



ILLINOIS GROUNDWATER ASSOCIATION NEWSLETTER

Volume 19, No. 2
Fall 2003

Contents

- IGA News
- Agency and Regulatory Update
- Focus on Illinois Groundwater Education
- IGA Officer Election
- Fall 2003 IGA Meeting at Joliet, Illinois

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NEWS FROM THE IGA

FROM THE IGA CHAIR, ED MEHNERT

Over the weekend, I returned to my undergraduate college for a football game for the first time in 20 years. It was a great weekend of golf, football, and story telling. It was great to catch up with old friends and to laugh at the old stories.

The Illinois Groundwater Association is also planning to celebrate its 20th anniversary and invites you to attend our Fall meeting in Joliet. I'm sure the IGA reunion will be more dignified than my college reunion, but hopefully just as fun. We're putting together another top notch meeting agenda (see page 16 of this newsletter). In addition, the IGA is hosting a field trip to Thornton Quarry on Friday October 17th. The quarry, which opened in 1837, is hard to miss since I-80/94 passes right over the quarry near the Illinois-Indiana border. The quarry provides spectacular views of a Silurian reef (Racine Formation) and a chance to collect fossils. We've all seen this quarry in our travels between Illinois and Indiana, but how many of you have never seen it first hand, and looked at the looming quarry walls from the bottom? Maybe you haven't had a chance to poke through lodes of petroleum-laced fossils, placed such that enthusiastic visitors get good pickings without danger to life and limb? Or, if you have seen it, was it years ago? Perhaps a new trip might refresh old memories and create happy new ones, as did my recent trip back to my undergraduate college. Your chances to see this quarry are dwindling, as this quarry is scheduled to be converted a stormwater reservoir as part of Chicago's TARP (Tunnel and Reservoir Plan) stormwater system in 2005. Access is likely to be much more limited when it is filled with water.

Please join us at the meeting (Thursday, 10/16) and/or the Thornton Quarry field trip (Friday, 10/17). Come spend the day with your professional colleagues or meet new colleagues.

Ed Mehnert, IGA Chair

Illinois State Geological Survey

(217) 244-2765 or mehnert@isgs.uiuc.edu

IGA NEWS

FALL 2003 IGA MEETING IN JOLIET

The Fall Meeting of the Illinois Groundwater Association will be held at Joliet, Illinois on Thursday, October 16, 2003. As an added bonus, there is a tour of Material Service Corporation's **Thornton Quarry** on Friday October 17, 2003. This trip will be led by Dr. Don Mikulic, ISGS, and Dr. Joanne Kluessendorf, Weis Earth Science Museum, and will run from 7:30 AM to 1:30 PM. Space on the quarry tour is limited to 46, so sign up early! For those needing overnight accommodations contact the Joliet Holiday Inn Express at 815-729-2000. More information on the meeting is on pages 14-16 of this newsletter.

SPRING 2003 MEETING A ROUSING SUCCESS

The Spring IGA meeting at Fermilab on April 10, 2003 was an unqualified success. It was a beautiful spring day, and the meeting started after all the attendees made their way through Fermilab's enhanced security checkpoints. The morning session focused on groundwater planning and management perspectives, and had presentations from the Northeastern Illinois Planning Commission on regional water supplies and water quantity and quality issues, Kane County's land management and water resource planning initiative, management of water supply needs by the Chicago Metropolitan Water District, and groundwater modeling and mapping in Kane County by the ISWS and ISGS. The afternoon session presented results from the Fermilab groundwater monitoring program, and studies of geophysical investigation of a karst area and the hydrologic characterization of a lake in Kane County. Presentations were both timely and pertinent to the many groundwater needs that face the groundwater community and residents of Illinois.

IGA STUDENT RESEARCH GRANTS PROGRAM

A primary goal of the Illinois Groundwater Association is to foster scholarship in the science of groundwater. One way we support this effort is through our IGA Student Research Grant Program. Applications are invited for IGA student research grants for the year 2003-2004. The IGA annually awards one or more modest grants (typically \$150 - \$300) to help support student research in groundwater in Illinois. Any undergraduate or graduate student registered for full- or part-time study at an accredited college or university in Illinois is eligible to apply. Applications are typically accepted and reviewed in early spring. Application forms and guidelines can be obtained from:

[Edward Mehnert](#)

IGA Grants Coordinator

Illinois State Geological Survey

615 East Peabody Drive

Champaign, IL 61820

(217) 244-2765 Fax (217) 244-2785

IGA NEWS**THREE ILLINOIS STUDENTS RECEIVE IGA GRANTS**

Over the summer, the Illinois Groundwater Association awarded \$300 grants to three graduate students from Illinois universities. The IGA is pleased to support groundwater research, and hopes to maintain or increase this support as its budget permits.

