

International Association of Hydrogeologists - US National Chapter

Newsletter, v. 30, no. 1, July 2001

Editor: Colin J. Booth, Department of Geology & Environmental Geosciences,
Northern Illinois University, DeKalb, IL 60115
Phone: 815-753-7933 Fax: 815-753-1945 E-mail: colin@geol.niu.edu

Note: You are getting this newsletter if you are on my e-mail list. If you didn't receive a 2001 dues statement, it's possible I have your hard-mail address wrong: please contact me to correct it. If you received a dues statement but haven't yet paid for 2001, please do so! Thanks - Colin Booth.

CONTENTS OF THIS ISSUE

- * Editor's Note
- * USGS Water Resources Budget Cuts
- * Hydrogeology Journal News - *Clifford Voss*
- * Chairman's Message - *Lenny Konikow*
- * Your US National Committee - contact e-mail addresses and phone numbers
- * Get-Together at GSA Meeting in Boston (November, 2001) - *Lenny Konikow*
- * GSA Birdsall-Dreiss Distinguished Lecture
- * Request for Chapter Authors: Field Hydrogeology Text. - *John E. Moore.*
- * Request for contributors to anthology on International Groundwater Management.

Meeting and Course Announcements

- * IAH Congress at Munich, September, 2001
- * International Mine Water Association Symposium, Freiberg, Germany, 2002
- * Idaho - 5th Ground water Technical Conference, Boise, October 2001
- * California - Symposium on Arsenic in Groundwater, October, 2001
- * California - 23rd Biennial Groundwater Conf: Managing California's Groundwater: October, 2001.
- * California - Geostatistics Short Course: July/August, 2001
- * California - Modeling Short Course: September, 2001

EDITOR'S NOTE:

Welcome to another issue of the IAH/US newsletter. For those of you who prefer to read a more formatted document an MS Word version is attached. For those of you who just plow through the e-mail, it's all here, too. Personally, I prefer to print out newsletters and read them the old-fashioned way.

In addition to strictly IAH news, this issue has several contributions and announcements from members. As I said in my recent e-mail, we will be happy to print items of interest and relevance to IAH members - conference announcements, job offers, requests for information, brief letters concerning IAH, etc. To cope with size and time limitations, we won't include ads for products or services, or letters that do not directly concern IAH. However, one thing that does affect all of us is budget cuts to the USGS, so I am including a brief item about that.

Otherwise, I'll keep this brief; Lenny discusses the major IAH issues in his Chairman's Message. And one final message in my role as Secretary-Treasurer: please, *let me know if you change your e-mail (or real) address.* Thanks.

Colin Booth

USGS WATER RESOURCES BUDGET CUTS

The U.S. Geological Survey is the primary Federal agency doing hydrogeological research, data collection, and resource evaluation in the United States, and many of its products are used and valued by IAH members. The Administration's proposed budget for fiscal year 2002 includes a cut of \$44 million for water resources investigations. Almost half comes from a 30 percent reduction in the National Water Quality Assessment Program. The biggest percentage cut would hit the Toxics Substances Hydrology Research Program, where a proposed \$10 million cut equates to a 71 percent drop in the program. The Ground Water Resources Program also is targeted for about a \$2 million cut. These programs support much of the ground-water research going on in the agency. According to an article in *Science* (May 11, 2001, vol. 292, p. 1040), these budget cuts may shut down research, eliminate about 500 jobs, and create logistical problems that will ultimately raise costs. The cuts can directly impact university research also, as the \$5.5 million Water Resources Research Institutes program for external grants is slated to be completely eliminated. There is hope that some or all of these budget cuts will be restored during the final appropriations process, and in early June the House Appropriations Interior Subcommittee recommended full restoration. This has to be approved by the full House Appropriations committee and by the Senate. If you are concerned about the negative impacts of these cuts, a letter to your Congressman and/or Senator might help.

