Newsletter

International Association of Hydrogeologists
U.S. National Chapter

In This Issue:

39th IAH Congress in to meet in Niagara Falls!
Officer Elections
U.S. Chapter News
Report on New IAH Commissions
Report - Permeable Reactive Barrier for Uranium in Ukraine
Plus Lots More!

August 2012
Volume 41, No. 2

International Association of Hydrogeologists
U.S. National Chapter Newsletter

Vol. 41, no. 2: August, 2012

Editor: Dave Kreamer, University of Nevada, Las Vegas

CONTENTS

A Note from the Chair – MIKE WIREMAN,
A Note from the Vice President for North America – LENNY KONIKOW
Treasurer's Report – VIC HEILWEIL

ARTICLES, REPORTS, NOTICES, AND ANNOUNCEMENTS

- **IAH 39th Congress, Niagara Falls, Canada, 16 – 21 September, 2012**
- **IAH USNC Executive Board Meeting at 39th Congress - Open to All Members - Sheraton on the Falls Hotel – Date, time and location will be provided by email to all USNC members**
- **New IAH Network on Groundwater and Ecosystems and the Commission on Regional Groundwater Flow to Meet at the 2012 39th IAH Congress**
- **U.S. National Chapter Elections**
- **Installation Of A Permeable Reactive Barrier In Uranium Mining District – East Central Ukraine**
- **Professors of Graduate Students – Opportunity for *Free* Student Memberships**
- **Students Supported by IAH USNC in Past Years - Where Are They Now?**
- **Internationally Shared Aquifer Resource Management (ISARM) - Americas initiative**
- **Download and Print USGS Topographic Maps**
- **Hydraulic Fracturing: EPA Reports Water at Dimock, PA Safe to Drink**
- **USGS Releases Groundwater Quality Trends for 1988-2010**
- **Senate Foreign Relations Committee Reports on Global Water Bill**
- **PELA GeoEnvironmental Professional Joins Karst and Caving Expedition in Vietnam**
- **Springer Science And Business Media Announces Special Issues Of Environmental Earth Sciences Journals**
- **In Memoriam: Paul Witherspoon**

CONFERENCES AND ASSOCIATED SOCIETIES

- **National Ground Water Association EXPO, Las Vegas, NV, USA, 4-7 December 2012**
- **National Ground Water Association Summit, San Antonio, TX, USA, 28 April – 2 May**
- **IAH USNC Co-sponsors Sessions, 2012 Geological Society of America Annual Meeting, Charlotte, NC, USA, 4-7 November**
- **XI Latinamerica Hydrogeological Congress – IV Columbian Hydrogeological Congress, Cartegena de Indias, Columbia, 20-24 August 2012**
- **Upcoming Groundwater Resources Association (GRA) Events**
- **Summary of Upcoming Events**

IAH/US NATIONAL CHAPTER: EXECUTIVE COMMITTEE 2009-20012

Chairman:	**Michael Wireman** **wireman.mike@epa.gov**	**U.S. Enivronmental Protection Agency** **(303) 312-6719**
Vice President, North America:	**lkonikow@usgs.gov**	**Leonard F. Konikow U.S. Geological Survey**
Past-Chair:	**John M. (Jack) Sharp** **jmsharp@mail.utexas.edu**	**Univ. Texas, Austin**
Secretary:	**Dave Kreamer** **dave.kreamer@unlv.edu**	**University of Nevada, Las Vegas** **(702) 895-3553**
Treasurer:	**Victor Heilweil** **heilweil@usgs.gov**	**U.S. Geological Survey**
Director:	**William Alley**	**U.S. Geological Survey**
Director:	**Vicki Kretsinger Grabert**	**Luhdorff & Scalmanini, Consulting Engineers**
Director:	**Jim Lamoreaux**	**PE LaMoreaux & Associates, Inc.**

Some Participants at the Board Meeting of the International Association of Hydrologeologists, U.S. National Chapter at the Ground Water Summit, Garden Grove, CA, May 8, 2012. From left to right: Devin Galloway, Jim LaMoreaux, Mike Wireman and Vicki Kretsinger Grabert.

A NOTE FROM THE CHAIR

After 4 busy and enjoyable years this is the final newsletter for the current USNC Board of Directors. As President of the USNC I want to use this opportunity to send a heartfelt thanks to the Board members I have worked with; Lenny Konikow, Jack Sharp, Dave Kreamer, Vic Heilweil, Vicki Kretsinger, Jim Lameroux, Bill Alley and John Moore. Special thanks go out to Lenny and Jack for their helpful advice as past Presidents of the USNC and to Dave Kreamer and Vicki Kretsinger for the terrific newsletters that we have produced over the past 4 years.

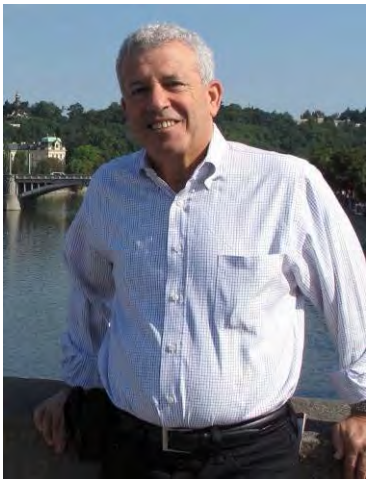
The major accomplishments of this Board during its four year term include:

- **Strengthening our relationship with IAH International,**
- **Creating a US Chapter website (thanks to Vicki),**
- **Establishing an endowment fund,**
- **Developing new partnerships with Engineers Without Borders and Hydrogeologists Without Borders,**
- **Participating extensively in the planning for the September, 2012 IAH Congress in Niagara Falls, Ontario.**

These accomplishments were due to the hard work of the current Board members. It is now time for elections to be held to choose new Board members for the next 4 year term. The slate of candidates for the new Board of Directors, includes a candidate for President, Treasurer and candidates for Directors. Vic Heilweil, the current USNC treasurer is a candidate for President of the USNC (also serves as Chair of the Board of Directors). Vicki Kretsinger, a current Board member is a candidate for treasurer of the USNC. Jim Lameroux is a candidate for a second term as a Director along with two new candidates – Suzanne Pierce and Devin Galloway. I will stay on the Board as past-President. We also invite Lenny Konikow, Jack Sharp and John Moore (as past-Presidents) to stay involved. As always, we are looking for new Board members- so if any USNC member is interested please let me know. For more details regarding the election please see article in this newsletter. Elections are currently underway for officers of IAH. An electronic ballot was sent to all IAH members around the world in late July. Voting is open until September 15. I want to congratulate Dave Kreamer, current Secretary for the USNC, who has been nominated and is standing for Vice President – North America. Good luck Dave!

A meeting of the USNC Board of Directors was held on May 8, 2012 during the NGWA Ground Water Summit in Garden Grove, CA. Minutes from the meeting were sent to all members in on June 6, 2012. The next USNC Board of Directors meeting will be held at the September 16-21, 2012, 39th Annual IAH Congress in Niagara Falls, Ontario. Specific information regarding he date, time and location of the Board meeting will be sent to all USNC members via email prior to the Congress. Please plan to attend the Congress. A number of sessions are being chaired by USNC members and some short courses are being presented by USNC members. This is a great opportunity to network with international colleagues.

Mike Wireman, Chair – IAH-USNC



A Note From the Vice President for North America

The first IAH Congress in North America since the 1998 Congress in Las Vegas will be held in Niagara Falls, Canada, in September, with the overall theme of "Confronting Global Change." It will certainly be the largest and most successful Congress yet, and registration has already capped out at the limit of 900. I hope that many of you will attend and participate in this event. Dr. John Cherry, Dr. Allan Freeze, Dr. Frank Schwartz, & Dr. Jozef Tóth will provide invited keynote talks. I hope to see you there. Program details are available at http://www.iah2012.org/

After four years as IAH Vice President for North America, my term of office will end at the Niagara Falls Congress. I have enjoyed serving the IAH community in this position—both the international community as well as the USNC membership—and felt it was an honor and privilege to have been chosen for this VP position. I feel that the future of IAH is strong, especially as they move to implement recommendations made as part of their Forward Look strategy. My confidence is further bolstered by the knowledge that my successor will be a highly competent and enthusiastic current member of the Executive Committee of the U.S. National Chapter, where I had many opportunities to interact with him (I won't name him since the election results are not yet available). I look forward to continuing to work with IAH and its members in the future, and thank all of you for your support in the past.

Lenny Konikow

Treasurer's Report for the National Chapter (August 2012)

2012 U.S. National Chapter (USNC) memberships:

- **As of July 30th, we have 236 paid USNC members, along with 21 honorary members and 19 sponsored members. This is approximately the same as last year at this time. While there are 48 members from 2011 that have not renewed their memberships, we have had 47 new paid members join IAH this year.**
- **In addition, individual members in the USNC are sponsored 11 developing country memberships and the USNC is sponsoring 5 developing country and 3 student members this year.**

2012 USNC financial status:

- **Regarding our general funds, we currently have about $17,000 in our JPMorgan Chase checking account and about $24,000 in our Vanguard Mutual Fund Account (Total Stock Market Index Fund), with an additional $250 being automatically invested monthly (as a transfer from our Chase checking account).**
- **Separately, we have about $11,000 in our Endowment Fund, split evenly between two Vanguard Funds (STAR and Extended Market Index). Our goal is to add additional contributions and let these funds grow to $20,000 before utilizing earnings for funding our endowment goals.**
- **We will receive about $2,300 in membership dues for 2012, or 10% of the approximately $23,000 IAH dues paid by US National Chapter IAH members. We will use about $800 of this for sponsored memberships and expenditures, including American Geological Institute membership dues, tax preparation, and tax-exempt incorporation fees. The remainder will be invested in our Endowment Fund at the end of the year.**

Vic Heilweil

Editor's Thanks

I would like to thank all of you who contributed to the IAH USNC newsletter over the last few years. Your contributions really made the newsletter go. All of us on the Executive Board of the U.S. National Chapter are very grateful and appreciative!

