

WATER NEWS



Summer – Fall 2007
Volume 8 Issue 1

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Established in 2000, the **DWRC's** undergraduate internship program has supported more than 75 water resources research and education projects. Undergraduate student interns at the University of Delaware and Delaware State University, working with faculty advisors, have conducted projects covering a diverse range of water-related topics. Some examples of their research, and a complete list of all internship projects, are provided in a new publication by the **DWRC**, found at <http://ag.udel.edu/dwrc/publications/DWRCinternshipspotlightbrochure.pdf>. To request a hard copy, please e-mail the Editor (mpautler@udel.edu). For information on eligibility and how to apply to the 2008-09 internship program, visit <http://ag.udel.edu/dwrc/job.html>.

INTRODUCING OUR 2007-08 INTERNS

Intern: Sarah Chatterson
Advisor: Dr. Joshua Duke
UD Department of Food and Resource Economics
Willingness to Pay for Sustainable Agricultural Practices in an Urbanizing Region



Intern: Samantha-Jo Ebert
Advisor: Dr. Dennis McIntosh
Delaware State University Department of Agriculture & Natural Resources
Can a Parabolic Screen Filter Improve the Quality of Water in a Recirculating Aquaculture System?

Intern: Adrienne George
Advisor: Dr. Dennis McIntosh
Delaware State University Department of Agriculture & Natural Resources
Determining Stress Levels of Mummichog (*Fundulus heteroclitus*) in Simulated Commercial Holding Tanks Treated with Various Water Conditioners



Intern: Jennifer Handlin
Advisor: Dr. Yan Jin
UD Department of Plant and Soil Sciences
Evaluation of the Use of Zerovalent Iron to Remove Pathogens from Water

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Intern: Janine Howard

Advisor: Mr. A. Scott Andres

Delaware Geological Survey

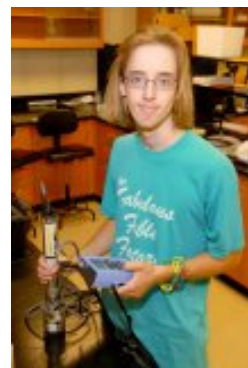
Effects of Wastewater Disposal on Ground Water Flow in Southern New Castle County

Intern: Nathan Kiracofe

Advisor: Dr. Shreeram Inamdar

UD Department of Bioresources Engineering

Assessment of Baseline Water Quality and Influent Pollutant Source Identification in the Noxontown Pond Watershed, Middletown, DE



Intern: Stephen Mayer

Advisor: Dr. Joshua Duke

UD Department of Food and Resource Economics

Benefit-Cost Analysis of Pelletized Broiler Litter in Agronomic Crop Production and Turf Grass Management

Intern: Marie Rivers

Advisor: Mr. A. Scott Andres

Delaware Geological Survey

Hydraulic Properties and Ground Water Flow Modeling of the Unconfined Aquifer, Southern New Castle County



Intern: Oluchi Ukaegbu

Advisor: Dr. Gulnihal Ozbay

Delaware State University Department of Agriculture & Natural Resources

Viability of a Freshwater Mussel (*Elliptio complanata*) as a Biological Filter for Aquaculture Pond Water Quality



Intern: Laura Yayac

Advisor: Dr. Gerald Kauffman

UD Water Resources Agency

Stream Restoration of a Piedmont Headwater Stream in White Clay Creek Wild and Scenic Watershed

DE AWRA Hosted 2007 Mid-Atlantic Sections' Conference

The DWRC co-sponsored the conference "Green Opportunities for a Blue Resource: An Economic Perspective," the first organized by the Delaware Chapter of the American Water Resources Association. Martha Corrozi of the Institute for Public Administration - Water Resources Agency, University of Delaware, said, "The intent of the conference was to provide a forum for water resource students and professionals from the Mid-Atlantic region to discuss current projects and areas of research in the water resources field. It was also meant to provide a venue for water resource students and professionals from various sectors to network and share their knowledge and expertise with one another. This conference played an important role in providing a setting for members of the Mid-Atlantic AWRA sections to meet in a forum for a few days."

