum of 30 semester or 45 quarter hours, or their coursework equivalent, in geological sciences

Completed applications must be postmarked by June 30, 2002 to the mailing address below to take

advantage of this program. Applications also may be delivered in person to the DOL offices located at 405 Black Lake Boulevard in Olympia by Friday June 28. Complete applications must include:

- ◆ Application & fees (first year initial license can be submitted at the same time)
- ◆ Sealed college transcripts or documentation of completion of educational equivalents
- ◆ Signed "Employment and Experience Verification/Reference" forms

Costs are \$100 for a geologist application fee and another \$100 for the license. Geologist specialty licenses are \$100 application fee and \$85 specialty license. Geologist licenses are renewed annually. Instructions and an electronic application are available at www.wa.gov/dol. Applications may be mailed to: Geologist Licensing Program, PO Box 9045, Olympia, WA 98507-9045. For questions, call 360-664-1497.

Hydrogeology of Washington State

The 4th Symposium on the Hydrogeology of Washington State will be held April 8-10, 2003, Sheraton-Tacoma Convention Center, Tacoma, Washington. Initial Announcement & Call for Abstracts - Abstracts Due: October 15, 2002. The last symposium was a huge success, drawing over 400 scientists and hydrogeology

professionals for talks, posters, field trips, and workshops. Attendance has grown steadily since the first symposium in 1995. Keynote speakers are Frank Chapelle—an expert in biogeochemistry from the USGS; Richelle Allen-King from Washington State University, the National Ground Water Association's 2003 Darcy Lecturer, and Nadine Romero - architect and chair of the first two symposia, currently studying Public Policy at the Kennedy School of Government, Harvard University. For Symposium Topic Descriptions, Abstract Instructions, Registration Information, and Addition to Mail List, refer to:

<http://www.wa.gov/ecology/events/hg>

Seawater Intrusion-SWICA II Conference

A large proportion of the world's population (about 70%) dwells in coastal zones. In the last half-century, population and economic growth have greatly increased freshwater demands. The lack of good management schemes for coastal water resources has led to the over-exploitation of groundwater in many parts of the world. The encroachment of seawater into coastal aquifers has become a common problem.

To address these concerns, the First International Conference on Saltwater Intrusion and Coastal Aquifers--Monitoring, Modeling and Management (SWICA-M³) was held in Morocco, April 2001. Conference proceedings are available on a CDROM, which is available for free downloading at: <http://www.olemiss.edu/sciencenet/saltnet/page8.html> (click the "proceedings" link.) This conference was considered successful and plans were formulated to hold a 2nd SWICA Conference. SWICA II is being organized by Profs. Luis Marin and Julia Pacheco. It will be held in Merida, Mexico (a beautiful resort town in the Yucatan area) March 30-April 2, 2003.

It is intended to be a multidisciplinary meeting that gathers hydrogeologists, geophysicists, geochemists, numerical modelers, managers, and policy makers to promote integrated approaches that can bridge monitoring, modeling, and management aspects. Conference Themes include: Biodiversity of coastal aquifer systems; Geochemistry: isotopic and inorganic; GIS-modeling; Island and atoll hydrogeology; Karst coastal aquifers; Monitoring; Near-shore processes; Numerical modeling; Optimization; Past and future climate change and its impact on coastal aquifer systems; Case studies; Submarine discharge; Sustainable management of coastal aquifers; and Variable-density flow and transport processes.

Before the conference, there will be two workshops, one given by Prof. Jacob Bear, and the other by Drs. Cliff Voss and Lenny Konikow. Field trips for the geology in Yucatan area are also being organized.

Please visit the conference web page at:
<http://www.igeofcu.unam.mx/swica2/> for more details.

Please send your abstract (as an electronic file) to Dr. Marin at <lmartin@tonatiuh.igeofcu.unam.mx>. Please contact him if you have any questions.

FCC Rule Inhibits Use of Ground-Penetrating Radar

According to a press release from the American Geological Institute, geophysicists are up in arms over a ruling by the Federal Communications Commission (FCC) that would essentially eliminate most commercial applications of ground-penetrating radar (GPR), a widely used technology for imaging buried objects. According to an FCC press release, GPR would be limited to frequencies below 960 MHz and between 3.1 to 10.6 GHz, and its use in those ranges would be "restricted to law enforcement, fire and rescue organizations, to scientific research institutions, to commercial mining companies, and to construction companies." Under the rule, consulting companies and many other private-sector geophysicists would not be qualified users of GPR instrumentation. Moreover, opponents of the ruling argue that many GPR applications need the prohibited frequencies to properly image objects such as conduits beneath concrete runways. GPR proponents also argue that the FCC ruling jeopardizes the use of this technology for safety purposes such as identifying buried power and gas lines. The principal driver for the FCC action appears to be concern from the Dept. of Defense that GPR could interfere with military wireless Global Positioning System units. Complicating matters is FCC's view that the new rule is in fact a relaxation of existing rules, implying that many current uses of GPR--many of them on behalf of the federal government--are already illegal. A number of groups, including several AGI member societies, are working to challenge the FCC ruling. Additional information on their efforts can be found at <http://www.g-p-r.com> and <http://www.radar-solutions.com>. The FCC press release is at: <http://www.fcc.gov/Bureaus/Engineering_Technology/News_Releases/2002/nret0203.html>.

NGWA Ground Water Expo in Las Vegas

The 2002 NGWA Ground Water Expo will take place December 9-11 in Las Vegas. The theme of the technical program is "**Linking Surface and Subsurface Hydrology--From Science to Technology.**" The International Association of Hydrogeologists is a cosponsor of this conference, and we encourage you



to attend. For more information about the Expo, registering for the conference, and Las Vegas, go to <http://www.ngwa.org/convention/national.html>.