Dave Kreamer

ARTICLES, REPORTS, NOTICES, AND ANNOUNCEMENTS

39th IAH Congress, Niagara Falls, Ontario, Canada - 16 to 21 September, 2012

Open to All!

Niagara Falls is the place to be for the 2012 IAH CONGRESS. Don't miss the fun!!

Open to All!

39th IAH Congress, Sheraton on the Falls Hotel, Niagara Falls, Ontario, Canada – 16 to 21 September, 2012

Next month, Canada will host the 39th IAH Congress in Niagara Falls, Ontario. The 2012 Congress theme is Confronting Global Change. The Congress will allow researchers to present on a wide variety of new and evolving hydrogeological issues and opportunities. Sub-themes to be highlighted include:

- **Climate Change**
- **Source Water Protection**
- **Groundwater and Energy**
- **Groundwater/Surface Water Interaction**
- **Groundwater and Cities**
- **Aquitard Hydrogeology**

A variety of field trips will be available to participants both on the mid-week field trip day as well as post conference.

2012 is a special year for hydrogeology in Canada as it is the 40th anniversary of the formation of the Canadian National Chapter of the International Association of Hydrogeologists (IAH-CNC Inc.). Historical plenary sessions featuring some of Canada's most esteemed hydrogeologists are being planned to honour this occasion.

Please visit www.iah2012.org for more information on this exciting conference.

IMPORTANT DATES

- **Deadline for discounted conference room rate-August 17, 2012**
- **Check-in for the Congress -September 16, 2012**
- IAH US National Chapter Executive Board Meeting - Sheraton on the Falls Hotel, Room – To Be Announced
  Date, time, and location will be provided by email to USNC members

All IAH Members are welcome!

Congress Continued

*Hosts of the **2012 Congress***

The International Association of Hydrogeologists - *Canadian National Chapter Inc.*
L'Association Internationale des Hydrogéologues- *Section Nationale Canadienne Inc.*

Congress Mailing Address: **Attention Steve Holysh, 2012 Congress Co-Chair**
c/o TRCA, 70 Canuck Drive, Building 100, Downsview, Ontario, Canada, M3K 2C5
www.iah2012.org info@iah2012.org

Note that the main registration package includes: Sunday Icebreaker/Trade Show Reception, IAH 2012 Electronic Proceedings,Mon/Tue/Thurs/Fri technical sessions, coffee breaks and lunches, one mid-congress tour, and Thursday Gala Dinner

Some Highlights of the Technical Program

- **9 short courses scheduled for Sunday September 16th (either full or half day);**
- **1 Pre-congress tour on Sunday Sept 16th (full day);**
- **4 Post-congress tours lasting from 1 day to 4 days;**
- **967 abstracts received.**
- **We have tentatively scheduled 4 Plenary talks and 2 Distinguished Lectures. We will make these time slots without concurrent technical sessions.**
- **Monday – 2 Plenary Talks: Joe Toth and Frank Schwartz,**
- **Tuesday – 2 Distinguished Lectures: Majid Hassanizadeh, Darcy Lecture (NGWA) and Marvin Glotfelty McEllhiney Lecture (NGWA),**
- **Thursday – 2 Plenary Talks: John Cherry and Al Freeze**

Other Congress Events:

New IAH Network on Groundwater and Ecosystems and the Commission on Regional Groundwater Flow to Meet at the 2012 39th IAH Congress

Network on Groundwater and Ecosystems

The new *Network on Groundwater and Ecosystems* is dedicated to improving our understanding of the relationship between groundwater and ecological resources. To achieve this goal, the Network's key objective is to promote interdisciplinary research, collaboration and exchange of ideas among hydrogeologists, biologists, physical, and social scientists regarding the relationship between groundwater and ecology.

A business meeting of the Network is planned to be held at the upcoming IAH Congress in Niagara Falls. The event will be the formal kickoff of this new IAH Network and will help guide the future activities and operation of the Network. The purpose of the meeting will be to elect the director and two co-directors and to initiate a formal Action Plan including projects, activities, deliverables, and potential collaborators. An Agenda will be prepared by a "Meeting Committee". Volunteers for this committee are needed. Please contact Joe Gurrieri (jgurrieri@fs.fed.us) if you are interested in organizing the meeting.

INVITATION

to the first meeting of the newly formed

REGIONAL GROUNDWATER FLOW COMMISSION (RGFC) OF THE IAH

The mission of the Commission is:

Foster the ***research*** and ***practical application of regional groundwater flow*** internationally.

Motivate new basic research and ***promote the application of knowledge of basin-scale gravitational groundwater flow systems*** to disciplines: regional water resources, geotechnics, geothermics, mineral exploration, petroleum exploration, landscape architecture, environment protection, soil and groundwater salinization and amelioration, forestry and agriculture, land use planning and management.

All "Friends of Regional Groundwater Flow" are welcome to join us for the first "Business and Mixer Meeting" of the new IAH commission!

If you are interested in regional groundwater flow systems join the committee and take part in the planned activities:

Group meetings;
Sessions at conferences
Stand-alone specialist Meetings/Symposia
Training workshops
Research
Liaison/Interaction with other groups/organizations
Education
Expert advice

Groundwater dependent lake in Hungary

Meet us at the first meeting to be held at the 39th IAH Congress at the Niagara Falls! Date: not fixed yet

If you are interested, please contact the caretakers below:

József Tóth,
Joe.Toth@ualberta.ca,
University of Alberta, Edmonton

Judit Mádl-Szőnyi,
szjudit@ludens.elte.hu,
Eötvös Loránd University, Budapest

IAH – U.S. National Chapter Elections

The term of the current USNC Board of Directors will end on December 31. The USNC is currently holding an election for President, Treasurer and Directors. Vic Heilweil is a candidate for President of USNC, Vicki Kretsinger is a candidate for Treasurer and Suzanne Pierce and Devin Galloway and Jim Lameroux are candidates for Directors. Ballots will be sent to all USNC members by August 17. Voting will be open until September 15, 2012. Short biographies and photos of the candidates are included here. Please be sure to vote!

Mike Wireman, President –USNC-IAH

Standing for Chairperson of the International Association of Hydrogeologists, U.S. National Chapter – Victor Heilweil

Biography: Vic Heilweil is a Research Hydrologist and the Ground Water Specialist for the USGS Utah Water Science Center. He is also an Adjunct Professor in the University of Utah's Department of Geology and Geophysics. Before completing a Ph.D. at the University of Utah, Vic served as director of the Andean Children's Foundation (CHOICE International) in Viacha, Bolivia, focusing on rural groundwater development. His current research is focused on both natural and managed aquifer recharge to permeable bedrock in arid settings of the western US and abroad (Europe, Central Americal, South America, West Africa, Middle East). Research has been published in AGU Monographs, Ground Water, Hydrogeology Journal, Hydrological Processes, Journal of Hydrology, Vadose-Zone Journal, and Water Resources Research. He currently serves as Treasurer for the U.S. National Chapter of the International Association of Hydrogeologists and is a past Associate Editor for Hydrogeology Journal.

Vision Statement: I appreciate the opportunity to participate in the upcoming U.S. National Chapter (USNC) election as a candidate for President of the Board of Directors. During the past four years as Treasurer for the USNC, I have gained a great appreciation for the organization and the advances that have been made under the current board, led by Mike Wireman. My vision for the next four years would be to continue with current focus areas, including (1) enhancing communications amongst USNC members, facilitated by our ever-improving newsletter and chapter website; (2) attracting new members, particularly students and young professionals; (3) increasing the number of sponsored developing country and student members; and (4) reaching our Endowment Fund goals in order to utilize earnings for philanthropic causes. In addition, I would like to promote USNC participation the International Secretariate's new "Twinning" program, whereby developed country national chapters such as ours are matched with developing country national chapters to facilitate technical exchange and assistance programs; having a "Twin" chapter may provide interesting international opportunities for some of our USNC members.

