

# IOWA WATER CENTER

at IOWA STATE UNIVERSITY

## Who We Are

The Iowa Water Center (IWC) has as its goal to encourage and promote interdisciplinary, inter-institutional water research that can improve Iowa's water quality and provide adequate water supplies to meet both current and future needs of the state. The center is authorized by the Water Resources Act of 1964, PL 88-379. The Institute works closely with the three Regents Universities in Iowa, USGS, along with Iowa Departments of Natural Resources and Agriculture and Land Stewardship to encourage cooperative water resources research, outreach, and education.

## Iowa Water Center Vision

Working closely with the Iowa Water Center Advisory Council the following vision statements were developed to guide center activities for years to come.

- ◆ The IWC will identify critical water resources research and outreach needs in Iowa and coordinate efforts to meet those needs.
- ◆ The IWC will provide Iowans with an independent, authoritative voice on water resource issues affecting Iowa.
- ◆ The IWC will draw on the expertise and experience already residing in Iowa's various universities and agencies; it will not be a stand-alone organization.
- ◆ The IWC will be a clearinghouse or resource center for water research that is relevant to Iowa.
- ◆ The IWC will provide for the education and technology transfer needed to assure multidisciplinary collaboration among Iowa's research professionals and the application of the best science to Iowa's water problems.

## What's New

As one of 54 state water institutes, the Iowa Water Center (IWC) has more than a new name. Formerly known as ISWRRI (Iowa State Water Resources Research Institute), the Center also has a new director, Rick Cruse. Cruse is an ISU professor of agronomy and coordinator of an initiative emphasizing water quality for the College of Agriculture. According to Cruse the aim is to create a center of excellence that reflects the outstanding



Dr. Richard M. Cruse

water research and education programs found throughout Iowa. The 42-year-old center has successfully focused on research addressing water quality issues related to Iowa's predominantly agriculture landscape. Today the center has renewed its emphasis on outreach with plans to develop the Iowa Water Center as a clearinghouse for research information. While the center will maintain a strong research component, disseminating information to water resource professionals, policy-makers and the public is a priority.

## Future Activities

Future Activities for the center include sponsoring the 2007 Agriculture and the Environment Conference. This conference will address water resource issues (quality and quantity) related to the emerging bioeconomy in Iowa. In addition to the conference, the center has plans to host additional teambuilding/networking events such as the Iowa Water Center Poster Symposium held at Iowa State University September 20, 2006. For more information about these or other IWC activities, please visit the new Iowa Water Center website.

[www.water.iastate.edu](http://www.water.iastate.edu)

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## Current Research

IWC is currently involved with various aspects of water resources research and education in Iowa. Many of Iowa's water research priorities address agricultural impacts on water quality and quantity. Current research emphasis addresses nutrients, animal waste, and sediment impacts on water quality. See also 2005-2006 Research Activities.

## Project Spotlight

*Sensors for CyberEngineering: Monitoring and Modeling the Iowa River for Nutrients and Sediments.* Jerald L. Schnoor, Civil-Environmental Engineering, University of Iowa, Iowa City, IA. Dr. Schnoor's research focuses on environmental cyberinfrastructures for sensing, modeling, and analyzing nutrient and sediment problems.



*University of Iowa students Chris Mutel, J.V. Loperfido, Drew Latta, and Robert Watson install sensors in Clear Creek, Johnson County, Iowa, as part of Dr. Schnoor's research modeling water quality in a real-time environment.*

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## 2005-2006 Research Activities

- ◆ fate of veterinary antibiotics in manure lagoons
- ◆ identification of relationships between soil phosphorus and phosphorus loss through tile drainage to improve the subsurface drainage component of the Iowa phosphorus index
- ◆ vegetative filter education and assessment in the state of Iowa
- ◆ hydrologic modeling of subsurface drainage for predicting drainage outflow
- ◆ improving water quality in Iowa rivers: cost benefit analysis of adopting new conservation practices and changing agricultural land use
- ◆ sensors for CyberEngineering: monitoring and modeling the Iowa River for nutrients and sediments

## Significant Accomplishments

Dr. Jerald Schnoor, the principal investigator on the IWC project, *Sensors for CyberEngineering: monitoring and modeling the Iowa River for nutrients and sediments*, recently received a grant award to serve as Co-Director of CLEANER (Collaborative Large-Scale Engineering Analysis Network for Environmental Research), a planning grant with the National Science Foundation. Funds from the IWC were key to Dr. Schnoor's award.

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