



# Illinois Water Resources Center

## Illinois Water Conference Celebrates 10 Years of Water Science

IWRC hosted our 10<sup>th</sup> anniversary biennial Conference on Illinois Water, October 8-9 in Champaign, Illinois. Begun in 1998, the mission of the conference is to showcase the latest research findings and policy issues related to Illinois waters.

This year's conference provided opportunities to reflect on the past and look to the future. What has changed in the last ten years, what are our successes, and what problems do we still face? To help out the past decade, we invited Richard Sparks, former director of the Illinois Water Resources Center and founder of this conference series, to give us his perspective on the changes that have occurred in the past ten years and the issues he sees on the horizon. Now the director of research for the National Great Rivers Research and Education Center, Dr. Sparks is actively involved in preserving and restoring our waterways.

Also on the conference agenda were plenary sessions on the Water Resources Development Act, climate change, nutrients, water supply, and energy/biofuels.

Papers were submitted by about 40 scientists and students and included topics such as groundwater research, technology, water quality, watershed-scale science, planning, and environmental



measurements.

"We invited members of the water community in Illinois to join us at the Illinois Water 2008 conference," says conference coordinator Lisa Merrified. "Topics defined the critical issues currently facing Illinois waters and explore the current research advancements in our scientific communities."

If you are interested in learning more about this year's conference or attending, please visit [www.iisgcp.org/ilwater/](http://www.iisgcp.org/ilwater/).

## Researchers Shed Light on Groundwater in Northeastern Illinois

Managing water resources in northeastern Illinois is complicated by interstate treaties and multiple demands on available supply. The aquifers underlying much of the region do not make the situation any easier. They are characterized as fractured dolomite aquifers which means that the water flows through cracks in the rocks. The cracks are highly variable, making the rate of flow and transportation of contaminants difficult to understand. It is not unusual for neighboring wells to produce very different amounts of water due to the number of fractures the well intersects. Further, as the water flows through the fractures in the rock, very little filtration occurs, making it possible for surface contaminants to travel long distances with little alteration.

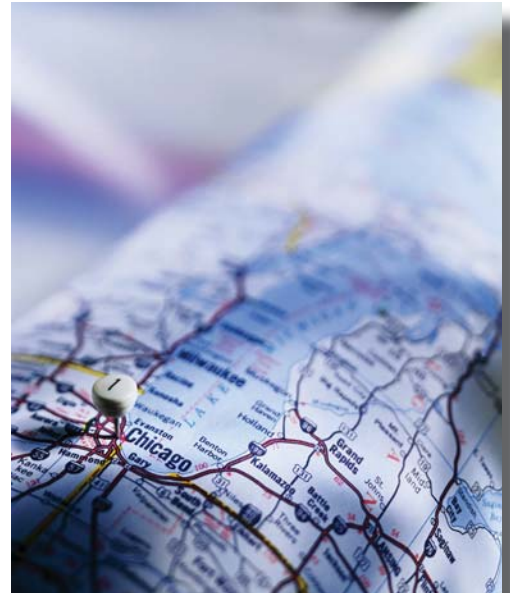
This year, two IWRC funded researchers completed projects to help us better understand the aquifer structure and function in

the region.

With funding from the National Institutes of Water Resources program, Researchers Yu-Feng Lin and Albert Valocchi, University of Illinois, and Randall Hunt, USGS Wisconsin Water Science Center, have developed a tool that can more quickly and easily allow decision makers to understand the implications of different options on the aquifer. They have developed a GIS plug-in called Pro Grade that can quickly generate aquifer recharge and discharge rates using widely available data. The tool is available online at [www.sws.uiuc.edu/gws/sware/prograde](http://www.sws.uiuc.edu/gws/sware/prograde).

Researcher Douglas Walker, University of Illinois, with funding from IWRC's base grant program, has spent the last two years looking at how to model the flow rates from these aquifers. As the aquifers are highly variable, determining impacts is difficult. Given the high demand on water in the region, more accurate methods for modeling these types of aquifers are critically needed. Dr. Walker's

revised models now show markedly different flow rates than those more commonly used. His findings, while preliminary, have created a great deal of interest and discussion within the groundwater community and could lead to new interpretations of how water flows under the Chicago area.



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