Standing for Treasurer of the International Association of Hydrogeologists, U.S. National Chapter – Vicki Kretsinger Grabert

She is the President and a Principal Hydrologist with Luhdorff & Scalmanini, Consulting Engineers (LSCE) with more than 28 years experience in groundwater quality monitoring and groundwater management. She has an M.S. in water science (with an emphasis on groundwater hydrology and water quality) from the University of California, Davis. She specializes in the understanding of contaminant transport and fate in hydrologic systems and the potential implication of the presence of natural or man-made contaminants. She also specializes in geochemical relationships and their correlation with groundwater flow, including mass transfer processes and migration and accumulation mechanisms occurring along groundwater flow paths and the occurrence of natural constituents such as arsenic and chromium. She has managed county and basin-wide groundwater monitoring programs, analysis of groundwater conditions, and accompanying data management systems. She has managed groundwater management plans and/or water supply assessments for cities and water purveyors. She has been a member of IAH since 1992 and served on the Executive Committee of the US National Chapter of the International Association of Hydrogeologists (2009-2012). She provided input to IAH's *Forward Look* planning document at a special meeting convened in Reading, UK in 2010. She is the Founding President of the Groundwater Resources Association of California (GRA), a GRA Director (since 1992); and Chair of the Affiliates Committee. She planned and organized GRA's new Contemporary Groundwater Issues Council. On behalf of GRA, she is a co-leader of the California Water Plan Update 2013 Groundwater Caucus. She is a board member of the Water Resources Collections and Archives. She is Past Chair of the Association of Ground Water Scientists and Engineers (AGWSE, Division of the National Ground Water Association). She is a co-editor of a semi-annual themed column in NGWA's *Ground Water* Journal.

Standing for New Board Member of the International Association of Hydrogeologists, U.S. National Chapter – Devin Galloway

Devin is the Groundwater Specialist for the Western Water Science Field Team of the USGS, a position he has held for the past 12 of his 34 years of service with the USGS. His principal research interests are in the field of Hydrogeology and more broadly, Groundwater in Geologic Processes. He is the author or co-author of more than 70 published articles (excluding professional meeting abstracts); 16 in peer reviewed journals (including, Geology, Geophys Res Lett, Hydrogeol J, J Geophys Res, J Volcanol Geoth Res, Rev Eng Geol, Water Resour Res); 36 USGS publications; and most of the remaining in conference proceedings, book chapters, encyclopedias, and newsletters. Devin is a frequent

peer reviewer for journals in the fields of Hydrogeology, Environmental and Engineering Geology, and Remote Sensing. He has collaborated on several international projects in Asia and the Middle East for the USGS. Devin is a longtime member of AGU, ASCE, GSA, IAH and NGWA. He currently serves as Chair of the UNESCO Working Group on Land Subsidence, and Vice-Chair of the ASCE Subcommittee on Land Subsidence of the Managed Aquifer Recharge Committee. ASCE (EWRI) bestowed the 2012 Distinguished Chair Award to Devin for leading development of the Standard, "Land Subsidence due to Fluid Withdrawals". He earned MS degrees from Indiana University (Environmental Sciences) and from the University of Illinois (Civil Engineering). Devin resides in Sacramento, California with his wife, grandson and the family dog.

Standing for New Board Member of the International Association of Hydrogeologists, U.S. National Chapter – Suzanne A. Pierce

Suzanne A. Pierce is a Research Assistant Professor with the Center for International Energy and Environmental Policy in the Jackson School of Geosciences and Assistant Director of the Digital Media Collaboratory in the Center for Agile Technology at The University of Texas at Austin. A trained hydrogeologist with a focus on participatory deliberation, Dr. Pierce has prior professional background as a Scientist with Sandia National Laboratories and as the Environmental Manager for one of the world's largest metals mines.

Dr. Pierce has built a record of research achievement and her research has garnered recognition at the local, regional, national, and international levels. Professional honors include selection as a Fulbright Nexus Scholar for the Western Hemisphere, ICE WaRM Liaison to the Australian Centre for National Groundwater Research and Training, a Science to Achieve Results (STAR) Fellow for the Environmental Protection Agency, and a Scholar of the Philanthropic Educational Organization (PEO).

Dr. Pierce adopts a scholar-practitioner approach to integrate science-based information with human organizational systems for application to groundwater management and energy-water problems. Resultant decision support systems link participatory modeling with simulation, optimization, and multi-stakeholder concerns. Current projects include development of hydroinformatics for sustainable aquifer yield in Central Texas and South Australia, along with evaluating perceptions of science at a geothermal basin in the Atacama Desert of Chile.

Elections Continued

Standing for New Board Member of the International Association of Hydrogeologists, U.S. National Chapter – Andrew H. Manning

Andy Manning is a Research Geologist in the U.S. Geological Survey's Central Mineral and Environmental Resources Science Center in Denver, Colorado. His research is focused mainly on groundwater flow in mountainous terrain and fractured rock, the environmental impacts of mineral deposits, and the application of environmental tracer techniques. He has published his work in Water Resources Research, Journal of Hydrology, Ground Water, Environmental Science and Technology, Geophysical Research Letters, Hydrogeology Journal, Geology, Tectonics, AGU Monographs, as well as numerous USGS publications. He serves as an Associate Editor for Hydrogeology Journal, and regularly performs peer reviews for a variety of hydrological, geochemical, and geological journals. Before completing a Ph.D. in hydrogeology at the University of Utah, he received his MS in structural geology, worked in environmental consulting, and managed environmental restoration work with the U.S. Army Corps of Engineers. Andy has performed collaborative work internationally with scientists in Asia, Europe, Central America, and Canada. He's a long-standing member of GSA and AGU.

Standing for Continuing Board Member of the International Association of Hydrogeologists, U.S. National Chapter – James W. LaMoreaux

Dr. James W. (Jim) LaMoreaux is Chairman of P.E. LaMoreaux and Associates, Inc. (PELA), an international consulting company based in Tuscaloosa, Alabama. PELA provides services in geology, hydrogeology, environmental sciences, and cultural resources/archaeology. He is Editor in Chief of Environmental Earth Sciences, an international multidisciplinary journal covering the interactions between humans, natural resources, ecosystems, special climates, or unique geographic zones and the earth. He also serves as Editor for Springer's Environmental Earth Science Book Series. Jim has served on the IAH USNC Board of Directors for four years, has more than twenty-eight years experience in the areas of project management and communications, and has supervised the administration of more than six hundred projects. Project activities for which he has been responsible range from the development of proposals and formulation of work tasks through the preparation of final reports and invoicing. He is also responsible for all day-to-day activities relating to personnel, accounting, general administration, and oversees all activities of the technical, administrative and operational divisions of P.E. LaMoreaux & Associates, Inc.. In addition, he directs an extensive environmental communications section and supervises PELA's marketing, advertising, and public relations programs.

Installation Of A Permeable Reactive Barrier In Uranium Mining District – East Central Ukraine

Mike Wireman – US EPA Region 8, with Dr. Boris Kornolovich –Kiev Polytechnical University

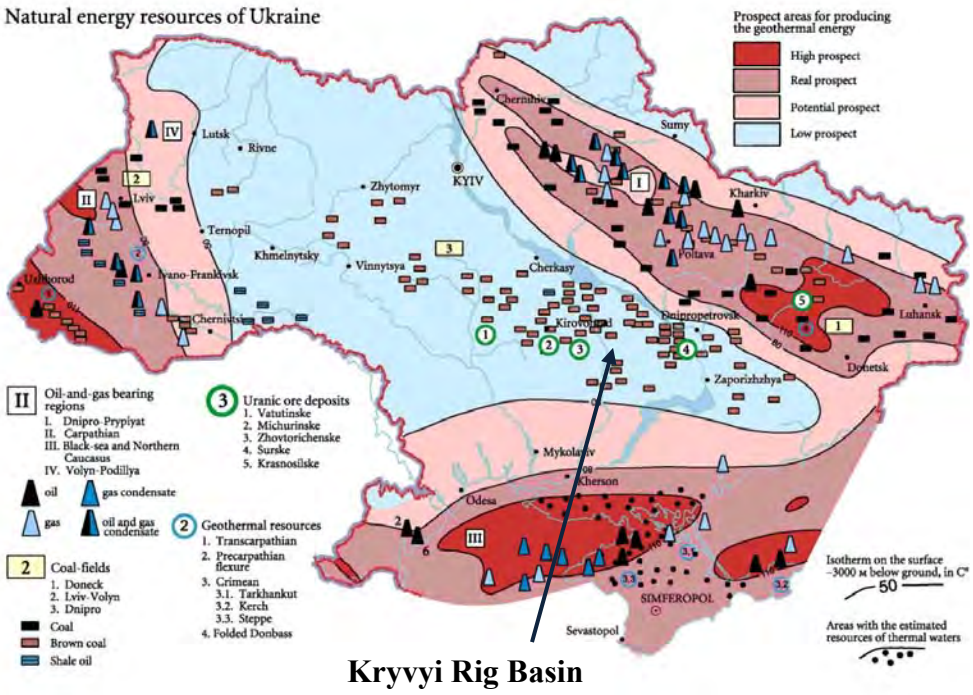
In the June 2009 USNC newsletter I reported on a USEPA Office of Research and Development project entitled: *Regional evaluation of mining-related metals contamination, risks and innovative remediation technologies in STCU nations: Ukraine and Georgia.* The project was authorized and funded by the U.S. State Department as part of the Bio-chem Redirect Program (BCRP). The BCRP is focused on non-proliferation, anti terrorism and de-mining activities in former Soviet Union countries. The project is being administered by the Science and Technology Center (STCU) in Kiev, Ukraine. One of the key objectives of this project was to pilot the use of an innovative remediation technology for groundwater impacted by mining activities. This article is a follow up to the June 2009 article and reports on the installation and preliminary effectiveness of a permeable reactive barrier installed in October 2011 downgradient of a large tailings facility at a uranium mine near Zhoty Vody, Ukraine.