2003 IGA Student Research Grant Recipients

Student	School	Advisor	Project
Diane M. Lamb	Illinois State University	Dr. Steve Van der Hoven	A study of nitrate transport in the vadose zone in a central Illinois agricultural area
Becky A. Ciske	Northeastern Illinois University	Dr. Laura Sanders	A study of the effects of precipitation on methane production and its relationship with the chemical composition of leachate at a landfill site
Steven Kroll	Northern Illinois University	Dr. Melissa Lenczewski	Influence of oxygenates on the fate and transport of BTEX compounds in fine grained soils

IGA thanks Ed Mehnert, Erik Spande and Paul Kesich for helping review the student grant proposals!

2003 IGA DUES REMINDER

It is fall 2003 already, so it is time to renew your membership for 2003. For more information on registration, please call or e-mail [Steve Bennett](mailto:Steve.Bennett@wiu.edu), IGA Treasurer, at (309) 298-1256. Please print, complete, and mail this information along with your registration fee to Steve at the address provided below. IGA membership dues are \$15. Student membership is \$5. Membership renewal for each calendar year is payable at the time of the Spring Meeting. **Make checks payable to the Illinois Groundwater Association.** Membership is available to anyone interested in groundwater resources in Illinois.

COST

Renew Membership \$15
New Membership \$15
Student \$5

Name: _____
Position: _____
Employer: _____
Address: _____

Phone: _____ Fax: _____
E-mail: _____

Clip form & mail to:

[Steve Bennett](mailto:Steve.Bennett@wiu.edu)

Western Illinois University

1 University Circle

Macomb, IL 61455

(309) 298-1256 Fax (309) 298-3399

SW-Bennett1@wiu.edu

IGA NEWS

IGA DIRECTORY OF EXPERTISE – UPDATE

As a new benefit to IGA members, we are developing a web-based directory for you and the public to locate groundwater expertise. The input and database components of the directory have been constructed and the next step is to design the web display component so the stored information can be shown. It is anticipated that by the time of the Spring 2004 meeting, the database will be publicly accessible from the IGA website. Members can be listed in the directory at no additional charge and will be given instructions on how to submit information in the future. The directory will include contact information and a brief description of professional expertise. Contact Randy Locke (rlocke@uiuc.edu) for further information.

IGA COFFEE MUGS AND MAGNETS – NEW!

IGA is pleased to introduce two new promotional items– coffee mugs and magnets. These items will help promote IGA around your office and will be on sale at the Fall meeting. Proceeds from the sale of the mugs and magnets will help IGA continue funding Student Research Grants.

ELECTION OF IGA OFFICERS FOR 2004

The biographies and the ballot for the Illinois Groundwater Association's election of officers for 2004 will be posted on the IGA web site prior to the election. This is done for the convenience of our members. Submit this ballot electronically to swilliams@weaverboos.com, or by mail to the address on page 15 of this newsletter

AGENCY AND REGULATORY UPDATE

SPECIAL GROUNDWATER RESOURCE DESIGNATION GRANTED

Rick Cobb, Illinois Environmental Protection Agency

The Illinois Pollution Control Board (Board) has designated the area contributing groundwater to Fogelpole Cave, a Dedicated Nature Preserve (DNP), as Class III: Special Resource Groundwater. Fogelpole Cave is located in the southern part of Monroe County, Illinois, approximately three miles north of Renault, Illinois. Located in the karst area of the Illinois Sinkhole Plain. Fogelpole Cave is also the habitat of the federally endangered Illinois Cave Amphipod (*Gammarus acherondytes*). Under the authority of 35 Ill. Adm. Code 620.230 (Board's Groundwater Quality Regulation), Class III: Special Resource Groundwater can be established for: groundwater that is demonstrably unique (e.g. irreplaceable sources of groundwater) and suitable for application of a water quality standard more stringent than the otherwise applicable water quality standard specified; for groundwater that is vital for a particularly sensitive ecological system; or groundwater contributing to a DNP that has been listed by the Illinois EPA. The Illinois EPA is required to review a written request to list a DNP, and upon confirmation of the technical adequacy, publish the listing of the DNP in the Environmental Register for a 45-day public comment period. Within 60 days after the close of the comment period, the Illinois EPA is required to publish a final listing in the Environmental Register. The Groundwater Section, of the Bureau of Water, at the Illinois EPA completed the review required and found the petition from the Department of Natural Resources' Nature Preserve Commission to be technically adequate. The 45-day comment period has ended with no comments.

AGENCY AND REGULATORY UPDATE (CONTINUED)**IEPA HONORED BY NATIONAL GROUNDWATER FOUNDATION - AGAIN**

Rick Cobb, Illinois Environmental Protection Agency

The National Groundwater Foundation has designated the Illinois Environmental Protection Agency (EPA) as a Groundwater Guardian Affiliate since 1997. This continued national recognition is based in the implementation of results oriented services (ROS) for protecting groundwater. Illinois' Groundwater Affiliate team is led by Illinois EPA, and promotes the Groundwater Guardian Program within the four priority Groundwater Protection Planning Regions in the state. In addition, our team promotes this program, as necessary, with other communities throughout the state, as well as with general statewide committees and organizations (e.g. USGS, U.S.EPA-Region V, others).

