



Illinois Groundwater Association Spring 2011 Newsletter

Advancing Groundwater Knowledge Since 1983

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From The Chair

The Illinois Groundwater Association is looking forward to 2011 being a great year. The upcoming Spring Meeting is to be held on Wednesday, April 6th at the Dickson Mounds Museum, located between Lewistown and Havana, Illinois. This scenic area adjacent to the Emiquon Preserve, located within the Illinois River watershed, is a great place to gather for a meeting, learn about Illinois groundwater topics and interact with your fellow members. We were very pleased to have a great response to our Call for Presenters for the meeting. We have a full agenda lined up with discussions on in-situ chemical reduction technologies, nutrient removal investigations and tourism



impacts on groundwater, just to name a few. Steve Wilson and Al Wehrmann from the Illinois State Water Survey will also be providing presentations on *"The Effects of Irrigation and Pumpage on the Groundwater System in Mason and Tazewell Counties"* and *"Assessment of Groundwater Conditions at the Emiquon Project Area Prior to Flooding,"* respectively. The meeting will conclude with The Nature Conservancy providing a brief overview of the Emiquon watershed restoration area. The complete agenda can be found on Page 8 of the newsletter.

As the former chair of the IGA's Membership Committee, I would like to emphasize that we truly value our members and we encourage persons to spread the word about our organization in an effort to recruit new members. If anyone has suggestions on ways the Executive Committee can improve the organization please contact any one of the committee members. Your comments are always welcome and encouraged!

In an effort to continue to provide services to our members, the IGA website will soon be updated to include a link for Continuing Education Opportunities. The IGA has also started a Facebook page, so please like us on Facebook (<http://www.facebook.com/pages/Illinois-Groundwater-Association/190934634254917>). The IGA Executive Committee is also busy planning the Fall Meeting to be held at Starved Rock. This meeting will include an informational seminar of professionals discussing the significance of the PG license in their work.

As you may already be aware, proposed rule changes for Clean Construction and Demolition Debris (CCDD) have been prepared by the Illinois EPA. These changes will require licensed Professional Engineer

From The Chair (continued)

certifications regarding soil sampling and groundwater monitoring. For those who wish to comment to amend the rule to include licensed Professional Geologist certifications, please send these comments to the Illinois EPA at epa.cddcomments@illinois.gov. Additional information can be found on page 11 of the newsletter.

In closing, please join us for the Spring Meeting at the Dixon Mounds Museum on Wednesday, April 6th. I look forward to seeing you there!

Danielle Wallin, P.G.

2011 Illinois Groundwater Association Chair

2011 Spring Meeting at Dickson Mounds, Lewistown, IL

The Spring 2011 IGA meeting will be at a new location this year: the Dickson Mounds area in Lewistown, Illinois. Each year the IGA has a meeting in central Illinois and one in northern Illinois. We recognize that Illinois is a big state, and having meetings that are geographically spread out will allow more members and guests to attend. When looking for a central Illinois location a board member recalled the Dickson Mounds Museum.



The museum has hosted conferences and has good accommodations. The Dickson Mounds Museum is one of the major on-site archeological museums in the United States. It features constantly changing displays on Native American culture and also 160 acres that include dig sites that can be inspected by visitors. In addition, an observation deck has a spectacular view of the Illinois River Valley. A visit to the museum itself is enticing even if

we were not holding an IGA meeting at the facility.

What makes the Dickson Mounds and the museum especially appealing is ongoing wetland restoration project in the Emiquon Basin by the US Fish and Wildlife



Service. The Illinois River watershed was once one of the most productive in the US, but declined as 11,000 acres of wetlands were converted to crop lands in the last 100 years. The objective is to restore the historic floodplain and associated



communities. The Fish and Wildlife Service and Nature Conservancy together have approximately 8,500 acres that are undergoing restoration.

The IGA agenda is on page 8. We are also featuring a field trip to the wetland restoration project in the Emiquon Basin, which will be accommodated at the end of the meeting agenda. The field trip will be lead by Museum staff.