Ukraine, one of the largest of the former Soviet Union countries, has a diverse mining industry that produces a wide variety of metallic and nonmetallic minerals that accounts for a significant part of the county's economic output. The major mining products include iron, manganese, uranium ores, coal, titanium, zirconium, beryllium, sulfur, mercury, non-metallic raw material for metallurgy and potash salt. Ukraine is a leader in Europe and the world with respect to known mineral reserves of: iron ore - 30 billion tons (6% of the world reserves), manganese ore – 2.5 billion tons (22.4%), coal – about 46 billion tons, and pure uranium – 42.6 thousand tons. Mining of titanium ore and production of titanium concentrate in Ukraine accounts for about 20% of the world production (National Report of the State of Environment in Ukraine, 2006). Since the break up of the Soviet Union, the development of mining and processing industries in Ukraine has increased. To accommodate modern understandings related to the environmental and human health risks associated with mining and to better compete in the modern free market the Ukrainian mining industry is starting to recognize the need for environmental characterization and management in mining districts, including remediation of contaminated water resources. Locally, there is significant pollution and degradation of the environment, particularly contamination of water resources, soil, and air near towns associated with past mining practices. The ability of the Ukrainian government and mining industry to reduce the human health risk in large mining districts has been constrained by the economic crisis and implementation of structural changes in the public health care system. The BCRP program is aimed at providing technical assistance to Ukrainian scientists engaged in work related to water resource remediation.

The Kryvyi Rig basin in the east central part of Ukraine (Figure 1) is one of the largest uranium mining districts in Europe. Uranium mining has a long history in Ukraine and occurred throughout the Soviet period. Zhovty Vody is one of the largest cities within the uranium mining district and is a center of uranium and iron ore milling and primary enrichment. Uranium mining and processing (including a hydrometallurgical plant and sulfuric acid plant) is conducted by the state owned enterprise VostGOK. The mining company and the City of Zhoty Vody have partnered with EPA and the Kiev Polytechnic University to install a permeable reactive barrier at a hydrogeologically suitable location to treat groundwater contaminated by leachate from a large tailings facility near Zhoty Vody. The "Shch" tailings facility is located in the Hcherbakovskaya Gully – a right hand tributary to the Zhovta River. The facility, which overlies about 200 ha, is located is about1.5 km south of Zhoty Vody and about 1.0 km west of the Zhovta River. Liquid and solid process waste is discharged through slurry pipelines into the

tailings facility. Seepage from the tailings facility infiltrates to the shallow water table which has resulted in contaminated groundwater discharging to the Zhovta River which is used by local residents for domestic and agricultural purposes. Shallow groundwater occurs in an aquifer comprised of unconsolidated Tertiary and Quaternary sediments which overlie a thick residual layer developed at the top of Precambrian granites (Figure 2). This shallow aquifer is about 30 meters thick, and depth to the water table is less than 5 meters. A steep gradient (0.23 -0.4) has developed on the water table as a result of the leachate mound beneath the tailings facility. This results in a fast travel time to the discharge area into the Zhovta River.

Figure 1 – Location of Kryvyi Basin -Ukraine

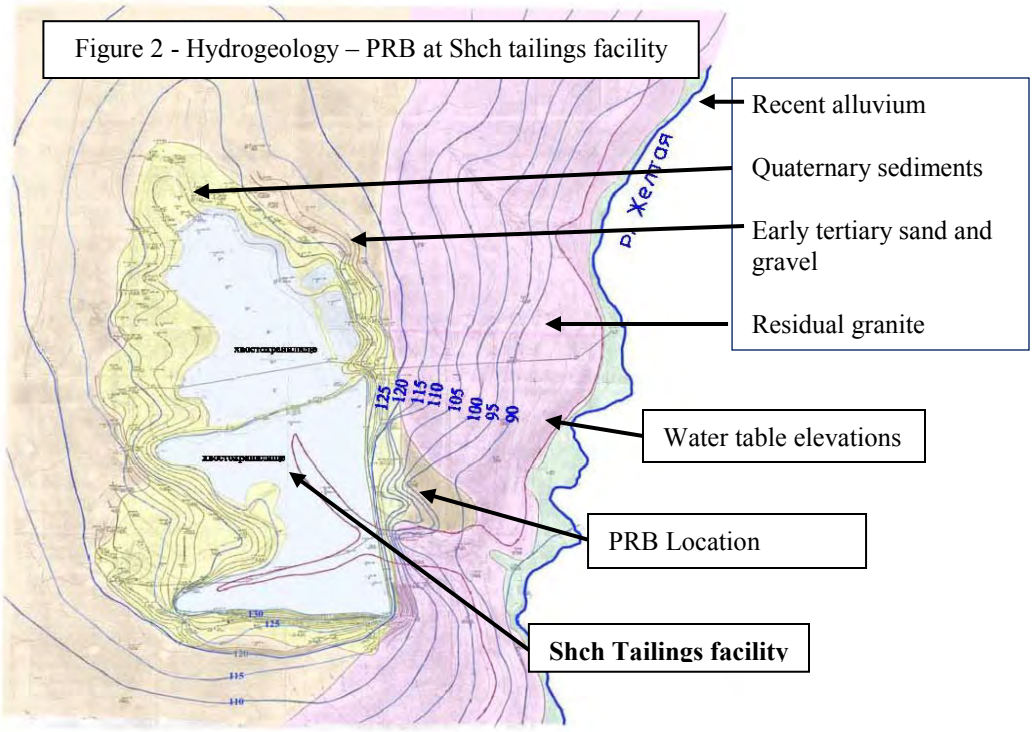


Kryvyi Rig Basin

From 2008 to 2011 field investigations were conducted to characterize the hydrogeology and surface water / groundwater quality in the vicinity of the tailings facility, and determine the most suitable location for the PRB. Concurrently, laboratory bench scale test were being conducted at the Kiev Polytechnic University to evaluate the effectiveness of different treatment media to be used in the PRB. Groundwater chemistry data for test well C-024, which has been monitored for more than 20 years, are shown in Figure 3. These data indicate that sulphate and TDS concentrations, and uranium 238 activity have increased significantly over that time.

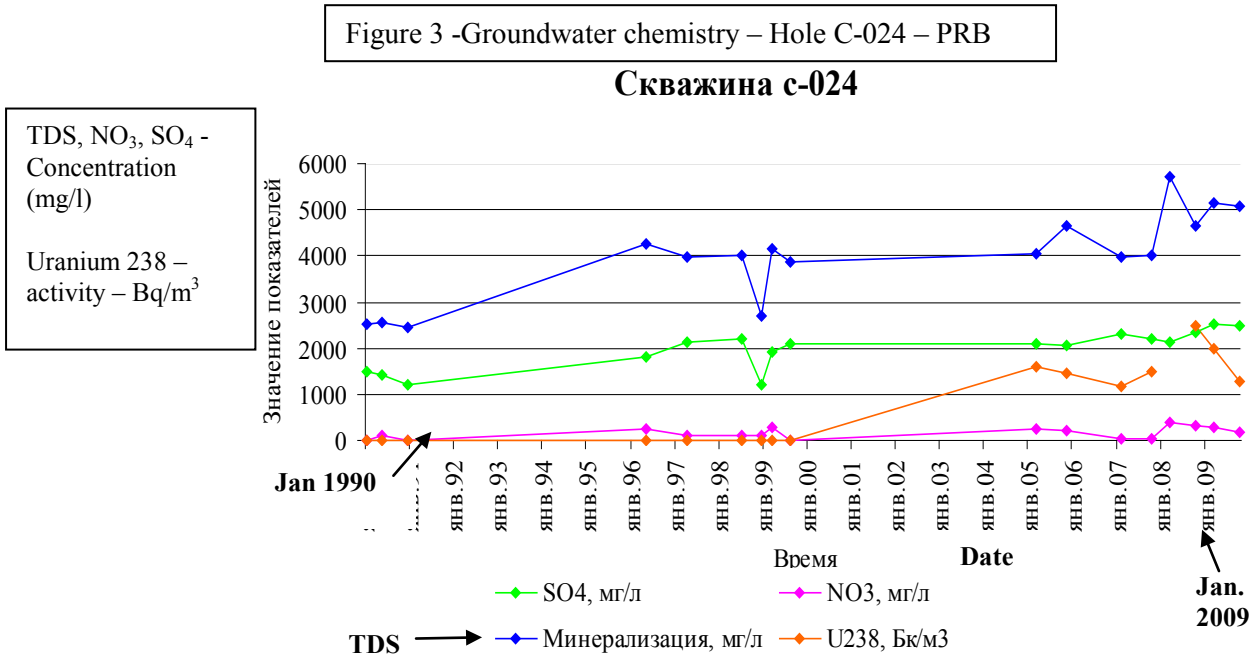
In the summer of 2011 the PRB was installed. A new design of PRB was constructed - cylinders with reactive materials installed in rows - instead of a conventional continuous barrier or a funnel-and-gate setup. The PRB consists of three staggered rows of seven wells, which contain three different treatment media, and 8 monitoring wells. The three different treatment media include: inorganic reactive material (zero-valent-iron) and two biologically active materials. Wells 1-7 were filled with zero-valent iron and sand, wells 8-14 were filled with zero-valent iron, calcium phosphate, sawdust and sewage sludge and wells 15-21 are filled with gravel, calcium phosphate,sawdust and sewage sludge. Water level and water chemistry data are currently being collected under an approved long term

Figure 2 - Hydrogeology – PRB at Shch tailings facility



monitoring program. These data are being analyzed to evaluate the effectiveness of the PRB over time. Preliminary results indicate that during the last six month period, the concentration of uranium in the groundwater being treated by the biologically active materials was practically unchanged – perhaps due to the low content of microorganisms in clayey and sandy soil near uranium tailings storage facility. At the same time, the uranium concentration in groundwater treated by zero-valent iron decreased to 0.1mg/liter which may demonstrate the effectiveness of zero-valent-iron as active material for use at contaminated sites in Zhovty Vody region. More data will be collected during the next two years to more fully evaluate the PRB effectiveness.