The following ROS's have been implemented during 2003, as follows:

- Assisted the Southern Groundwater Protection Planning Committee in recruiting the City of East Alton into the Groundwater Guardian Program;
- Assisted the Village of East Alton in the development of result-oriented activities (ROAs) for the Groundwater Guardian Program;
- Worked with the Northeastern Groundwater Committee to recruit the City of Plano;
- Supported/participated in three Regional Committee "Groundwater Protection Field Days" held in the Northern, Northeastern, and Southern Priority Areas;
- Participated/co-sponsored a Youth Festival at Rock Valley College;
- Southern Groundwater Committee co-sponsored/participated in a Water Stewardship Project for area fifth graders at Lewis and Clark Community College on April 28, (Teacher Training Workshop) and May 2, (Student Water Festival) 2003;
- Expanded the Northeastern Priority Region to include DuPage County;
- A total of three separate "training" sessions were held earlier this year to help DuPage County teachers educate their sixth through eighth grade students on general concepts related to groundwater and groundwater quality protection;
- In the next school year, the program will be expanded to cover more of the 125 schools serving about 67,000 middle school students in this rapidly growing Chicago suburban area with a population of over a million;
- A DuPage County Drinking Water Protection Program Workshop was held. Approximately 60 individuals attended this training workshop including: community water supply officials, environmental health professionals, consultants, local well drillers, and members of the general public. Participants of this one day training session learned about the DuPage County "Supplemental Well Ordinance" requirements, how various municipalities within DuPage County have begun to incorporate the DuPage County Health Department rules into their procedures, the importance of local municipalities to develop and implement a comprehensive Cross-Connection Control Program and information related to proper maintenance of private water supply wells. Organizers of this workshop were able to develop an agenda that offered 3.5 hours of Renewal Training Credit for drinking water supply operators and 4.5 hours of Continuing Education Credits for Licensed Environmental Health Practitioners. This was the first time that a regional groundwater committee function has offered "approved" training credits.

AGENCY AND REGULATORY UPDATE (CONTINUED)

SOURCE WATER ASSESSMENT PROGRAM STARTED BY IEPA

Rick Cobb, IEPA

The Illinois Environmental Protection Agency (IEPA) in cooperation with the U.S. Geological Survey (USGS), Illinois Department of Public Health, and local county health departments is providing drinking water-quality data and analyses to the public as part of IEPA's Source Water Assessment Program (SWAP) [<http://www.epa.state.il.us/water/groundwater/source-water-assessment/index.html>]. SWAP is designed to be a proactive approach to protecting the water supply by increasing public awareness of present and potential contaminants that may be detrimental to drinking-water quality in Illinois. The primary components of SWAP are as follows:

- Identifying areas that supply drinking water,
- Inventorying potential sources of contamination,
- Determining the susceptibility of the drinking-water source to contamination, and
- Informing the public of the assessment results.

SWAP assessments will be conducted for all public water supplies in Illinois. The public water supplies consist of approximately 1,800 community water supplies (CWS) and more than 4,100 non-community (Non-CWS) water supplies. The source of water for these supplies is both surface water and groundwater, or a combination. The SWAP assessment of each community water supply has been published as a Fact Sheet and posted on the Web. The assessment describes the source of drinking water (surface water, groundwater, or both), characteristics of the community water-supply wells and/or intakes, source-water quality, finished-water quality, potential sources of contamination, susceptibility to potential contamination, and surface-water and/or groundwater protection efforts. The information and data used in the assessment preparation are provided by the IEPA and include searching State and Federal databases, analyses, field surveys, and water-test results.

The SWAP Fact Sheets for all community water supplies were completed on May 2003. Selecting the county of interest can access the SWAP Fact Sheets completed. The number of completed CWS Fact Sheets for each county is given in parentheses after the county name, followed by the number of Non-CWS facilities with information for that county. The CWS Fact Sheets accessible below are stored in Adobe Portable Document Format (PDF) and are similar to the original printed Fact Sheet. A version of the CWS Fact Sheet that conforms to the guidelines of Section 508 of the Americans with Disabilities Act (ADA) (supports assistive technology for PDF documents for the visually impaired) is available at <http://il.water.usgs.gov/factsheets/indexada.html>.

In addition to the published Fact Sheets which document the source-water conditions at one point in time (the time the data are collected), the USGS and IEPA have developed an interactive-mapping (geographic information system) Web application for retrieving up-to-date source-water data and analyses. USGS real-time data for Illinois also are accessible through this application. This should be a very useful tool for local county health officials.