Binoculars may be helpful to fully appreciate the wetlands restoration project. And remember, by the time of the meeting on April 6th, spring will be in full swing and the wetlands will be luxuriant and green.

Contact information for the Dickson Mounds Museum and directions can be found at this link: <http://www.museum.state.il.us/ismites/dickson/geninfo.html>

Fall 2010 IGA Meeting at NIU-Hoffman Estates



The Illinois Groundwater Association held its Fall 2010 Association meeting on Friday, September 24th at the Northern Illinois University Hoffman Estates campus. This campus is just outside of Chicago and 18 miles west of O'Hare Airport. The Conference Center specializes in corporate events and has full AV facilities, WiFi, and new meeting rooms. As expected, the accommodations and the service were first rate. We will certainly be coming back!

Our fall 2010 meeting featured a presentation by Mike Chrzastowski of the ISGS on the coastal geology of the Chicago area. The presentation was excellent, and the very next day Mike led a truly outstanding day-long field trip on coastal geology on the Chicagoland area. We had a brand new motor coach and perfect weather. The field trip was organized by the Illinois-Indiana Section of the American Institute of Professional Geologists, and we were happy to help by arranging our meeting the day before the field trip and giving Mike a venue for his presentation.

The rest of the meeting agenda explored topics like using water management tools like WebGIS, risk mitigation near agricultural wells, leachate monitoring, changing public water safety rules, and geothermal heating systems. This was quite a list of first class presentations, and the IGA was pleased to provide them to Illinois.

2010 IGA Student Grant Winners



The IGA is honored to provide grants to assist students in their groundwater-related research. In fact, academic stewardship is one of the primary goals of the IGA, and providing financial support to worthy students is a key element of our outreach. As noted in the following article, we dispense up to two \$500 grants in the spring and fall of each year. Each grant request is reviewed by members of the IGA board and our long-time (and much appreciated) IGA student grants coordinator Edward Mehnert.

The IGA was pleased to present two for student grants in 2010, dispensing a total of \$1,000. We are pleased to acknowledge those who are awarded grants along with their research titles and what the grant money will be used for at our web site: <http://www.illinoisgroundwater.org/sgrants.html>.

For 2010 our grant awardees were:

- Derek Hartmann – M.S. student at Bradley University: *Anoxic Rotating Biological Contactors for Achievement of Denitrification*
- Randi Liescheidt – M.S. student at Illinois State University: *Using O and H Isotopes to Trace Sources of Groundwater in Constructed Wetlands.*

The IGA Board of Directors congratulates each of our 2010 grant winners. We are looking forward to their presentations at upcoming IGA meetings.

IGA Supports the Illinois Junior Academy of Science Earth Science Awards

One of the core missions of the IGA is to promote the science of groundwater and foster educational and professional opportunities in Illinois. To this end, the IGA has recently decided to provide a donation to the Illinois Junior Academy of Science (IJAS) (<https://sites.google.com/a/ijas.org/ijas/>) in the Earth Science Category. The IJAS has hosted project-based competitions in science categories for middle and high school students for over 50 years. Recently, the IJAS has decided to provide a modest cash award for the outstanding junior and senior level projects to increase interest in this category

The IJAS Earth Science award category is well suited for the IGA's mission since it will foster student growth and interest in the earth sciences and science in general. In response to the request by the IJAS award committee, the IGA Board of Directors has decided to provide a donation that will be used toward the IJAS Earth Science awards. We are pleased to have this opportunity and wish all the students well in their studies and their projects.

Spring 2011 IGA Student Grants

A primary goal of the Illinois Groundwater Association is to foster groundwater scholarship. One way we support this effort is through our Student Research Grant Program (<http://illinoisgroundwater.org/sgrants.html>), and the IGA has granted over \$15,000 in direct financial support to deserving students since 1987.