HYDROGEOLOGY JOURNAL

Clifford I. Voss, Executive Editor

Hydrogeology Journal, HJ, now in its tenth year, is still an evolving and growing publication. The new Managing Editor, Bob Schneider initiated his term in 2001, taking over from Bill Wilson. Bill had managed the journal as Technical Editor since 1994 and brought about many improvements that shape *HJ*'s professional appearance and content. Bob now brings to bear his many years of experience as a US Geological Survey hydrologist and technical editor to the day-to-day work of managing article reviews, revisions, acceptance and publication.

The *HJ* publisher, *Springer*, based in Germany, has initiated full electronic publishing of *HJ* in addition to the paper journal. All journals appear completely on the web. Individual articles appear on the *HJ* website even before they appear in a printed journal, within only a few weeks of publication acceptance by the Editors. The web article is an official and citable reference, and speculation has it that one day, electronic articles will replace, or at least reduce the need for, paper journals. For the foreseeable future, *HJ* will continue to appear both in paper and on the web and there are no plans to end the paper journal. The electronic version of *HJ* may be found at: <http://link.springer.de/journals/hydrogeo/>. IAH members may register there for full searchable access to complete electronic articles. Others may inspect only titles, authors and abstracts.

The *HJ* theme issues for the next two years are already under production. For January 2002, the theme is "Ground-Water Recharge" with Guest Editors, Dr. Bridget Scanlon (University of Texas at Austin) and Dr. Peter Cook (CSIRO Land and Water, Australia). The issue covers recharge in both arid and humid climates. For 2003, Guest Editor, Dr. Ove Stephansson (Royal Institute of Technology, Sweden), is organizing the theme, "Subsurface Fluids and Solid Mechanics" considering the coupling between solid mechanics and fluid flow in spatial-temporal scales ranging from geologic to engineering.

Your comments about *HJ* are always welcome.

Contact: cross@usgs.gov and rschneider_hjah@attglobal.net

CHAIRMAN'S MESSAGE

Lenny Konikow

In January I took over the position of Chairman of the U.S. National Chapter (USNC) of the International Association of Hydrogeologists (IAH) for a four-year term of office. I am most pleased to take on this position, as I have been a member of IAH for many years and have always thought very highly of the organization and its goals. For those of you who don't know me, let me introduce myself. I have been a research hydrologist with the U.S. Geological Survey for almost 30 years, where I have been working mostly on the development, application, and evaluation of ground-water models for various hydrogeological problems. Prior to becoming Chairman of IAH/USNC, I served four years on the Board of Directors of NGWA's Association of Ground Water Scientists and Engineers, and before that, I was on the Management Board of the Hydrogeology Division of the Geological Society of America for four years. Each of the scientific organizations I've been involved with has their own niche and special value. I believe that IAH is a unique organization that provides a valuable forum for those of us who have a broad interest and an international or global perspective on ground-water resources and hydrogeological issues. It has more than 3500 members in 135 countries. The USNC, however, has only about 250 members, a point I'll mention again below.

In taking this position, one of the first things I did was to review the mission of IAH, which can be summarized briefly by two statements:

- to promote growth in the knowledge of hydrogeological science and its application for the common good in relation to water and the environment;
- to promote understanding of issues relating to management of ground-water resources and to enhance the role of ground-water professionals.

To accomplish these goals, IAH:

- publishes a journal (*Hydrogeology Journal*), a book series, and a newsletter;
- promotes international cooperation among hydrogeologists and others with an interest in ground water;
- encourages worldwide application of hydrogeological skills through education and technology transfer programs;
- sponsors international meetings, including an annual Congress; and
- cooperates with national and international scientific organizations.

I plan to be an active Chairman and make sure that the U.S. Chapter actively contributes to the worthy goals and activities of the whole International Association of Hydrogeologists, which is headquartered in the United Kingdom. I would also like to improve the cohesiveness of the U.S. membership, and give our members more opportunities to interact with each other.