Figure 3 -Groundwater chemistry – Hole C-024 – PRB



Professors of Graduate Students – Opportunity for *Free* Student Memberships

*****Call for Applications – Due October 1, 2012*****

A new student membership initiative was launched early this year. The IAH USNC encourages all graduate students enthused about hydrogeology and learning more about hydrogeology in other countries to join IAH.

The USNC is continuing to provide the opportunity for a free, one-year student membership in IAH in 2013 for up to 3 graduate students. To pursue this opportunity, the USNC requests the following:

- Any university professor in a graduate hydrogeology program can nominate one hydrogeology graduate student (who will remain a graduate student at least through June of the following year) for a one-year membership.
- The professor should determine that the graduate student has an interest in and will benefit from this membership.
- The nominating professor will submit the following application information:
    - Submitting professor's name, academic affiliation and department, and contact information;
    - Student name, academic affiliation and department (confirm whether same or different), and contact information;
    - Student graduation month and year (anticipated date); and
    - Statement relating to student interest and potential benefit derived from IAH membership (1 to 2 sentences).
- Nominations are due by **October 1, 2012** ; email application information to Vicki Kretsinger Grabert, USNC Board Member and Membership Liaison at vkretsinger@lsce.com.

By October 15, the IAH USNC Executive Committee will tally the number of graduate student nominations, select awardees on a random selection basis if there are more nominees than can be selected, and notify winners (both the nominators and the winners). The IAH USNC will submit the applicant's contact information and payment to IAH headquarters for the student's IAH membership, including subscription to the *Hydrogeology Journal,* beginning with the first issue of the membership year.

The USNC looks forward to increasing student participation in IAH!

Students Supported by IAH USNC in Past Years - Where Are They Now?

Joseph Asante

Joseph Asante completed his PhD in Hydrogeology at the University of Nevada, Las Vegas this Spring, and has begun work as a V isiting Assistant Professor of Hydrogeology in the Department of Geology at Oberlin College, Ohio. He was honored by being chosen as one of nine Outstanding Graduates from a graduating class of over 2,900, and at Spring graduation cermonies, he sat with the Board of Regents and was introduced to an estimated audience of 10,000 by the President of the University.

Melanie Reed Krautstrunk

Melanie Reed Krautstrunk just returned from a r esearch year in northern Ghana where she studied groundwater recharge in one of the fastest growing regions of Africa. In this region, water stresses are quickly mounting and there is increasing demand for groundwater. Melanie was funded by Rotary International. She is completing her Masters thesis and plans to graduate in December.

ISARM-Americas Initiative

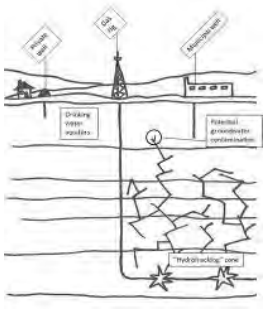
For more than a d ecade, the Internationally Shared Aquifer Resource Management (ISARM) - Americas Initiative, jointly sponsored and coordinated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organization of American States (OAS), has been developing information about transboundary aquifer systems in the American hemisphere. The ISARM-Americas initiative has been successful in promoting cooperation in the sharing of data and information on 73 transboundary aquifer systems among 24 c ountries from Argentina/Chile to Canada. The initiative has produced three books. Book 1, published in 2007, is an inventory of transboundary aquifer systems. Book 2, published in 2008, covers the legal and institutional aspects of the transboundary aquifer systems. Book 3, published in 2010, is a synthesis of the socio-economic, environmental and climatic aspects of the transboundary aquifer systems.

The IX Coordination Workshop of ISARM-Americas was held in Medellin, Colombia, 17 - 19 November, 2011, in the framework of the Seventh Inter-American Dialogue on Water Management. The main objective of the Workshop was completion of the draft of Book 4 on a strategy for the management of transboundary aquifers of the Americas. It is hoped that Book 4 will be published by the end of the year.

More information about the ISARM-Americas program can be found at http://www.isarm.org/publications/128, including Books 1 (Spanish) and 2 (English and Spanish)

Download and Print USGS Topographic Maps

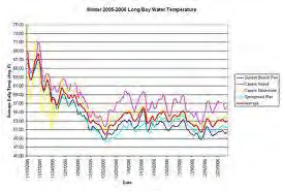
The U.S. Geological Survey (USGS) recently launched a new USGS Map Locator and Downloader—a web tool designed to deliver digital topographic maps quickly, easily, and at NO COST. Using open source software and Google Maps software, the Map Locator and Downloader allows you to find topographic maps by zip code, address, or interactively. You can pan, zoom, or switch to satellite imagery. You can then order printed maps or freely download scanned map files in GeoPDF® format. Available are current USGS quadrangles and a large number of historical maps. Access and more information are available at: *store.usgs.gov* where you can click on "Map Locator & Downloader". Once maps are downloaded, users can view and manipulate maps via Adobe Reader®.



Hydraulic Fracturing: EPA Reports Water at Dimock, PA Safe to Drink

The AGI Geopolicy Monthly Review newsletter for July 2012 reports that the Environmental Protection Agency (EPA) announced in July that contaminant levels in Dimock, Pennsylvania's water supplies show no health threat and no connection to chemicals used in hydraulic fracturing. The Pennsylvania Department of Environmental Protection (DEP) has not allowed Cabot Oil and Gas to drill near Dimock, the town featured in the documentary "Gasland." The wells were shut down in 2009 because the town claimed poor well construction caused the migration of methane gas into water resources. The DEP found unusual gas concentrations on 18 properties. The EPA methane tests found five wells with methane levels above the 28 parts per million threshold. People receiving water from these wells were already aware of methane levels present in local water. The EPA tested for naturally occurring substances including arsenic, barium, and manganese. Levels of concern for health impacts were identified at five households, however all have built, or plan to build, water treatment systems to reduce the risk.

Source: American Geosciences Institute



USGS Releases Groundwater Quality Trends for 1988-2010

According to the AGI Geopolicy Monthly Review newsletter for June 2012, the U.S. Geological Survey's (USGS) National Water-Quality Assessment (NAWQA) Program recently released the latest decadal-scale groundwater quality trends for 1988-2010. The report (available for downloading at: http://pubs.usgs.gov/sir/2012/5049/) showed concentrations of nitrate, chloride, and other dissolved solids sampled across the country. NAWQA reported that while concentrations met the guidelines for drinking water set by the Environmental Protection Agency (EPA), pollutant concentrations have increased since the 1990s at most sites. The report includes an interactive map that displays the change in nitrate, chloride, and dissolved solids concentrations in groundwater at 56 well networks. Almost all sites that underwent a significant change in groundwater content saw an increase in pollutant concentration as large as 50 milligrams per liter. The map shows the aquifer types for the different sites surveyed across the U.S. At eight groundwater study sites, NAWQA investigated potential factors affecting the trend, such as improved methods of geochemical dating, contaminant degradation rates, contaminant distribution, and reduction-oxidation conditions related to dissolved organic carbon. Dating groundwater recharge was found to be one of the most important factors in determining groundwater-quality trends.

Modified from: American Geosciences Institute

Senate Foreign Relations Committee Reports on Global Water Bill

The AGI Geopolicy Monthly Review newsletter for June 2012 reports that on June 19, the Senate Committee on Foreign Relations passed the Senator Paul Simon Water for the World Act of 2011 (S.641) without amendment. The bill would help provide access to clean and sustainable drinking water for almost one billion people worldwide. The bill is co-sponsored by Senator Dick Durbin (D-IL) and Senator Bob Corker (R-TN) and has wide bi-partisan support. The bill would amend the Foreign Assistance Act of 1961 (P.L. 87-195) to create a Senior Advisor for Water position at the United States Agency for International Development (USAID). The Senior Advisor for water will develop and oversee country-specific water strategies in high priority countries and give further capacity to the Department of State to address global safe water, sanitation, and integrated river basin management issues. The bill is named after Senator Paul Simon (D-IL), who served in the Senate in the 1980s and 1990s, because he warned about a fresh water crisis in the developing world in his book *Tapped Out: The Coming World Crisis in Water and What We Can Do About It*. [However, the web site "GovTrack.us" indicates that only 21% of all Senate bills reported favorably by committee in 2009-10 were actually enacted, so the prognosis is uncertain.]