Student grant applications are accepted in the spring and fall of each year, and for 2011 we anticipate awarding four grants worth a maximum of \$500 each. The 2011 spring and fall application deadlines are April 22 and November 12, respectively.

Any undergraduate or graduate student registered for full- or part-time study at an accredited college or university in Illinois is eligible to apply. Notifications have been sent to many eligible institutions, and we encourage

students to submit their applications as early as possible. The application form and guidelines can be obtained from the student grants section of the web site or from:

Edward Mehnert
IGA Grants Coordinator
Illinois State Geological Survey
615 East Peabody Drive
Champaign, IL 61820
217/244-2765 Fax 217/244-2785
mehnert@isgs.illinois.edu

Benefits of the IGA student grants go well beyond monetary support for research. As part of the grant conditions, students present their findings at an IGA meeting - a great opportunity to improve professional presentation skills in front of a supportive and interested audience. Overall, involvement in the IGA gives students a chance to network with groundwater professionals in academia, government, and industry, learn about relevant



Student grants help prepare the next generation

issues, improve their resume, and hone communication skills.

Support IGA with Your Membership Dues

Membership in the IGA is open to anyone interested in the groundwater resources of Illinois and dues help the IGA meet its educational and charitable mission. Professional member dues are \$25, and student membership is \$5 per year. With your membership dues you support the IGA. We offer several convenient ways to pay: cash, check or now pay online (<http://illinoisgroundwater.org/join.html>) with a credit card or PayPal account.

We encourage you to pay online because it is the quickest and simplest way to help the IGA. Using this payment method also gives you the choice of selecting a recurring or single-year subscription. Never worry about forgetting to pay your dues again!

If you prefer to pay by cash or check, please complete the membership form (<http://illinoisgroundwater.org/forms/Membership%20Form.pdf>) on the web site or use the form below. **Please make checks payable to the Illinois Groundwater Association.** Cash or check memberships expire on December 31st of each year. Online memberships expire 12 months from the date of payment.

	COST	Name: _____
Renew Membership	\$25	Position: _____
New Membership	\$25	Employer: _____
Student	\$5	Address: _____

		Phone: _____ Fax: _____
		E-mail: _____

Clip this form and send with payment to:

Steve Bennett, IGA Treasurer
 Department of Geology
 Western Illinois University
 1 University Circle
 Macomb, IL 61455
SW-Bennett1@wiu.edu

Direct membership inquiries to:

Diane Lamb
dianemlamb@gmail.com

IGA Meetings – Get Your CEUs Here

Continuing education units (CEUs) are required for many Illinois professionals. The IGA Spring 2011 program has been approved by the Illinois Department of Public Health as meeting the annual three-hour training requirements for local health department water program personnel as specified in the Local Health Department Grant Protection Rules, Section 615.320 (c) 2. Interested Sanitarians can attend the meeting and have an IGA officer sign their program to show attendance.

The IGA has also has approval from the Illinois Environmental Protection Agency,

Bureau of Water, Division of Public Water Supplies/Operator Certification to provide CEUs for drinking water operators.

Other professions also can use the IGA's meetings for CEUs. For instance, Illinois Professional Engineers (PEs) can attend IGA meetings for CEUs.

Some educational programs require that our meeting agenda be preapproved. Be sure to ask an IGA officer in advance if your educational program is included. If it isn't, we'll work with you to meet your educational needs!

Groundwater Science Awards – Request for Nominations

The **Groundwater Science Award Program** is administered by the Illinois Groundwater Association to recognize outstanding science-based achievement in the management, protection, and utilization of groundwater in Illinois. Any individual or organization involved in research, education, consulting services, water well construction, or public service is eligible. An award can be presented from the following two categories:

Research/Scientific Achievement

Presented for outstanding achievements related to groundwater science. Due to the multidisciplinary nature of groundwater science, the award may recognize organizations, agencies, businesses or individuals.

Public Information/Education

Presented to persons or organizations that have advanced understanding of groundwater science through preparing or presenting public information, education materials, and programs to inform the public about groundwater issues.