This site is a secured site. However, federal, state, local governments, and consultants with a signed confidentiality agreement can obtain access.

AGENCY AND REGULATORY UPDATE (CONTINUED)**U.S. EPA AWARDS BROWNFIELD GRANTS IN ILLINOIS**

The U.S. EPA brownfield program has granted funding of \$73.1 million for 176 applicants across the United States, and within Illinois the U.S. EPA has approved 11 grants totaling \$3.9 million to help assess and redevelop brownfield sites. Brownfield sites are abandoned or underutilized properties where real or perceived environmental contamination has slowed redevelopment, and EPA Region 5 Administrator Thomas V. Skinner said, "Brownfields redevelopment does much more than turn neighborhood eyesores into community assets. It also restores hope and creates opportunity." More information on the U.S. EPA brownfield program is available at: <http://www.epa.gov/brownfields/>.

Four of the grants totaling \$1.5 million were awarded to one site for cleanup activities at North Chicago and to two groups, South Suburban Mayors and Managers Association and Southeast Chicago Development Commission (<http://www.epa.gov/region5/news/news03/03opa098.htm>). The North Chicago cleanup grant of \$160,000 will target cleanup of petroleum related contamination. The South Suburban Mayors and Managers Association received a grant of \$200,000 for a brownfield assessment and community outreach, and \$1 million to be used as a revolving loan fund for cleanup activities. The Southeast Chicago Development Commission received a grant of \$200,000 to clean up a site that had been used as a gas station, dry cleaner, and furniture manufacturer for retail redevelopment.

Seven grants totaling \$2.4 million were awarded to Illinois sites outside of the Chicago area (<http://www.epa.gov/region5/news/news03/03opa099.htm>). A Canton, Illinois site formerly used by International Harvester from 1840 to 1984 was awarded grants of \$300,000 for environmental assessment and \$200,000 for cleanup activities. Freeport, Illinois was awarded \$200,000 to conduct community outreach and assess numerous hazardous materials sites along an industrial corridor of the W.T. Rawleigh Corporation, which went bankrupt in the late 1980s. Rock Island, Illinois will receive \$95,750 to clean up a former fueling station and bulk petroleum storage facility and turn this site into the Sylvan Slough Natural Area, which will be a demonstration project to reduce runoff entering the Mississippi River. Rockford, Illinois was granted \$400,000 to assess hazardous substances and for community outreach along the Illinois 251 corridor. Sterling, Illinois has received a \$400,000 assessment grant and an \$800,000 revolving loan fund to clean up contamination at the Northwestern Steel and Wire Co. property, assess impacts to groundwater in the Rock River area, and conduct community involvement activities.

AGENCY AND REGULATORY UPDATE (CONTINUED)**IEPA ISSUES BIENNIAL NONPOINT SOURCE POLLUTION REPORT**

<http://www.epa.state.il.us/water/watershed/reports/biannual-319/index.html>

The Illinois EPA has published its biennial report demonstrating the agency's accomplishments in controlling nonpoint-source pollution. The grant provided by the U.S. EPA under Section 319 of the Clean Water Act that funds Illinois EPA's nonpoint source pollution activities requires the submittal of a status report by accepting agencies every six months.

The report states: "Nonpoint source pollution is the diffuse, intermittent runoff of pollutants from various sources. Precipitation moving over and through the ground picks up pollutants from these sources and carries them into rivers, lakes, and ground water. Major sources that contribute to Illinois' nonpoint source pollution problems are agriculture, construction erosion, urban runoff, hydrologic modifications, and resource extraction activities."

Funds from the U.S. EPA's grants from 1990 to present have been used to develop and demonstrate effective and innovative nonpoint source pollution projects. The IEPA has also used these funds to promote public knowledge and awareness of nonpoint source pollution.

IEPA DEVELOPS SOURCE WATER PROTECTION TOOL

Rick Cobb, IEPA

The Illinois EPA has coordinated with the Montana Water Center and the Midwest Technical Assistance Center to develop a new interactive web-based training tool to simplify the process of developing a **source water protection plan**, based on the completed assessment, for small public drinking water systems.

NEW PUBLICATIONS FROM THE ISGS

The ISGS has released several groundwater reports recently that may be of interest to our IGA members:

Larson, D.R., B.L. Herzog, T.H. Larson, 2003. **Groundwater Geology of DeWitt, Piatt, and Northern Macon Counties, Illinois**, Illinois State Geological Survey Environmental Geology 155.

Panno, S.V, W.R. Kelley, C.P. Weibel, I.G. Krapac, and S.L. Sargent, 2003. **Water Quality and Agrichemical Loading in Two Groundwater Basins of Illinois' Sinkhole Plain**, Illinois State Geological Survey Environmental Geology 156.