One hundred people were in attendance from September 19-21. The keynote speaker was Dr. David Tilley of the Department of Environmental Science and Technology at the University of Maryland. He spoke on "Green Opportunities for Ecosystems that Solve Environmental Problems." Panel session members compared and contrasted economics and water resources from water supplier, non-profit, government, industrial, and academic perspectives.

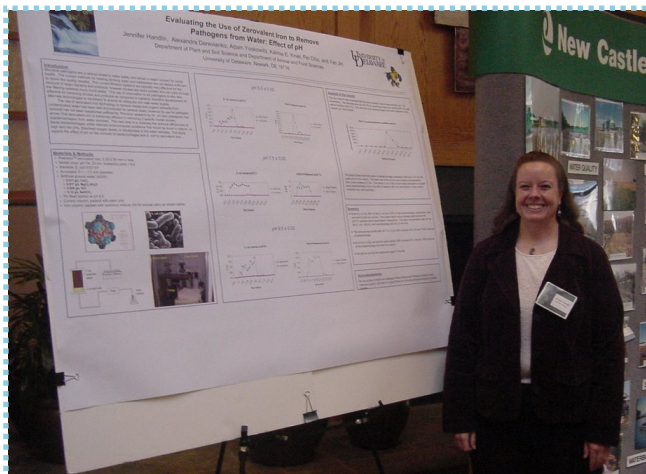
Concurrent session topics included those on economic impact and solutions, watershed planning, restoration/retrofits, drinking water, and urban case studies. Four local field trips were offered that invited visitors to discuss the shad population in the Brandywine River; Best Management Practices at multiple water supply, stream restoration, and wetland sites; urban farm management; and the Russell W. Peterson Urban Wildlife Refuge.



Organizers Martha Corrozi (above left) and Laura Whalen (above right) take a moment from their busy schedules to speak with DWRC Program Coordinator Maria Pautler (right) about the conference.



DE AWRA Hosted 2007 Mid-Atlantic Sections' Conference



Current DWRC interns Oluchi Ukaegbu (left) and Jennifer Handlin (right) display posters describing their research projects thus far.



Current DWRC intern Stephen Mayer shows AWRA DE Treasurer Aditya Sood the red oak tree he won, courtesy of one of the conference exhibitors.

"I think the conference was successful and reached our goals of bringing together speakers from different backgrounds to discuss water resources in the Mid-Atlantic region and how much these resources are worth from an economic standpoint. Hopefully the conference attendees learned something new or made new contacts. The DE AWRA planning committee also learned a lot that will be useful for the next time we host the conference," summarized Laura Whalen, DNREC Water Resources, and President of the DE AWRA.

Full conference coverage, including PowerPoint slideshows and photographs of field trips, is found at: <http://deawra.org/MAC2007.html>

The DE AWRA will hold its annual dinner on December 11, 2007 at 6 pm at the Delaware Nature Society's Ashland Nature Center. The cost of the catered dinner is \$25/members, \$15/students, \$30/nonmembers. Contact Martha Corrozi at 302-831-4931 or mcorrozi@udel.edu.

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Hello – from Maria Pautler - **DWRC** Program Coordinator



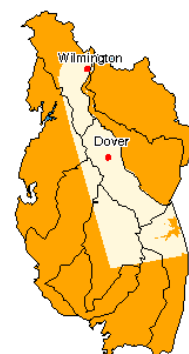
Hello from my desk in Townsend Hall! I've worked over ten years in the Department of Plant and Soil Sciences (PLSC; earned my B.S. and M.S. in PLSC, too) and am pleased to now work as the program coordinator for the **DWRC** and Editor of **WATER NEWS**. I have former **DWRC** coordinators Cynthia Greene and Amy Boyd to thank for paving the way, as we worked on some issues together over the years. I do similar work for UD's Institute of Soil and Environmental Quality (ISEQ; also housed in PLSC), as well as interface with Dr. Sims' graduate students and other workers, sometimes in a research capacity. Thanks for the input and collaboration I've received from the water community thus far. I look forward to our next "wave" of interaction!