The technical session at the Expo, organized by AGWSE, will include eight keynote speakers, **TIPs** (technical interactive presentations, which are enhanced poster presentations that have proven effective in sharing research results), Action Demonstration Sessions that will showcase the latest in groundwater monitoring equipment, and other educational opportunities. Confirmed speakers include: Scott Bair, Cliff Dahm, Bridget R. Scanlon, Edward Sudicky, and William Woessner. The goal of "Linking Surface and Subsurface Hydrology-From Science to Technology" is to provide a forum for the exchange of practical and applied hydrogeologic information.

The poster format has become extremely popular as an effective and rewarding method of sharing research results and technical advancements with colleagues. At this year's NGWA Ground Water Expo in Las Vegas, all accepted submissions--other than the eight invited speakers and the stage-oriented Action Sessions--will be presented in the form of a Technical Interactive Presentation. TIP presenters will have a scheduled 30-minute time slot when the speaker will be at their TIP for interaction with interested conference attendees. (A formally delivered talk will not be presented.) Through this presentation method, conference attendees will get a more complete picture of the project being described, and go away with a deeper understanding of your work.

Interested in participating in one of these innovative presentations? Act quickly. The deadline for abstracts is **June 1**, so there's still a little time (but not much). For detailed presentation information and instructions for submitting an abstract, go to <http://www.ngwa.org/pdf/CallforParticipants2.pdf>. For questions, call Dawn Guth at 1-800-551-7379.

Special offer for IAH members: To encourage participation, we are offering one **complimentary registration** at the 2002 NGWA Ground Water Expo/Conference to the first IAH member who submits an abstract in response to this announcement in our newsletter. To qualify, simply send an e-mail to lkonikow@usgs.gov at the same time that you submit your abstract. We will let you know if you are the first.

AGI: K-12 Earth Science Education Blueprint for Change

On April 12, 2002, the American Geological Institute (AGI) convened a Member Society Forum on K-12 Earth Science education, in part to explore recommendations outlined in Blueprint for Change:

Report from the National Conference on the Revolution in Earth and Space Science Education. Minutes of the April 12 forum, the EarthComm curriculum, and the IES curriculum program, are available through the AGI Education web site at www.agiweb.org/education/

The Revolution Conference provides recommendations for transforming Earth and space science education over the next ten years. For a free copy of the report, send an e-mail to: <Communications@terc.edu> or download it from: <www.EarthScienceEdRevolution.org>. The report states that only 7 percent of the nation's high school students take Earth and space science, and that "... a science-literate citizenry is vital to the nation's well-being and security and will ensure our nation's continued leadership in science and technology in the 21st century. To empower the public to make sound and reasoned choices, Earth and space science must be taught throughout the United States in K-12 classrooms and be accessible to all students."

IAH/USNC needs a representative to participate in the next AGI Member Society Forum on K-12 Education, which will be held on Tuesday October 29th from 1:00 to 4:00 PM at the GSA Meeting in Denver, Colorado. Discussion topics will include "Equity and Diversity in K-12 Earth and Space Science Education" and "Assessment and Evaluation-Promoting the inclusion of Earth Science in K-12 State Testing." If you have an interest in K-12 Earth Science education and would like to volunteer to attend this meeting on behalf of IAH, please contact either Colin or Lenny as soon as possible.

Other GSA Sessions

The following two GSA Special Sessions are being organized by IAH members:

Evaporite Karst and Engineering/Environmental Problems

A special session on "Evaporite Karst and Engineering/Environmental Problems in the United States" will be convened at the Annual Meeting of

GSA in Denver. Evaporite karst (EK) includes sinkholes, caves, and subsidence/collapse structures formed by natural or manmade dissolution of evaporites, mainly salt and/or gypsum/anhydrite, which are widespread in the USA. At many sites, EK produces engineering and environmental hazards, such as damage or collapse of homes, buildings civil projects (dams, bridges, and highways) and farmlands. Abstracts are due at GSA by July 9 (paper) or July 16 (electronic). Publication of a proceedings will follow in about 12 months. Contact Kenneth S. Johnson at ksjohnson@ou.edu (or 405/329-4150) for more information.

Denver Basin Bedrock Aquifers-Past, Present, and Future

A large portion of the rapidly growing Denver Metropolitan area depends on groundwater produced from the Denver Basin bedrock aquifers. The stratigraphy of the basin is complex and heterogeneous which makes it difficult to predict how the aquifers will respond to increased usage. The use of groundwater from the bedrock aquifers has caused water level declines and reduced saturated thickness. Water is being withdrawn at a rate that exceeds recharge, which results in groundwater mining. The session will bring together technical experts and public officials to present scientific, legal, regulatory and economic aspects of groundwater depletion. For further information about this session contact John Moore (moore123@aol.com) or Peter Barkmann (peter.barkmann@state.co.us).

SECRETARY-TREASURER'S NOTE

I hope you all enjoy the Spring newsletter and find it informative. The next newsletter is due out in the Fall, and if you have any items you would like to be included, please let me know.

Once again, my usual plea--let me know if you change your e-mail or mailing address, otherwise IAH will lose you.

-- Colin Booth



IAH: U.S. NATIONAL COMMITTEE

Chairman:	Lenny Konikow:	lkonikow@usgs.gov	703-648-5878
Secretary-Treasurer:	Colin Booth:	colin@geol.niu.edu	815-753-7933
Vice-Chair:	John Harsh:	jfharsh@usgs.gov	813-884-9336
Vice-Chair:	Yoram Eckstein:	yeckstei@geology.kent.edu	330-672-2364