Ipe, V.C., and S.B. Bhagwat, 2003. **Water Resources in Illinois: Demand, Prices, and Scarcity Rents**, Illinois State Geological Survey Illinois Minerals 126, 11 p.

Herzog, B.L., D.R. Larson, C.C. Abert, S.D. Wilson, and G.S. Roadcap, 2003, **Hydrostratigraphic Modeling of a Complex, Glacial-Drift Aquifer System for Importation into MODFLOW: Ground Water**, Vol. 41, No. 1, pp. 57-65. Reprint 2003-1.

Larson, D.R., E. Mehnert, and B.L. Herzog, 2003. **The Mahomet Aquifer: A Transboundary Resource in East-Central Illinois**, Water International, 28(2): 170-180. Reprint

These reports are available from the ISGS Information Office, 217-244-2414. The charges for these reports are: EG155= \$13.00, EG156= \$8.50, and IM126= \$5.00.

A complete list of ISGS publications and maps is available on the ISGS web site, www.isgs.uiuc.edu.

AGENCY AND REGULATORY UPDATE (CONTINUED)

IEPA PUBLISHES WATER MONITORING STRATEGY

<http://www.epa.state.il.us/water/water-quality/monitoring-strategy/index.html>

The Illinois EPA has published its "Water Monitoring Strategy, 2002-2006", which outlines surface and groundwater data collection programs and goals and objectives that will be conducted by the IEPA over the next five years to address the question: "What is the quality of Illinois waters?". This document is available through the Illinois EPA's web site link, provided above.

This program was funded by the U.S. EPA as authorized by the Federal Clean Water Act (CWA). To determine if the CWA goal of determining if the nation's waters are 'fishable and swimmable' funds are provided to the states to assess the quality of their waters. The state water monitoring strategies are performed using U.S. EPA guidance, "Elements of a State Water Monitoring and Assessment Program (October 2002).

ISWS – FREE WATERSHED MAP

Do you like free stuff? Then the Illinois State Water Survey is the place for you!

The Illinois State Water Survey is offering a free Illinois watershed map (<http://www.sws.uiuc.edu/hilites/map.asp>). All you have to do is go to their web site and request a copy, or e-mail the form from the web site to get one via snail mail. Electronic copies are available for download in PDF format.

ISWS VIDEO CLIPS AVAILABLE

Two video clips from the Illinois State Water Survey are available through their web site (<http://www.sws.uiuc.edu/hilites.asp>). The first is a short clip about the Illinois State Water Survey and its mission. The second is a clip showing the impact of the ice age on Illinois ([Impact of the Ice Age on Illinois Land and Water](#) [25 Mb file]). The short video on glacial geology is particularly well done, with excellent synopses of Illinois glacial geology and nicely executed visuals. The clips will be great for teachers, or those interested in a brief tour of the ISWS or the impact of glaciers on Illinois and its surficial geology.

NGWA GRANTS SCHOLARSHIP

The National Ground Water Association has awarded a college scholarship to Anna Booth, daughter of long-time IGA volunteer and former Chair Colin Booth. This scholarship is available to NGWA members or their immediate family, and Colin certainly qualifies as a long-time active member of the NGWA. Anna is an outstanding student and, according to Bev Herzog, the NGWA was "especially pleased to honor his (Colin's) daughter." Congratulations Anna!

ABSTRACT: UNCERTAINTIES IN ESTIMATING GROUNDWATER AVAILABILITY

Abstract from the ISWS: <http://www.sws.uiuc.edu/hilites/more.asp?id=ugycoa&fr=hi>

Uncertainty of estimates of groundwater yield for the Cambrian-Ordovician Aquifer in northeastern Illinois (490k pdf file), D.D. Walker, S.C. Meyer, and D. Winstanley, *in*: Proceedings of Probabilistic Approaches and Groundwater Modeling, Am. Soc. Civil Eng., Env. and Water Resour. Inst. Symposium, Philadelphia.

The population of northeastern Illinois is predicted to increase 15 percent by the year 2020, which is expected to increase the demand for water in the region. Limitations on water withdrawals from Lake Michigan and declining groundwater levels have prompted regional planning agencies and managers to ask the Illinois State Water Survey (ISWS) for estimates of the amount of groundwater available from the regional aquifers (NIPC, 2001). But simple, single-valued estimates of groundwater availability often are accompanied by assumptions and uncertainties that limit their usefulness, although these assumptions and uncertainties may not be explicitly stated. To illustrate the limitations of such estimates, the ISWS (Walker, et al. 2003) has examined the estimates of groundwater availability from the series of sandstone and dolomite formations underlying northeastern Illinois and southeastern Wisconsin, described by Suter et al. (1959) as the Cambrian-Ordovician Aquifer.