I was very pleased that in February, Andrew Skinner (Secretary General of IAH) flew in from United Kingdom specifically to meet with the new officers of the USNC. We spent a very productive day together here in Reston, VA, and Yoram Eckstein and I were joined by Phil Bennett (IAH Council) and Cliff Voss (Editor, *Hydrogeology* journal). We discussed a broad range of topics related to the philosophy and operation of IAH. The three issues I will mention here are legal status, membership numbers, and cooperation with other societies.

In a recent IAH newsletter, it is reported that at the Cape Town General Assembly there was a unanimous vote approving a change in the corporate status of IAH. During the first 44 years of its existence, IAH had no corporate legal standing. Now, it is in the process of establishing and registering in the United Kingdom as a charitable company. I was surprised to learn that the USNC is in the same boat the IAH had been, in that we presently have no formal legal status as an organization. This is a practical issue because we do have some significant funds in our treasury, and a formal tax-free status with the IRS will allow us to generate (and keep) the interest generated by this capital. But there will also be some costs and effort required to achieve and maintain this status. Obtaining a tax-free certification from the IRS requires us to first incorporate as an organization, similar to what IAH is doing in UK. We will need legal advice to guide us through the process; we may have to revise our constitution and bylaws;

and we will have to file annual reports, among other things. Fortunately, Yoram Eckstein has helped us find a lawyer in Washington, DC, Mr. Gabriel Eckstein (yes, his son) who has volunteered to work with us and help guide us through the process. The officers of the USNC have unanimously agreed to pursue this course of action, and we will keep you informed of our progress.

In the May 1989 USNC newsletter, it was reported that we had grown to about 250 members. In May 2001, we also report about 250 members. I suppose the good news is that we appear to have stability. On the other hand, many of us believe that we should have shown some growth in membership during this time and that the population of U.S. hydrogeologists is underrepresented in IAH. During our February meeting, Andrew Skinner challenged us to double our membership during my term of office. He indicated that he believed that a U.S. membership of at least 500 was critical for the long-term viability of IAH as a whole. I believe that this will be a difficult goal to meet, but that it is feasible. It will require that all of us be a little more outspoken with our colleagues about the aims of our organization, the benefits and value of membership, and encouraging them to join. Obviously, if each present member brings in one new member, we will meet this goal. So I am asking each of you to do what you can to help the U.S. chapter grow to a level that we feel is realistic, attainable, and will infuse the organization with new ideas and vitality.

Because the USNC is relatively small in membership, I believe that one strategy that can simultaneously increase our exposure to other professionals, while also providing additional value to our own members, is to co-sponsor meetings, conferences, short courses, and other similar professional events for which we are not the primary organizers. This effort is already underway and we have already co-sponsored a Symposium on Hexavalent Chromium in Groundwater organized by the Groundwater Resources Association (GRA) of California, which was held in Burbank, CA, January 25, 2001, and attended by over 300 professionals. Co-sponsorship of several additional California conferences are already planned (and described elsewhere in this newsletter). These cooperative activities have been made possible by the volunteer efforts of Vicki Kretsinger, who is an IAH member and a co-founder of GRA, and we appreciate the generous donation of her time. (Additional information about GRA of California and their meetings and conferences can be obtained from their web site, <http://www.grac.org/>). If any of you are aware of any other upcoming meetings organized by state or regional associations or technical groups that might be appropriate for co-sponsorship by IAH, please let me or one of our other officers know about it. Increasing visibility is certainly one track towards increasing membership.

I would like to hear from you if you have any ideas or suggestions on how to make this a better organization, how to increase membership, or how to serve you better. Please feel free to e-mail (lkonikow@usgs.gov) or call (703-648-5878). I look forward to hearing from you and to serving IAH for the next four years.

--Lenny Konikow

Your IAH US NATIONAL COMMITTEE

		E-mail	Phone
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

GET TOGETHER AT GSA MEETING IN BOSTON (NOV. 2001)

The Hydrogeology Division of the Geological Society of America has another excellent technical program in hydrogeology planned for the next Annual GSA Meeting, which will be held in Boston during Nov. 5-8, 2001. I suspect that many IAH members will be interested in attending, and you should check out the program. For those of you who do come to Boston, I propose that we have an informal get-together on Tuesday afternoon, immediately following the Hydrogeology Division Luncheon and Business Meeting (which usually ends sometime around 3:00 pm). I envision that in an informal "social" atmosphere we will have a chance to discuss common interests, including our international experiences, goals of IAH, and whether to formalize future such meetings.