DWRC Partner Passages ~~

Robert M. Hirsch, Associate Director for Water at USGS, recently announced a USGS website that describes the Great Lakes Basin Water Availability and Use pilot project. Found at <http://water.usgs.gov/wateravailability/greatlakes/>, the website includes links to all reports that the pilot project has produced to date and is relevant to the national Water Census. Mr. Hirsch stated, "It is our hope that the pilot study will show the utility of working at regional scales to answer such questions as: How much water do we have now? How is water being used? How is water availability changing? How much water can we expect to have in the future?... A Water Census should lay the foundation of hydrologic science for sound State and local water plans. I believe that these Great Lakes Basin pilot products can be very helpful in explaining to water professionals just what we are talking about as well as to help them understand the great value of these products. Even though every Water Census effort will differ based on the conditions and needs in a given river basin or principal aquifer, I think it's useful to be aware of these Great Lakes Basin pilot study products."

Mid-Atlantic Regional Water Quality Program

DWRC intern advisor Dr. Dennis McIntosh and **DWRC** Advisory Panel member Dr. David Hansen are active in the Mid-Atlantic Regional Water Quality Program. Land grant universities in Delaware, Maryland, Pennsylvania, Virginia, and West Virginia, and the USDA-CSREES, working with EPA Region III, have formed a partnership to advance water quality protection and restoration efforts in the Mid-Atlantic by providing water quality science support, training, and education. This regional program is anchored by, and complements, state water quality programs and existing Extension efforts. Partnerships are also developed with NRCS, USGS, river basin commissions and non-governmental organizations. For more information, visit <http://www.mawaterquality.org/>.



DWRC Spotlight on Graduate Research

DWRC graduate fellow Jennifer Seiter made two presentations with co-author and advisor Dr. Donald Sparks at the Soil Science Society of American annual meetings in New Orleans, November 4-8, 2007: **Direct speciation and distribution of dietary arsenic in chicken excreta and tissues**, and **Arsenic status in Delaware soils**. Subsequently, Jennifer was awarded the first Donald L. and Joy G. Sparks Graduate Fellowship in Soil Science based on her demonstrated excellence in academic performance, outstanding research and/or teaching potential, and the promise of an outstanding career. She received a \$3000 award and will be recognized at UD's annual Honors Day.



DWRC Notices and Calendar

UPCOMING MEETINGS

Mar. 30-Apr. 3, 2008 – National Ground Water Association 2008 Ground Water Summit, Memphis, TN. Visit <http://www.ngwa.org/2008summit/index.aspx>.

Apr. 14-16, 2008 – National Water Resources Association (NWRA) Federal Water Seminar, Washington, DC. Visit <http://www.nwra.org>.

May 28-30, 2008 – International Workshop on Water and Sanitation in International Development and Disaster Relief, Edinburgh, Scotland. Visit http://www.lifelong.ed.ac.uk/water_and_sanitation_2008/. Deadline for abstracts is Dec. 15, 2007.



LENDING A HELPING HAND - During the recent Soil Science Society of America annual meetings in New Orleans, some attendees from UD found time to help out with the post-Hurricane Katrina rebuilding efforts in St. Bernard's Parish.

Pictured above left are UD technical writer Katie Ginder-Vogel and graduate student Jennifer Gilbert installing insulation in a home rehabilitation project. (Photos courtesy of J. Gilbert)

The EPA's National Network for Environmental Management Studies (NNEMS) 2008 Student Fellowships program has been announced. The application deadline is Jan. 22, 2008. For details and an application visit: <http://www.epa.gov/education/students.html>

Delaware Water Resources Center Advisory Panel

The Delaware Water Resources Center

The Delaware Water Resources Center (DWRC), established in 1965, is part of a network of 54 Water Resources Research Institutes throughout the nation. The DWRC receives funding through Section 104 of the Water Resources Research Act of 1984. The US Geological Survey administers the provisions of the Act and provides oversight of the nation's Water Resources Centers. The primary goals of the DWRC are: to support research that will provide solutions to Delaware's priority water problems, to promote the training and education of future water scientists, engineers, and policymakers, and to disseminate research results to water managers and the public. For more information, visit our website:

<http://ag.udel.edu/dwrc/>

WATER NEWS is published biannually by the Delaware Water Resources Center, Dr. J. Thomas Sims, Director. Maria Pautler, Editor, welcomes materials for publication, including news articles and letters to the Editor. To submit material or request future issues, please address your correspondence to the address below or contact the Editor at mpautler@udel.edu or 302-831-0847.

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