Source: American Geosciences Institute

PELA GeoEnvironmental Professional Joins Karst and Caving Expedition in Vietnam

PELA GeoEnvironmental (P.E. LaMoreaux & Associates. Inc.) hydrogeologist and karst specialist Gheorghe Ponta participated in the French-Romanian-Vietnamese 2012 Karst and Caving Expedition in Vietnam. The Expedition took place in the Northern Province of Cao Bang, a largely undeveloped and

pristine region of Vietnam, during March, 2012. The Expedition is part the same partnership that travelled to Laos in 2010 and 2011. While the comparatively cooler temperatures in Cao Bang required different considerations and adjustments in strategy, the ultimate purpose of the Expedition in Vietnam remained largely the same as the prior expeditions to Laos: exploration, data-gathering, and mapping of underwater systems. The humanitarian goal of the 2012 Expedition included studying the possibility of supplying running water to the isolated villages of the Dong Mu Plateau.

The Expedition was organized by the "Geokarst Adventure" Association under the auspices of the French peleological Federation through its Commission for International Relations and Expeditions and the Romanian Speleological Federation through its Commission for Exploration. PELA GeoEnvironmental is proud to have Mr. Ponta as one of its professionals. PELA provides geologic, hydrologic, engineering, environmental, and waste management expertise. The firm has successfully completed thousands of projects in thirty-five U.S. states and fourteen foreign countries throughout the Middle East, Europe, and Central and South America.

Springer Science And Business Media Announces Special Issues Of Environmental Earth Sciences Journals

Dr. James LaMoreaux, Chairman of PELA GeoEnvironmental (P.E. LaMoreaux & Associates, Inc.) and Editor of the international journal, Environmental Earth Sciences (EES), published by Springer - Science and Business Media, announces the publication of several special issues of EES. The Issue titles and a brief synopsis are provided below.

"China's Environment: Challenges and Solutions"- In the past decades, China has experienced remarkable economic growth and rapid agricultural-to-industrial and rural-to-urban transitions. As a consequence, China, the most populous country in the world, now faces many daunting environmental challenges. A special issue of Environmental Earth Sciences has been organized to understand China's environmental problems, to explore possible solutions, and to provide policy makers with recommendations on how to solve these problems.

"Wenchuan Earthquake Geohazards"- On May 12, 2008, a devastating earthquake measuring Ms 8.0 struck Wenchuan, Sichuan, China. Landslides, avalanches and debris flows resulted in the deaths of over 20,000 people and the destruction of major infrastructure. Scientists all over the world are researching the geohazards induced by Wenchuan Earthquake. The goal of this special issue is to present lessons for those both planning for, and responding to major earthquakes.

"First Argentine Meeting on Geochemistry of the Earth's Surface"- This special issue covers the first meeting on the geochemistry of the earth's surface processes, I RAGSU. I RAGSU was envisioned to probe into the geochemical nature of the processes occurring on the surface of the earth and took place at the city of Córdoba (Argentina), between the 27th and the 30th of September, 2009.

"Advances in Karst Hydrogeology"- Karst aquifers constitute 12% of the global land surface and store water on which approximately 20-25% of the world's population depends. Moreover, karst aquifers also support fragile ecosystems. This special issue describes the progress of research into Karst Hydrogeology, in part resulting from the 4th International Symposium on Karst (ISKA), held in Málaga (Spain) on 27-30 April 2010. Many members of the IAH Karst Commission contributed to this special issue as authors, reviewers, and editors. The IAH Newsletter will also feature an article highlighting this special issue and the contributions of IAH Karst Commission members.

In Memoriam: Paul Witherspoon

A well respected and influential leader in the field of Hydrogeology, Paul Witherspoon (1919-2012) passed away on February 10, 2012, after a long battle with Parkinson's Disease. Paul was the founding Director of Lawrence Berkeley National Laboratory's Earth Science Division (ESD) from 1977-1982. Paul was a member of the IAH U.S. National Chapter. The Laboratory notes that "Paul was an energetic participant in ESD affairs well into his 80's, and his good cheer, active intelligence, and wealth of experience were always appreciated by his friends and colleagues". Those who knew him recognized Paul's grace and wit, and were aware that his astute insights in hydrogeology were at the top of his discipline.

Paul graduated from Pitt (University of Pittsburgh) in June 1941, with a B.S. in petroleum engineering, and immediately began working with Phillips Petroleum as an Apprentice Engineer. He married Elizabeth Talbott, October 26, 1946, and decided to pursue graduate studies in nearby Lawrence at the University of Kansas in 1949, receiving his M.S. in 1951 in petroleum engineering physics. About that same time he got a job with the Illinois State Geological Survey, in Urbana, Illinois, and also started working on a Ph.D. at the University of Illinois nearby. In 1957, with a young family of three children, he began working at U.C. Berkeley in their Department of Mineral Technology as a petroleum engineering professor and by 1965 he had shifted his interests from petroleum to geological engineering, doing pioneering work on geothermal systems with the thought that this might be another source of energy for the U.S. In the 1970's he began work on nuclear waste isolation and his group set the standards for supporting hydrogeological work in the late seventies and early eighties, including the following Yucca Mountain studies. He stayed active within ESD after 1982 he retired as ESD Director, and retired from teaching at Cal Berkeley in 1989. He was a prime mover in producing worldwide reviews on the progress in nuclear waste isolation every five years, since 1991, putting out the Fourth Worldwide Review early in 2006. This "ongoing" book, documents how countries around the world have tried to manage issues in nuclear waste isolation, and has been crucial to the worldwide effort to solve this problem. Paul will be missed by his friends, colleagues and the entire hydrogeologic community.

CONFERENCES AND ASSOCIATED SOCIETIES

For more information, go to: http://groundwaterexpo.com/

Call for Abstracts Coming Soon: Due October 22, 2012

The 2013 NGWA Summit, The National and International Conference on Groundwater, will take place in San Antonio, Texas on April 28-May 2. The Summit is planned to cover a wide range of groundwater-related topical matter. The lineup of sessions will be posted in August. A call for abstracts will then be issued with a due date of October 22, 2012.

For further details as they develop, see http://groundwatersummit.org/.

2012 Geological Society of America Annual Meeting & Exposition

NOVEMBER 4-7, CHARLOTTE, NORTH CAROLINA, USA

ABSTRACTS DUE: AUGUST 14, 2012

IAH and the IAH USNC are sponsoring the following three sessions at the upcoming GSA Annual Meeting and Exposition in Charlotte, North Carolina from November 4-7, 2012. **Abstracts are due on August 14.**

T87. Building Capacity for Hydrologic Science in Water-Stressed Regions of the World (Posters)

GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Geology and Health Division; GSA Geology and Society Division; GSA Geoscience Education Division; International Association of Hydrogeologists, U.S. National Chapter; National Ground Water Association; Consortium of Universities for the Advancement of Hydrologic Science Inc.; GSA Limnogeology Division

Conveners: Alan E. Fryar, Adam Milewski, Mohamed I. Sultan

The development and prudent management of water resources depends upon the appropriate training of hydrologists. We seek posters on integrating hydrologic education with research and practice in water-stressed regions, especially in Africa and Asia.

****

T101. Hydrology of Urban Groundwater, Streams, and Watersheds

GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; International Association of Hydrogeologists

Conveners: Anne J. Jefferson, John M. Sharp

This session explores how urbanization affects water quantity, quality, and ecohydrology in groundwater and surface water systems. Field and modeling studies of flow, recharge, water balance, groundwater-stream interactions, water quality, and contamination are welcome.

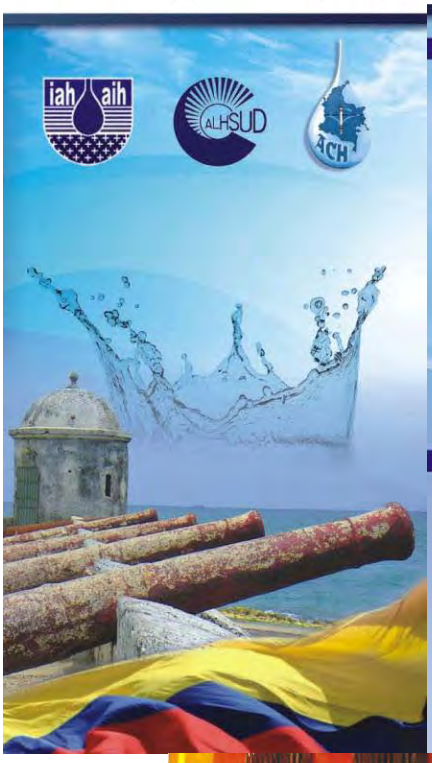
****

T102. Hydraulic Fracturing for Resource Development or Remediation: Methods, Results, and Industry-Regulatory Response to Environmental Impacts on Ground and Surface Waters

GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; International Association of Hydrogeologists; GSA Geology and Health Division; GSA Geology and Society Division; GSA International Section

Conveners: Gerry V. Winter, Neil Coleman

Hydraulic fracturing is important for developing oil, gas, and water in low-permeability formations and is used in remediation of contaminated sites, but the process can result in unintended consequences that adversely affect the environment.