■ *Lenny Konikow*

GSA BIRDSALL-DREISS DISTINGUISHED LECTURE

The Hydrogeology Division of the Geological Society of America has selected Dr. Graham E. Fogg to be the 2002 Birdsall-Dreiss Distinguished Lecturer. Graham is a Professor of Hydrogeology in the Department of Land, Air and Water Resources, at the University of California, Davis. He will be offering three Birdsall-Dreiss lectures, as follows:

- A. Plume Behavior in Heterogeneous Geologic Systems: Natural Attenuation, Remediation, and the Role of Diffusion.
- B. Groundwater Vulnerability and the Meaning of Groundwater Age Dates.
- C. A Geologic Approach to Simulation of Subsurface Hydrology.

Graham can be contacted at gefogg@ucdavis.edu for scheduling a visit. Also check his web page at <http://lawr.ucdavis.edu/faculty/fogg/> for further information.

IAH EDUCATION AND TRAINING DIVISION

REQUEST FOR CHAPTER AUTHORS FOR A NEW REFERENCE FOR HYDROGEOLOGISTS:

Field Hydrogeology - a standard guide for site investigations and report preparation
(Editor: Dr. John E. Moore)

Dr. John E. Moore, professor of hydrology at Metro State College (Denver Colorado), past president of IAH, and the chairman of the IAH Education Commission, would like to locate possible authors for chapters for this book, which is under preparation with Lewis Publishers for the IAH Education and Training Commission (to be available 2002). The book is intended both as a textbook and a field pocket guide for hydrogeology, and will contain standard methods for planning and undertaking hydrogeologic investigations, based on the American Society of Testing Materials (ASTM) standards, US Environmental Protection Agency and US Department of Interior field technical manuals. The guide will contain chapters on:

- Hydrogeologic fundamentals and description of conceptual models.
- How to plan a hydrogeologic field investigation.
- How to conduct a well inventory.
- Surface hydrogeologic investigations (geophysical methods etc.)
- Subsurface hydrogeologic investigations (aquifer tests etc.)
- A working computer model that can be used to design aquifer tests.
- Detailed list of sources of hydrogeologic, information, and web sites.
- How to plan, write, and review hydrogeologic field reports.

If you are interested in writing a chapter, please contact John at: moore123@aol.com

REQUEST FOR CONTRIBUTORS TO ANTHOLOGY ON INTERNATIONAL GROUNDWATER MANAGEMENT

We have had a request for contributors for chapters for an anthology titled *International Groundwater Management*, to be edited by Dr Mary Brentwood and Dr Stephen Robar of the University of Pittsburgh - Bradford, PA. The book will examine groundwater management issues in the major regions of the seven continents. The editors are "looking for contributions from professional resource managers as well as scholars across the disciplines, in order to obtain a variety of treatments of the subject and a full spectrum of geographic regions." Interested authors can obtain further information and an author's contribution proposal form (to be returned by September 10, 2001) from Dr Stephen Robar, Co-Director, Environmental Studies Program, Department of History/Political Science, University of Pittsburgh - Bradford, 300 Campus Drive, Bradford, PA 16701. Phone 814-362-0242. Fax 814-362-7529. E-mail robar@pitt.edu.

CONFERENCE ANNOUNCEMENTS

Thirty-First Congress of IAH, September 9-15, 2001: Munich, Germany

September 9-15, Munich, Germany. Thirty-First Congress of IAH. New Approaches to Characterizing Groundwater Flow. INFO: Munich 2001, Institute of Hydrology, GSF National Research Centre of Environment and Health GmbH, Ingolstädter Landstr. 1, 85764 Neuherberg, Germany.
Tel: +49 89 31872585; FAX: +49 89 31873361; E-mail: seiler@gsf.de; Web: www.agh.geo.uni-muenchen.de/munich2001/

Idaho - 5th Ground Water Technical Conference for Idaho, October 1-2, 2001, Boise, Idaho, USA.