The availability of groundwater from the Cambrian-Ordovician Aquifer has been expressed as its practical sustained yield (PSY), defined as “the maximum amount of water that can be continuously withdrawn by a pumping array without exceeding recharge or causing water levels to decline below critical levels”. (Suter et al., 1959, Zeizel et al., 1962) A series of studies conducted in the 1950’s and 1960’s determined that the best estimate of the PSY of this aquifer in northeastern Illinois for the 1958 configuration of pumping centers was 46 million gallons per day (mgd) (Suter et al., 1959), and that its maximum PSY is 65 million gallons per day mgd (Walton, 1964).

In this paper, a simple scoping analysis using published estimates for parameters and recharge areas suggests that maximum PSY may lay between 28 and 180 mgd. This level of uncertainty could affect regional planning because withdrawals from the Cambrian-Ordovician Aquifer are a large proportion of the water supply for the six collar counties surrounding Chicago (NIPC (2001) estimates show that approximately 41% of all groundwater for non-cooling use in these counties came from this aquifer.

In addition to conceptual and parameter uncertainties, estimates of groundwater yield assume certain economic, legal, social, and climatic conditions, often implicitly. These conditions constrain well field design, land use, and other factors that indirectly limit the feasibility of groundwater development. As a consequence, changes in economic, legal, social, and climatic conditions can be expected to change the estimated yield.

Decisions to withdraw water from aquifers are based on consideration of many factors including science, engineering, economics, societal values, and politics. In the future, the ISWS will move away from providing single-value estimates such as the PSY and toward analyses of management alternatives that clearly state their assumptions, reflect parameter uncertainties, and evaluate the impacts on the surrounding environment. While such analyses will be more complex than single-value estimates, they will provide a richer basis for resource managers to use in making decisions about water withdrawals.

FOCUS ON ILLINOIS GROUNDWATER EDUCATION

Groundwater Protection Education Program

Fall 2003 Activity Schedule, Sep.–Oct.

(dates, type of presentation, name of event, location, state agencies, local sponsor)

Source: Harry Hendrickson/IDNR

- 9/18-20 Exhibit and consultation for local elected officials on local wellhead protection, Il. Municipal League Annual Meeting, Chicago Hilton, IDNR, USEPA, IML
- 9/19 Presentations, Marengo Schools Field Day, McHenry PHD, DNR, others
- 9/22 Presentations and model building, Beardstown High School, IDNR
- 9/24 Model building, NE Regional GW Comm, Yorkville, IDNR, Kendall SWCD
- 9/25 Display, NIPC Water Supply Committee Meeting, Chicago, IDNR, NIPC
- 9/26 Presentations, Mason County Make-a-splash field day, Chautauqua, IDNR
- 9/26 Presentations, Kent Creek Watershed Fair, Rockford area, IDNR, Boylan
- 9/30-10/1 Presentations, Will Co. Field Day, Channahon area, IDNR, CES
- 9/30-10/3 Presentations, W. IL Stewardship Days, Jacksonville 4H Camp, IDNR, CES
- 9/30-10/2 Presentations, DuQuoin Field Days, Fairgrounds, IDNR, S. IL SWCDs
- 10/3 Presentations, Highland Silver Lake Nature Day, Madison Co., IDNR, CES
- 10/6 Presentations, Pike/Calhoun Field Day, Pere Marquette S.P., IDNR, CES
- 10/7 Presentations, Stewardship Day, Allerton 4H Camp, IDNR, CES
- 10/7-9 Exhibit and consultation with local officials on wellhead protection, Illinois River Conference, Pere Marquette Hotel, Peoria, IDNR, IDOA, CES, others
- 10/16-18 Exhibit, model building, and workshops, IL. Science Teachers Assoc., Peoria Conv. Ctr., IDNR, ISTA
- 10/17 Presentations, World Water Monitoring Day, Elgin H.S., Elgin EHS, IDNR?
- 10/21-23 Exhibit, Nonpoint Source Outreach Conference, Chicago Congress Hotel, IDNR, IEPA, USEPA, CBG

For more information on education and educational events contact Harry Hendrickson/IDNR at HHENDRICKSON@dnrmail.state.il.us or 217/785-8577

*FOCUS ON ILLINOIS GROUNDWATER EDUCATION***Illinois Groundwater Protection Education Program
2003 Annual Report**

Submitted by Harry Hendrickson/IDNR

Budgets and Priority-setting for 2003

Continuing severe budgetary and administrative constraints resulted in further limitations on educational commodities, travel and work. The 2003 Illinois Groundwater Protection Education Program work plan was developed and approved by the Education Subcommittee of the Interagency Coordinating Committee on Groundwater (ICCG) and Groundwater Advisory Committee (GAC) in December 2002. Key in setting priorities were the results from the annual activities surveys, discussed below.

Groundwater Education Assessed

Each year the amount of time by IDNR, IDPH, IEPA, IDOA, and local volunteers on each of the groundwater education programs is calculated and used as one measure of whether the program met its goals. This time investment is also compared from year to year to see how education efforts track with time. There are seven types of program categories (summarized below), but there is a broad range within each.