The IGA awards committee reviews nominations and selects award recipients. The committee is composed of current IGA members representing state agencies, academia, the water well industry and the consulting industry. Awards are presented during the Spring or Fall IGA meeting. The program is co-sponsored by the Illinois Groundwater Protection Education Program that was developed under the Illinois Groundwater Protection Act.

The awards program was started in 1993 and the IGA has presented **Achievement Awards** to 14 individuals and presented 16 **Public Information/Education Awards** to individuals or organizations. The winners of the education and achievement Groundwater Science Awards are posted on the IGA web site: <http://www.illinoisgroundwater.org/gwawards.html#achievement>

To request nomination information contact any IGA board member. Board member contact information is available at the IGA web site: <http://www.illinoisgroundwater.org/officers/presoff.html>

Spring 2011 IGA Meeting Registration

Please return a form for each person attending. Registration includes a continental breakfast, a catered lunch and afternoon refreshments. **If you aren't a member yet, become one and save up to \$46 on meeting registrations this year!** Send this information to Steve Bennett (SW-Bennett1@wiu.edu) IGA Treasurer, by Monday March 28th by mail or e-mail (see information below) to qualify for early registration. Make checks payable to the Illinois Groundwater Association if registering by mail, or pay at the conference if registering by email or fax. For faster and simpler registration, register online now at www.IllinoisGroundwater.org.

Early Registration (at or before 3/28/2011)	
Member:	\$67.00
Non-Member:	\$103.00
Student:	\$21.00
Late Registration (after 3/28/2011)	
Late Member:	\$77.00
Late Non-Member:	\$113.00
Late-Student:	\$21.00

Contact Information

Name: _____

Position: _____

Employer: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

IGA Membership

Membership in the IGA is open to anyone interested in the groundwater resources of Illinois and dues help the IGA meet its educational and charitable mission. Professional member dues are \$25, and student membership is \$5 per year. We offer several convenient ways to pay: cash, check or now online (<http://illinoisgroundwater.org/join.html>) with a credit card or PayPal account.

Membership Dues	
(Re)new:	\$25.00
Student:	\$5.00
Send registrations and memberships to: Steve Bennett, IGA Treasurer Department of Geology Western Illinois University 1 University Circle Macomb, IL 61455 SW-Bennett1@wiu.edu 309/298-1256	

Contact Information

(if same as above, check here)

Name: _____

Position: _____

Employer: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

**Provisional Agenda
Illinois Groundwater Association
2011 Spring Meeting**

April 6, 2011

Dickson Mounds Museum, Lewistown, Illinois

- 8:30 – 9:00 Registration
- 9:00 – 9:15 Opening Remarks, Danielle Wallin, IGA Chair
- 9:15 – 9:45 **Amy Gahala**, *Northern Illinois University*, Impact of Tourism on the Groundwater of the Riviera Maya, Quintana Roo, Mexico
- 9:45 – 10:15 **Jim Mueller**, *The Adventus Group*, InSitu Chemical Reduction Technologies – Differentiators and Technology Implementation
- 10:15 – 10:45 Break
- 10:45 – 11:15 **Shae Birkey**, *AECOM Environment*, TBA
- 11:15 – 11:45 **Jessie Ackerman**, *Illinois State University*, Quantifying Nutrient from Groundwater Seepage Out of a Constructed Wetland Receiving Wastewater Effluent
- 11:45 – 1:00 Lunch & IGA Executive Committee Meeting
- 1:00 – 1:30 **Mark O'Brien**, *JFNew*, Specifying and Procuring Native Plant Material for Alternative Stormwater Management
- 1:30 – 2:00 **Jonathan W. Love**, *Illinois State University*, Using Natural N Isotopes to Identify Nitrate Removal Mechanisms in Constructed Wetlands Receiving Agricultural Tile Drainage
- 2:00 – 2:15 Break
- 2:15 – 2:45 **Steve Wilson**, *Illinois State Water Survey*, The Effects of Irrigation and Pumpage on the Groundwater System in Mason and Tazewell Counties, Illinois
- 2:45 – 3:15 **Allen Wehrmann**, *Illinois State Water Survey*, Assessment of Groundwater Conditions at the Emiquon Project Area Prior to Flooding
- 3:15 – 5:00 Field Trip to Emiquon Wetland Restoration