The keynote speaker will address the impact of pharmaceuticals in ground water and there will be a guest luncheon speaker. Over 30 abstracts have been reviewed and are anticipated for presentation at the conference. The abstracts cover a wide range of topics such as ground water flow and transport modeling, permeable reactive barriers, geochemistry, landfill contamination, ground water/surface water interaction, statistical analyses of spring discharge, and others. There will be a panel discussion on the effects of the drought in Idaho and four short courses will be offered at no additional cost (planned topics: Radon and Arsenic Drinking Water Rules, DNA in Ground Water Studies, Nitrogen Isotopes in Ground Water Studies, and Simulating TMDL Processes). For registration information, please contact the Idaho Water Resources Research Institute, Morrill Hall, Room 205, P.O. Box 443011, University of Idaho, Moscow, Idaho, 83844-3011 USA. E-mail is iwrri@uidaho.edu or phone is 208-885-6429. Please refer to Connections 2001: Idaho's Ground Water Technical Conference, Attn. Peggy Hammel.

Third Contaminant Symposium: "Arsenic in Groundwater" -- October 2, 2001: Sacramento, California

The California Groundwater Resources Association will be hosting a symposium in the series on Groundwater Contaminants: Arsenic. Cooperating organizations include IAH, USGS, National Ground Water Association, Water Education Foundation, Association of California Water Agencies, and others. The Symposium will be held in Sacramento; the tentative date for the one-day event is October 2, 2001.

Arsenic occurs naturally in the environment, but is also present in some places because of man's activities. The distribution of arsenic in soil, groundwater, and surface water has been extensively investigated during the past two decades. The USGS has collected and analyzed arsenic in potable water from over 18,000 wells in nearly 600 counties across the U.S. Although arsenic is ubiquitous and generally detectable at some concentration, the issue of focus is to what extent are detections of arsenic significant with regard to protecting our water supplies and public health. For centuries, arsenic has been recognized as a toxic element. In 1999, the National Research Council (NRC) reported on historical toxicological studies relating to arsenic and its contribution to a variety of cancers. Further, the NRC recommended that the present maximum contaminant level (MCL) for arsenic in drinking water of 50 µg/L be lowered. After decades of scientific study, followed by the USEPA regulatory process of public review

and comment, the USEPA in January 2001 recommended that the standard be lowered to 10 µg/L. Shortly thereafter, in March 2001, the process for EPA to reach a final decision on the rule came to an abrupt halt. With the entrance of the new political administration, and a new head of the USEPA, the recommendation to lower the standard was delayed for reasons cited to be a lack of “clear proof” of the health risk and the need to allow for independent reviews of the science behind the studies and estimates of implementation costs.

While the extensive and prolonged process of reevaluating the arsenic MCL had reached a tentative milestone early this year, the delay has caused intense focus on the regulatory process of developing or changing drinking water standards. This Symposium is planned to bring the scientific community, regulators, water purveyors, industry, attorneys, and political representatives up-to-date on the current issues surrounding arsenic in groundwater. The format of the one-day conference will be similar to GRA’s recent symposium on Hexavalent Chromium and will include the following sessions: (1) Arsenic Geochemical Characteristics and Distribution, (2) Risk, Toxicology, and Regulations, (3) Water Supplies and Social, Political, Economic, and Legal Issues, and (4) Treatment and Remediation.

Watch for upcoming Symposium details on the GRA web site at www.grac.org/.

Managing California's Groundwater: The Challenges of Quality and Quantity: October, 2001 Sacramento, California

Planning is underway for the 23rd Biennial Groundwater Conference, which will be held October 30-31, 2001, in Sacramento. The theme of the conference is “Managing California’s Groundwater: The Challenges of Quality and Quantity.” For 46 years, this conference, first sponsored by the University of California and the California Department of Water Resources (DWR), has been bringing to the attention of policy-makers the importance of the groundwater resource. Additional sponsors of the Conference are the Groundwater Resources Association of California, State Water Resources Control Board, Water Education Foundation, and the U.S. Geological Survey. Cooperating organizations include the International Association of Hydrogeologists.