A. Teacher training sessions. We invested twenty eight days in twelve teacher training events. Over 560 teachers came to classroom presentations and almost 2000 contacted us at exhibits and picked up groundwater education materials. Groundwater was integrated into six traditional water workshops for teachers, indicating progress in fulfilling a long-sought goal of this program. Emphasis is placed in these events on integrating groundwater into the water cycle and highlighting Illinois Learning Standards related to the water cycle, as developed by ISBE.

B. Field days for students, teachers and parents. We invested 67 days at 36 of these student-centered events. We provided (usually) outdoor classroom presentations to about 19,300 students, 640 teachers, and 950 parents. Students from 53 counties were represented. Teachers received an instructional packet including posters, rain gauge, rain (meter) stick with a local water budget, and directions to enter data in the State Water Survey Weather Watcher program.

C. Fairs and other events designed for the general public. We invested 29 days at seven events. Over 6300 people picked up or requested information at our exhibits. We staffed a Water Well Clinic at both state fairs, where staff assisted well owners with various problems. Since many of these events are on weekends, our participation is limited due to federal and state work rules. Business and trade group partnerships provided a great deal of assistance with staffing.

D. Professional conferences. We invested eighteen days in providing exhibits and presentations at nine other (non-teacher) professional conferences, where about 5130 water, health, engineering, municipal, crop and other professionals picked up information.

E. Regional and state planning meetings. To foster communication and coordination with local groundwater protection programs, we attend as many of these meetings as possible. We invested eighteen days in twenty-one planning meetings, of which fifteen were related to regional groundwater committees and two were related to sealing abandoned wells.

*FOCUS ON ILLINOIS GROUNDWATER EDUCATION***Illinois Groundwater Protection Education Program (Cont.)**

F. Award presentations. We invested four days in developing and presenting Shining Star Awards to two local units of government. Thanks to the awards, local news outlets covered local success stories, and displays and articles were used in local venues and newsletters.

G. Customer fulfillment. In addition to participation at various events and meetings, we receive daily requests for information by phone, email, and mail. We often refer the customer to a local health, extension, or water agency for local information and service. We normally fulfill the requests for information in two days through the Groundwater Education Materials Center (GEM Center), where we keep about ninety information pieces from ten agencies and organizations in stock. Many of our responses provide more than one piece, such as Teacher Instructional Packets, which include about twenty-five items from several sources. In FY 03, we distributed about 100,000 pieces (fact sheets, bulletins, posters, stickers, displays, videos, overheads, brochures, teacher activity books, etc.), mostly to intermediate distributors, such as local health departments, SWCDs, extension offices, or workshop facilitators. We have moved the GEM paper materials from a storage shed to the new DNR basement library, which allows for a significant improvement in quality of service.

H. Statistical trends. Compared to previous years, we reached more teachers (through workshops), students, well owners, and professionals. While participation at fairs and public events was about the same, our attendance at planning meetings was reduced. The time spent with awards programs resulted in excellent press coverage and documented role models and success stories.

<u>ACTIVITY</u>	<u>FY 01</u>	<u>FY02</u>	<u>FY03</u>
Teacher contacts in workshops	250	360	561
Teacher contacts through exhibits	3600	2650	1994
Student contacts through field day presentations	8300	13600	19270
Teacher contacts through field day presentations	420	700	640
Days for student/teacher field days	32	36	68
Professional conferences presentations	19	19	9
Days for these meetings	40	40	18
Professional contacts	3000	4200	5135
Award presentation days	NA	5	4
Regional and state planning meetings	62	40	21
Days for these meetings	52	30	18
Adult general public contacts: fairs, field days, etc.	4600	4300	6370

For further information contact:

Harry Hendrickson/Illinois Department of Natural Resources
hhendrickson@dnrmail.state.il.us or 217/785-8577

FALL 2003 ILLINOIS GROUNDWATER ASSOCIATION MEETING AND FIELD TRIP

Please join the IGA in celebrating its 20th Anniversary at the **Fall Meeting in Joliet** on Thursday, **October 16th**. The meeting will be held at the Holiday Inn Express at 411 S. Larkin, right off I-80. Details on the technical program will be posted on the IGA web site (www.iga.uiuc.edu). We encourage your contribution to the technical program, and if you are interested there is (probably) still time. If you would like to make a technical presentation, e-mail your 250-word abstract to Randy Locke (rlocke@uiuc.edu) as soon as possible.

Need a room? Contact the Holiday Inn Express at 815-729-2000.