Groundwater Update

National Ground Water Awareness Week

The US Environmental Protection Agency and its partners will celebrate the 2011 National Ground Water Awareness Week on March 6-12. The purpose of promoting groundwater awareness is to highlight that more than 90 percent of all public drinking water systems rely on groundwater to supply the population with drinking water. Moreover, millions of Americans rely on groundwater from aquifers to supply their private wells. Providing a basic understanding of groundwater and aquifers is also an integral part of Ground Water Awareness Week; for instance, explaining that groundwater flows slowly through underground formations called aquifers, primarily through pore spaces between sand grains, gravel, and through cracks in rocks. These aquifers supply water for domestic use, agricultural development, and provide recharge to our lakes, streams, and rivers.

The US EPA provides links that can help the public learn to protect this vital resource at this link: <http://water.epa.gov/type/groundwater/awarenessweek.cfm>. Key among the suggestions at this link are:

- Annual Well Testing - If your family gets drinking water from a private well, do you know if your water is safe to drink? What health risks could you and your family face? Where can you go for help or advice? This Web site will help answer these questions: <http://water.epa.gov/drink/info/well/index.cfm>
- Groundwater Protection - The "Citizen's Guide to Ground Water Protection" encourages citizens to take an active and positive role in protecting their community's ground water supplies.

AIPG Field Trip to Starved Rock and Matthiessen State Park



The Indiana-Illinois Section of the American Institute of Professional Geologist (AIPG) is hosting a field trip on the *Geology of the St. Peter Sandstone and the Ottawa-LaSalle Area* on Saturday May 21, 2011. This field trip will be lead by Pius Weibel, Senior Geologist with the ISGS.

This full-day trip will travel to the Ottawa-LaSalle area to visit a large quarry where the Ordovician St. Peter Sandstone is mined for use as industrial (silica) sand. Subsequent stops will examine natural exposures of the sandstone within the scenic confines of both Matthiessen and Starved Rock State Parks. Participants will also have the opportunity to view the Ordovician Platteville Limestone, Pennsylvanian cyclic strata, and Pleistocene glacial deposits. In

addition to discussions on the deposition of these strata, we will also examine elements of the LaSalle Anticline and the origin of the unique landscape of the area. Hard hats are required for the quarry stop, but no rock hammers please! This trip may include easy to moderate hiking, including numerous stairs.

A motor coach departs from the NUI extension campus located at 5555 Trillium Bld in Hoffman Estates, Illinois, at 8:00 am on Saturday May 21st. Participants will earn 8.0 professional development hours. The registration fee is TBA, but will include transportation, lunch, snacks, and a guidebook. To hold your spot please RSVP with Ramona Cornea at (815) 395-1221 or r.cornea@comcast.net by May 1, 2011.

Groundwater Update

AIPG 2011 National Meeting in Chicagoland



You are invited to attend the 2011 American Institute of Professional Geologist (AIPG) 48th Annual National Conference is taking place for the first time in Illinois on September 10-13, 2011 at the Hilton Chicago – Indian Lakes Resort located in Bloomington, IL (30 minutes from downtown Chicago and O’Hare International Airport). The national conference is being held jointly with the American Institute of Hydrology (AIH) and is co-hosted by the AIPG Illinois-Indiana Section and co-sponsored by the Lake Michigan Section of the Air and Waste Management Association (LM-A&WMA). At this conference you will have the opportunity to increase your technical knowledge of current advancements in technology and practice methods, earn continuing education credits, and interact with fellow professionals from the consulting, municipal, industrial, regulatory and academic communities.