Introduction

The Latin American Association for Groundwater Development (Asociación Latinoamericana de Hidrología Subterránea para el Desarrollo – ALHSUD) and the Colombian Association of Hydrogeologists (Asociación Colombiana de Hidrogeólogos - ACH), Colombian IAH Chapter , invite to the XI Latin American Hydrogeology Congress and the IV Colombian Hydrogeology Congress to be held in Cartagena de Indias, from August 20th to August 24th 2012.

The Latin American hydrogeology congresses had been held since 1992, looking for an approach between scientists, researchers, students, consultants, regulators and the professionals related to this area, in order to study and analyze the present and future of hydrogeology in Latin America. This congress will be a forum for the exchanges of ideas, knowledge, experience and techniques through studies, investigations and practical applications related to the present and future of our most important natural resource: **water**.

The increasing demand of water resources, the recent climate change and the environmental contamination, arises the challenge to protect and use this resource on a sustainable way, in order to ensure the right to Groundwater use for future generations.

Congress Activities*

- Pre-congress activities
- Technical courses and workshops
- Forums
- Plenary sessions with keynote international speakers
- Technical sessions
- Posters
- Stands
- National and International exhibits
- Group session on Trans boundary Aquifers (to be confirmed)
- Session of the CYTED network: AQUIFERURAL (to be confirmed)
- Tourist tour to Rosario Islands

Congress Topics*

Groundwater Resources: Analysis and Management

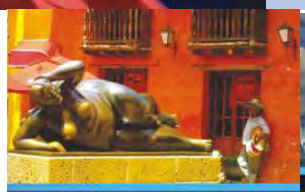
- Sustainable Groundwater Management
- Hydrogeological Information Systems.
- Application of Geostatistics on Hydrogeology
- Use and protection of Groundwater
- Groundwater Harvesting
- Karst Hydrogeology
- Groundwater Recharge
- Coastal Aquifers
- Isotopic Hydrogeology
- Advances of Remote Sensors and Satellite Imagery
- Numerical and Analytical Modeling
- Interaction between Groundwater and Surface Water
- Eco-Hydrogeology
- Urban Hydrogeology
- Rural Hydrogeology
- Virtual Water

Groundwater and Environment

- Environmental and Forensic Hydrogeology
- Monitoring Groundwater Flow and Contamination
- Groundwater and Mining
- Groundwater and Petroleum
- Groundwater and Geotechnics
- Groundwater and Agriculture
- Risk Based Corrective Actions (RBCA) - Remediation
- Regulations
- Numerical and Analytical Modeling
- Saltwater Intrusion

Forums*

- Environmental Regulations Applied to Groundwater in Colombia and other Countries.
- Mining and Environment (Impacts caused by open pit mining, tunnel mining and mitigation).
- Hydrocarbons and Environment (Injection and Reinjection, Fracturing, shale, Assessment and Mitigation).



Courses*

(To be confirmed, on the 3rd Circular will be given the definitive details)

- Geostatistics applied to hydrogeology, by Luís Filipe Tavares Riveiro(2 days)
- Environmental Site Assessment and Risk Based Corrective Actions – RBCA (2 days)
- Marine Resistivity Imaging (3 days)
- Earth Resistivity Imaging (3 days)

Location: Cartagena

Cartagena de Indias is a cultural and historical Colombian city, is a wonderful place at the coast of the Caribbean Sea. It was founded on 1533 and on 1984 was declared World Heritage by UNESCO.

Venue: Almirante Hotel

The congress will be held at the Almirante Estelar Hotel, with all the amenities and the best view in front of the Caribbean Sea. It is located next to the beach, five minutes from the old city and 10 minutes from the airport. The hotel has three restaurants, pools, sauna, jacuzzi, casino, gym and Wi-Fi internet access.

Pre-Registration

Please fill in and send by e-mail to hidrogeologia2012@gmail.com
Updates will be sent to your e-mail address

First Name: _____
Last Name: _____
Title/Degree: _____
Institution: _____
Position: _____
Address: _____
Phone number: _____
Email: _____
ALHSUD member: Yes ☐ No ☐
Speaker: Yes ☐ No ☐
Presentation: Oral ☐ Poster ☐
Provisional presentation/poster title _____

Important Dates:
First circular: April 2011
Second circular: August 2011
Deadline for abstract submission: March 15, 2012
Acceptance of abstracts: April 16, 2012
Full work: April 30th, 2012

Registration Fees:

Before January 31st 2012	
ALHSUD - ACH Members	US$ 300
Professionals	US$ 350
Undergraduate Students (only 50 openings)	US$ 150
After January 31st 2012	
Professionals	US$ 400
Undergraduate Students (only 50 openings)	US$ 150

Awards

Recognition for the best three student speakers.

Language

Spanish – Portuguese – English

Contact and Additional Information

www.asociacioncolombianadehidrogeologos.org
e-mail:
hidrogeologia2012@gmail.com
Tel. (57-1) 2715284 - 6241973
Fax (57-1) 6241971
Cel. (57) 3102620049

For bookings at the venue, please send an e-mail to this address with the name of the congress:
feriasycongresos@hotelesestelar.com

*Check our website for updates

Groundwater Resources Association of California (GRA)

An Associated Society of the Geological Society of America

2012 Events

by Vicki Kretsinger

The USNC/IAH has been a co operating organization for a n umber of Groundwater Resources Association of California (GRA) events. As members of a co operating organization, IAH members enjoy GRA member rates to attend these events.

IAH members are welcome to express their interest in assisting with the planning of 2013 events or participating as a session organizer or presenter by contacting GRA. Learn more about GRA, or the programs in which IAH is participating with GRA as a cooperator, on the GRA web site at http://www.grac.org , or by telephone, 916-446-3626.

Upcoming GRA Conferences

****

Managing Wells in California: Protecting Groundwater Resources
August 28-29, 2012
Sheraton Grand Hotel, Sacramento CA

This symposium examines how wells and well management practices affect the quality and quantity of groundwater. Abandoned wells, wells that have not been properly plugged and destroyed, are a g rowing problem in the state. Many wells may be improperly sealed or may provide a cross-connection between water bearing zones, presenting a potential for contaminants to migrate into our drinking water aquifers. This problem is not unique to California. Other states have similar issues but some states fund the destruction of abandoned wells or require destruction of such wells when a property is sold. Some states are also re-evaluating existing standards to address these problems.

This Symposium will review current challenges and address a comprehensive approach to managing wells, with the following sessions:

- Summary of the key information from the GRA webcast series on abandoned and improperly constructed or destroyed wells
- The use of wells and well-related issues in California
- Panel discussion: authority and accountability for wells in California -- who is responsible?
- Well planning & design
- Drilling and well construction methods
- Well operation, maintenance, performance monitoring & rehabilitation
- Well toolbox -- assessing inactive and active wells
- Panel discussion: data collection, availability, and transparency
- Abandoned wells -- to destroy or not to destroy -- and destruction methods
- Panel discussion: well standards -- where we are and where we're headed

90 Minute GRA-Cast Series:

An Approach for Evaluating the Progress of Natural Attenuation in Groundwater
Thursday, August 30, 2012 from 12:00 pm – 1:30 pm PST
Speaker/Presenter: John T. Wilson, U.S. EPA

Abstract: Monitored Natural Attenuation (MNA) is widely applied to ground water contamination at hazardous waste sites. Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), MNA is considered to be a remedy like any other remedy. When MNA has been selected as a remedy, concentrations of contaminants in the groundwater are expected to achieve a clean-up goal at the site within a reasonable time frame. At many CERCLA sites, the time by which the goals are to be obtained is specified in the Record of Decision (ROD). At CERCLA sites, the performance of the remedy or combination of remedies that were selected under the ROD is reviewed every five years. At present, there is no generally accepted approach to evaluate long term monitoring data and establish a time by which clean up goals should be attained. There is also no generally accepted approach that can be used to determine whether the extent of attenuation within a particular five year review period is adequate to allow the site to attain the clean-up goal at the site within a specified time frame.

U.S. EPA recently released a report that addressed these issues [*An Approach for Evaluating the Progress of Natural Attenuation in Groundwater* EPA 600/R-11/204 www.epa.gov/ada]. The report presents a simple, statistically based approach for evaluating the progress of natural attenuation from the data collected during site characterization and long term monitoring. The report provides an approach to establish the time that should be required to attain the clean up goals, and an approach to evaluate attenuation within a review cycle to determine whether attenuation within that period of time is adequate to allow the site to attain the ultimate clean-up goal by a specified time.

This presentation will review the key aspects of the approach to evaluate MNA as presented in the report, and will illustrate the application of the approach by applying the associated computer applications to example data sets.

Principles of Groundwater Flow and Transport Modeling
September 11-13, 2012
Seaport Conference Center Redwood City, CA
Instructors: Thomas Harter, Ph.D.; Graham Fogg, Ph.D.; Peter Schwartzman

The use of computer modeling tools has become a standard practice in many groundwater investigations. Groundwater resources evaluation, groundwater quality assessment, contamination site assessment and remediation, environmental impact review, and other groundwater related activities frequently rely on computer models as a means of understanding groundwater flow and the fate of contaminants in the subsurface. This course introduces the conceptual principles and practical aspects of groundwater modeling in an intuitive yet comprehensive manner. The course objective is to demystify the use of groundwater models by providing 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 first half of the course reviews the concepts of groundwater flow and transport, and of finite difference and finite element methods. It provides 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 a compatible transport model. Exercises include site-specific models as well as basin/watershed wide models.