On Friday, **October 17th**, IGA will host a field trip to Material Service Corporation's **Thornton Quarry**. This trip will be led by Dr. Don Mikulic, ISGS, and Dr. Joanne Kluessendorf, Weis Earth Science Museum, and will run from 7:30 AM to 1:30 PM. Tour the quarry and learn about its geology, hydrology, and relationship to TARP. All field trip participants will be transported via coach bus from the Joliet Holiday Inn Express to the Thornton Quarry and back. Because of bus limitations, the field trip is limited to 46 participants. Sign up early; don't be left of the bus!

Registration Information

Name: _____

Affiliation: _____

Address: _____

E-Mail Address: _____

Phone: _____

IGA Member– Yes _____ No _____

(IGA membership cost \$15 per year and saves you \$ when registering for meetings! Join now!)

IGA Fall Meeting, Holiday Inn Express, Joliet on Thursday, October 16

Registration includes continental breakfast, lunch, and afternoon refreshments.

Member, registering prior to Oct. 2	\$45
Member, registering on or after Oct. 2	\$55
Nonmember, registering prior to Oct. 2	\$60
Nonmember, registering on or after Oct. 2	\$70
Student (registered at an Illinois University)	\$25

IGA FALL MEETING AND FIELD TRIP (CONTINUED)

IGA Field Trip to Material Service Corporation's Thornton Quarry on Friday, October 17

Participants must have a hard hat, long pants, and field boots. IGA will provide cold drinks. Please bring a sack lunch. We expect this to sell out fast so register early! Max. Participants = 46.

Member, registering prior to Oct. 2	\$20
Member, registering on or after Oct. 2	\$25
Nonmember, registering prior to Oct. 2	\$30
Nonmember, registering on or after Oct. 2	\$35
Student (registered at an Illinois University)	\$20

Events attending:

IGA Membership (\$15) _____ Meeting _____ Field Trip _____ Amount Enclosed _____

Checks should be made out to Illinois Groundwater Association, and mailed to:

Sara Williams, Weaver Boos & Gordon, Inc., 1901 Butterfield Rd., Ste. 800, Downers Grove, IL 60515, fax: 630-968-7769, phone: 630-698-7777, e-mail: swilliams@weaverboos.com

2003 ILLINOIS GROUNDWATER ASSOCIATION MEMBERSHIP

IGA membership dues are \$15. Student membership is \$5. Membership renewal for each calendar year is payable at the time of the Spring Meeting. Please fill out form below and mail to address listed below. **Make checks payable to the Illinois Groundwater Association.** Membership is available to anyone interested in groundwater resources in Illinois.

<i>COST</i>	Name: _____
Renew Membership \$15	Position: _____
New Membership \$15	Employer: _____
Student \$5	Address: _____
	Phone: _____ Fax: _____
	E-mail: _____

Clip form & mail to:

Sara Williams/Weaver Boos & Gordon
 1901 Butterfield Rd., Ste. 800, Downers Grove, IL 60515
 Fax: 630-968-7769, phone: 630-698-7777
 E-mail: swilliams@weaverboos.com

PROVISIONAL AGENDA
ILLINOIS GROUNDWATER ASSOCIATION 2003 FALL MEETING
OCTOBER 16, 2003
HOLIDAY INN EXPRESS, JOLIET, ILLINOIS

- 8:30-9:15 Registration with refreshments
- 9:15-9:25 Opening Remarks: **Ed Mehnert**, IGA Chair
- Session 1**
- 9:25-9:45 **Dennis Duffield**, City of Joliet, *Joliet's Water and Wastewater Development Program 2003: A plan to meet the future water and wastewater needs of Joliet*
- 9:45-10:05 **TBA**
- 10:05-10:25 **George Roadcap**, Illinois State Water Survey,
Potentiometric Surface of the Silurian Dolomite in Northeastern Illinois
- 10:25-10:35 **Break**
- 10:35-10:55 **Stu Cravens**, Kelron Environmental,
Landfill Wars: Politics, Money and the Silurian Dolomite Aquifer
- 10:55-11:15 **Kelly Warner**, US Geological Survey, *Arsenic Fact Sheet*
- 11:15-11:35 **Subhash Bhagwat**, Illinois State Geological Survey,
Economics of Water Resources in Illinois
- 11:35-11:50 **Awards Presentation**
- 11:50-1:00 **Lunch**
- Session 2**
- 1:00-1:20 **Don Mikulic**, Illinois State Geological Survey, *Geology of Thornton Quarry*
- 1:20-2:00 **Nick Venuso**, Metropolitan Water Reclamation District of Greater Chicago, *TARP Design and Performance*
- 2:00-2:20 **Business meeting and open mic for announcements to the Association**
- 2:20-2:30 **Break**
- 2:30-3:00 **Craig Rawlinson**, STS Consultants, Ltd., *Groundwater Protection Evaluation - Chicago Underflow Plan (CUP) McCook Reservoir*
- 3:00-3:20 **TBA**
- 3:20-3:40 **TBA**
- 3:40 **Adjourn**