Concurrent technical and policy sessions will be held during the two-day conference that will address the following areas: groundwater quality; groundwater quantity; groundwater management: new tools; watershed effects on groundwater; emerging non-conventional contaminants; development of ground water in impaired water areas; GIS and hydrologic applications; and remediation technologies. Registration for the event is \$195 before September 30; \$250 after September 30. The student rate is \$65 for the two-day event. Registration covers printed abstracts, luncheon, and an evening reception. Watch for more information to appear on the GRA web page (www.grac.org/) and on the UC web site (www.waterresources.ucr.edu). For further information, call Cindy DeChaine University of California Water Resources Center, at (909) 787-4327.

Conference on Uranium Mining and Hydrogeology, and International Mine Water Association Symposium, September 15-21, 2002: Freiberg, Saxonia, Germany

Abstract deadline January 14, 2002; In cooperation with IAH, among others. For further information please go to the web-page <http://www.geo.tu-freiberg.de/umh/index.htm> or email: UMH@geo.tu-freiberg.de or umh@imwa.de

COURSE ANNOUNCEMENTS

Short Course on “Geostatistics for Hydrogeological & Environmental Applications” - July/August 2001, San Jose State Univ., California.

This two-day course is being sponsored and organized by the California GRA with the Geology Department, San Jose State University, and in cooperation with IAH and the Association of Engineering Geologists. The course, which aims to teach the fundamentals of geostatistics in the context of environmental and hydrogeological applications, will be held July 31 and August 1 at San Jose State University. Geostatistics offers practical approaches to addressing the impact of spatial variability of subsurface properties such as permeability, lithology, or solute concentration. The instructor is Dr. Steven F. Carle of Lawrence Livermore National Laboratory. Specific topics will include:

- Modeling spatial variability, with emphasis on understanding the meaning of parameters that prescribe variogram, covariance, and correlation models.
- Use of various forms of kriging and cokriging as mapping tools and estimates of uncertainty--which form is best for specific applications.
- Application of geostatistical simulation algorithms to stochastic simulation of continuous and categorical properties, particularly permeability and hydrofacies spatial distributions.

The course will mix theory and application by integrating working examples into the teaching of the geostatistical techniques. Theory will be presented with a goal of enhancing understanding of how to correctly apply geostatistical methods. Prior exposure to basic statistics and linear algebra is recommended, but not required. In advance of the course, students are encouraged to donate trial data sets to use as instructive example applications. The instructor will demonstrate geostatistics applications with GSLIB (public domain software). This will not be a software-training course, but rather, the emphasis will be on acquiring working knowledge, conceptual understanding, and awareness of both the usefulness and limitations of geostatistical methods in environmental and hydrogeological applications.

For more information, contact Vicki Kretsinger of Luhdorff and Scalmanini, Consulting Engineers (530) 661-0109 or check the GRA web site (www.grac.org/).

Short Course on “Principles of Groundwater Flow and Transport Modeling”, September 2001: California State University, Sacramento

This 3-day course, offered by the California GRA with the University of California Cooperative Extension/Groundwater Hydrology Program and the Geology Department of California State University, Sacramento, and in cooperation with the International Association of Hydrogeologists, introduces the conceptual principles and practical aspects of groundwater 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. The course includes review of the concepts of groundwater flow and transport, and of finite-difference and finite-element methods. It will also include an overview of various software programs for groundwater flow and transport modeling 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. Class exercises include site-specific models as well as basin/watershed wide models.

Instructors for the course include Dr. Graham Fogg, Dr. Thomas Harter, and Peter Schwartzman. The course will be held at the California State University, Sacramento, in Sacramento on September 18-20, 2001. For more information, contact Donna Geyen at the Groundwater Resources Association of California (916-446-3626).