This year’s conference theme is **“Geosciences: The Road to a Sustainable Future”**. The four day conference includes technical presentations, nationally recognized keynote speakers, workshops, field trips, poster sessions and an exhibit hall. The technical program offers a solid selection of multidiscipline topics including sustainability, natural resource management, energy, environment and technology and climate change. In addition, six exciting field trips will include Lake Michigan coastal geology and development, regional quarry and mining trips, and field lectures covering geological, hydrological, and environmental engineering areas of interest. Continuing education credits will be offered for all technical sessions, workshops and field trips. The exhibit hall will include an area for student posters, exhibitor booths for marketing products and services, and displays from conference sponsors. Additionally, trips to Chicago’s Shopping District, Navy Pier, architectural tours, restaurants, and nightlife will be offered.

Visit www.aipg.org/2011/AIPG-AIH.htm for details or to obtain forms regarding abstract submittal, sponsorship opportunities and exhibitor information. The deadline to submit an abstract is **May 20, 2011**.

Groundwater Update

Regulatory Changes that Impact PGs in Illinois

The Illinois EPA (IEPA) has proposed rules on clean construction and demolition debris (CCDD) that affects licensed Professional Geologists and their practice in the State of Illinois. Specifically, a provision in the proposed rule will require licensed Professional Engineer certifications regarding soil chemistry sampling/testing program evaluations and design of groundwater monitoring systems that are well within the expertise by licensed Professional Geologists.

The IEPA has invited comments from stakeholders on its draft regulations implementing Public Act 96-1416, which became law on July 30, 2010. The CCDD law requires IEPA to propose rules to establish additional technical requirements for CCDD facilities; set operating standards for uncontaminated soil fill operations; and develop standards for the maximum allowable concentrations of chemical constituents in uncontaminated soil generated during construction or demolition activities and used as fill material at either type of fill site. A summary of the proposed regulatory changes, FAQ, and the link to the proposed amendments are at this link: <http://www.epa.state.il.us/land/ccdd/index.html>.

Public Act 96-1416, among other things, established interim requirements for certain fill operations until rules are finalized by the Illinois Pollution Control Board. Public Act 96-1416 specifically directs that the final rules to implement this new Public Act are not limited by its interim provisions (See Sec. 22.51 (f)(2) and Sec. 22.51a. (d)(2)). This directive from the legislature allows the Illinois EPA to include Professional Geologists in appropriate locations within 35 IAC Part 1100.

The Illinois-Indiana Section of the American Institute of Professional Geologists (AIPG) has reviewed the new Public Act and the IEPA's draft rule, and have identified certain sections of 35 IAC Part 1100 where Illinois Licensed Professional Geologists should be incorporated. Specifically, the draft rule requires a licensed professional to develop and implement plans and programs for soil sampling and groundwater monitoring, and certify soils that meet the requirements to qualify as uncontaminated. Professional Geologists have the background, education, experience and Illinois licensure which qualify them to perform selected functions under Public Act 96-1416. The AIPG Illinois-Indiana Section has submitted comments to the Illinois EPA to add Professional Geologists to appropriate sections of draft rule 35 IAC Part 1100.

The IEPA is seeking comment and proposed changes from stakeholders on the draft rules. Here's the timeline of **informal** outreach activity by IEPA:

- February 17 - Release the draft rule to stakeholder groups and invite comments; post the draft rule on Illinois EPA's CCDD webpage
- March 11 - Stakeholder comments due on the draft rule
- Mid-to-late April - Release revised draft rule to stakeholder groups and invite comments; post revised draft rule on webpage
- May 12 - Stakeholder comments due on the revised draft rule
- June 30 - Finalize proposed rule for sign-off by Illinois EPA Director and the Governor's Office
- July 30 - File proposal with the Illinois Pollution Control Board

Send your comments on the draft rule to epa.ccddcomments@illinois.gov.