Course Topics

- Principles and concepts of groundwater modeling
- Overview of groundwater modeling software
- Conceptual model development

- Data collection and preparation
- Model grid design
- Boundary conditions: concepts and application
- Implementing rivers, lakes, recharge, drainage, and other special situations
- Modeling multiple aquifer systems
- Sensitivity analysis, model calibration and verification
- Contaminant transport modeling
- Capture zone analysis

GRA 21st Annual Conference & Meeting
California Groundwater: Data, Planning and Opportunities
October 4-5, 2012 Conference and Meeting; October 3, 2012 Optional Field Trip & Dinner
DoubleTree by Hilton Hotel, Rohnert Park, CA in Sonoma County

Special Features Include:

- California Water Plan Update 2013: DWR's Plans for Significantly Enhancing Groundwater Information including State-Wide Inventory of Groundwater Management Plans and Program Activities, Approach to Estimating the Change in Storage in Basins/Subbasins, and Climate Change Impacts on Groundwater Supply and Storage
- Advances and Updates in Data Management: CASGEM and GeoTracker
- ACWA's Groundwater Management Framework Action Plan Priorities
- Stanford Woods Institute Center for the Environment/John Lane American Water in the West: Best Management Practices for Groundwater
- AB 359: Mapping Groundwater Recharge Areas
- Groundwater Recharge and Storage: State Water Board Recycled Water Policy, Central Valley Regional Water Board Draft Aquifer Storage and Recovery (ASR) General Order
- State Water Board Groundwater Strategy
- 2012 David Keith Todd Lecturers: Dr. John Cherry and Dr. Bill Alley
- Collegiate Groundwater Colloquium
- Optional pre-conference Field Trip lead by the Sonoma County Water Agency
- Optional pre-conference Dinner: Mixing Wine and Local Geology

Cooperating Organizations

University of California Water Institute, California Department of Water Resources, Cal/EPA Department of Toxic Substances Control, Water Education Foundation, US Geological Survey, Association of California Water Agencies

More details are available on GRA's website, www.grac.org, as they develop.

Summary - Upcoming Conferences

2012

5-10 Aug 2012
Brisbane, AUSTRALIA. 34th International Geological Congress.
INFO: Web: http://www.34igc.org/

12-18 Aug 2012
Budapest, HUNGARY. Groundwater, Thermal and Mineral Water in Karstic Terrains and Porous Sedimentary Basins: Utilization of Thermal and Mineral Waters. Organised by IAH Hungary/CMTW and Institute for Geological and Geochemical Research, Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences,.
INFO: forizs@geokemia.hu.

13-15 Aug 2012
Oulu, FINLAND. The XXVII Nordic Hydrological Conference - Nordic Water 2012.
INFO: Web: http://nhc2012.oulu.fi/index.html

14-16 Aug 2012
Zhengzhou, CHINA. 2nd International confernce on Water Resources Management and Engineering (ICWRME2012).
INFO: Email: icwrme2012@163.com Web: http://www.icwrme.org/

20-24 Aug 2012
Cartagena de Indias, COLOMBIA. 12th Latin American Hydrogeological Congress.
INFO: Web: http://www.asociacioncolombianadehidrogeologos.org/congreso/

26-31 Aug 2012
Stockholm, SWEDEN. World Water Week - Water and Food Security.
INFO: Web: http://www.worldwaterweek.org/

28-29 Aug 2012
Sacramento, USA. Managing Wells in California. Organised by Groundwater Resources Association of California.
INFO: Web: http://www.grac.org

2-7 Sep 2012
Berlin, GERMANY. 3rd International FEFLOW User Conference (FEFLOW 2012). Organised by DHI-WASY.
INFO: Email: feflow2012@dhi-wasy.de Web: www.feflow.com/feflow2012

16-21 Sep 2012
Busan, SOUTH KOREA. IWA World Water Congress and Exhibition. Organised by International Water Association (IWA).
INFO: Web: http://www.iwa2012busan.org/

16-23 Sep 2012

Niagara Falls, CANADA. Confronting Global Change. 39th IAH Congress. Organised by IAH Canada.
INFO: Email: info@iah2012.org Web: http://www.iah2012.org/

24-27 Sep 2012
Vienna, AUSTRIA. HydroPredict'2012. International Interdisciplinary Conference on Predictions for Hydrology, Ecology, and Water Resources: Water Resources and Changing Global Environment. Organised by University of Natural Resources and Applied Life Sciences (BOKU) Vienna, International Commission on Groundwater (ICGW) of International Association of Hydrological Sciences (IAHS), and Charles University Prague.
INFO: Email: Hans_Peter.Nachtnebel@boku.ac.at or Karel.Kovar@pbl.nlWeb: http://web.natur.cuni.cz/hydropredict2012/
For information about abstract submission for oral and poster presentation refer to conference web site.

27-29 Sep 2012
Katowice, POLAND. Calcium and magnesium in groundwater - distribution and significance. International Seminar. Organised by Polish Geological Institute.
INFO: Lidia Razowska-Jaworek. Email: camgseminar@pgi.gov.pl Web: http://camgseminar.pgi.gov.pl

---

15-17 Oct 2012
Rennes, FRANCE. GDAT 2012. Groundwater Dating Meeting.
INFO: Web: http://osur.univ-rennes1.fr/GDAT2012/

17-19 Oct 2012
Vulcania, FRANCE. How to combine Forest Management, Local Development and Protection of Surface and Groundwater?. LIFE+ Environment SEMEAU project.
INFO: Web: http://www.life-semeau.eu/accueil

---

29 Oct - 1 Nov 2012
Sucre, BOLIVIA. Congreso Internacional de Hidrogeología y Recursos Hídricos.
INFO: Email: bethuned@ucalgary.ca or j_torresbal@yahoo.comWeb: http://www.congresoaguasucre.org/

4- 7 Nov 2012

CHARLOTTE, NORTH CAROLINA, USA. Geological Society of America Annual Meeting – Geosciences, Investing in the Future. Abstract Deadline August 15.
INFO: Web: http://www.geosociety.org/meetings/2012/

5-7 Nov 2012
Central Drakensberg, SOUTH AFRICA. International Conference on Fresh Water Governance for Sustainable Development.
INFO: Web: http://www.wrc.org.za/freshwater

14-16 Nov 2012
Beni Mellal, MOROCCO. Water resources in the arid and semi-arid regions: challenges and prospects. Case of the African continent.. REZAS'12 conference.
INFO: Email: rezasafrica@gmail.com Web: http://www.fstbm.ac.ma

---

19-24 Nov 2012
Ciudad de Guatemala, GUATEMALA. 1st Guatemalan Hydrogeological Congress.
INFO: Web: http://www.asokarst.org

19-22 Nov 2012
Sydney, AUSTRALIA. 2012 Hydrology and Water Resources Symposium.
INFO: Web: http://www.hwrs2012.org.au/

19-21 Nov 2012
Kuwait City, KUWAIT. International Groundwater Symposium 2012. Organised by IAHR.
INFO: Web: http://www.iahrgroundwater2012.info/

---

29 Nov – 2 Dec 2012

Las Vegas, NV, USA. National Ground Water Association EXPO.
INFO: Web: http://www. ngwa.org/

18-21 Dec 2012
Aurangabad, INDIA. The Assessment and Management of Groundwater Resources in Hard Rock Systems with Special Reference to Basaltic Terrain. 5th International Groundwater Conference (IGWC 2012).
INFO: Email: psk120154@yahoo.co.in or karvimrajan@gmail.com

2013

8-14 Jan 2013
Addis Ababa, ETHIOPIA. Colloquium of African Geology (CAG). Organised by Geological Society of Africa.
INFO: Web: http://www.CAG24.org.et

15-17 Apr 2013
Lima, PERU. Mine Water Solutions in Extreme Environments.
INFO: Email: zmullard@infomine.com Web: http://www.minewatersolutions.com

---

18-19 Apr 2013
Barcelona, SPAIN. Aspectos Tecnológicos e Hidrogeológicos de la Geotermia.
Organised by Asociación Internacional de Hidrogeólogos - Grupo Español (AIH-GE).

28-April - 2 May 2013

San Antonio, Texas, USA. 2013 NGWA Summit — The National and International Conference on Groundwater
INFO: Email:: http://groundwatersummit.org/

13-16 May 2013
Rennes, FRANCE. HydroEco'2013 – 4th International Multidisciplinary Conference on Hydrology and Ecology: Emerging Patterns, Breakthroughs and Challenges.
INFO: Email: Gilles.Pinay@univ-rennes1.fr or Karel.Kovar@pbl.nlWeb: http://osur.univ-rennes1.fr/HydroEco2013/

10-13 Jun 2013
The Hague, THE NETHERLANDS. LuWQ2013 – International Interdisciplinary Conference on Land Use and Water Quality: Reducing Effects of Agriculture.
INFO: Email: Email: Dico.Fraters@rivm.nl or Karel.Kovar@pbl.nlWeb: http://www.luwq2013.nl/
Abstract deadline 20 October 2012.

2-6 Sep 2013
Madrid, SPAIN. IAMG2013. 15th annual conference of the international association for mathematical geosciences.
INFO: Web: http://www.igme.es/internet/iamg2013/