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SDWRI Water News

South Dakota Water Resources Institute

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SDWRI WATER NEWS

SOUTH DAKOTA WATER RESOURCES INSTITUTE
SOUTH DAKOTA STATE UNIVERSITY
COLLEGE OF AGRICULTURE AND BIOLOGICAL SCIENCES

JUNE 2012

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The 7th Annual Eastern South Dakota Water Conference

October 30, 2012 at the University Student Union at SDSU

The topics for this year's conference include

- Current water issue and the law – new legal developments
- Updates on the work by the legislative Regional Watershed Advisory Task Force
- Panel discussion of water use and management
- Importance of water to generate wealth in South Dakota
- Agricultural water management, including agricultural drainage
- Water quality and water conservation
- Workshop: How to locate and use geospatial information in water management

Conference stipends covering travel, hotel and registration are available.

Contact the Trista Koropatnicki at trista.koropatnicki@sdsu.edu or 605-688-4910 for more information.

The goal of the ESDWC is to bring stakeholders in water resources, including policy makers, industry, agriculture, officials from federal, state, and local governments, universities, engineers, interest organizations and the citizens of the state together to exchange information, discuss solutions to current and emerging water resources topics, define new policies and network to form professional relationships. In addition, a large number of college-level students from engineering, agronomy and other biological sciences typically attend the conference to engage in water-related discussions of relevance to the state and the region and meet with prospective employers.



WRI Summer Intern Aashay Arora

I am a final-year undergraduate student of civil engineering at the Indian Institute of Technology, Kharagpur, India. Being interested in water resources, I applied for a summer internship at the South Dakota Water Resources Institute. Pursuing work under Dr. Kjaersgaard has been a really great learning experience for me. My work involves generating crop yield maps, automating the process of making South Dakota spatial precipitation maps, classifying vegetation in Roberts County, SD and doing field work at quite a few sites. In the process I work with ArcGIS and ERDAS Imagine, learn about the immense potential in GIS-based research, and also enhance my programming skills. I have already made some great memories over here, and I thank WRI for giving me this opportunity.



2012 Big Sioux Water Festival Celebrates its 20th Year!

This year marked the Big Sioux Water Festival's 20th year. The festival is co-sponsored by the South Dakota Water Resources Institute and was held on May 8th at the SDSU Campus. This year there was 1,033 fourth graders and their teachers on campus for the festival. More than 200 volunteers from throughout the SDSU and Brookings communities assisted with the event.



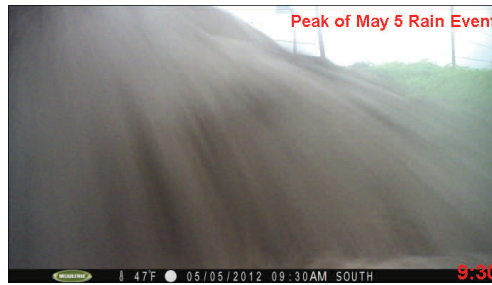
A Visit to the Iowa Flood Center



Pictured are Jeppe Kjaersgaard, Chris Hay & Boris Shmagin

J. Kjaersgaard and B. Shmagin from the Water Resources Institute and C. Hay from the Department of Agricultural and Biosystems Engineering at SDSU visited the Iowa Flood Center (IFC) of University of Iowa in Iowa City on June 19 and 20. The purpose of the visit was to discuss collaborations with Center's director Witold F. Krajewski and deputy Director Nathan Young and learn about the Center's activities serving the needs of the state of Iowa for research, monitoring and warning systems about flooding. During the visit we each gave a seminar presentation, tour the university campus and laboratories of one of the oldest fluid mechanic laboratory in the country. We additionally meet with Iowa Institute of Hydraulic Research (IIHR) Director Larry Weber to learn about IIHR experiences relative to developing of effective and meaningful outreach programs.

Extreme Runoff Event on May 5th, 2012



To the left is a series of impressive runoff pictures captured on a research field in Moody County, South Dakota showing the impact of a 5 - year 30 - minute rainfall event during wet conditions (May 5, 2012).

During the morning of May 5, a 1.4- inch rainfall event occurred at the project site located near Trent, SD. The soil had been tilled 5 days earlier and the soil was saturated from a 1.0 - inch rain the day before. The rainfall event was only 20 minutes. An automatic camera took pictures of the runoff event every 5 minutes. The surface runoff from the ten acre field is routed through an H-flume as it exits the field. The first picture was taken at 9:15 when the rain event started. The second picture was taken at the peak of the runoff event at 9:30. The third picture was taken at the end of the runoff event at 10:15.

Geospatial Technology for Educators Workshop Held May 29th—June 1st

Sixteen teachers from South Dakota and North Dakota participated in the *Geospatial Technology for Educators* (GTE) workshop held May 29 - June 1 at the U.S. Geological Survey (USGS) Earth Resources Observation and Science (EROS) Center near Sioux Falls. The purpose of this workshop was to provide information on geospatial technologies and how they can be used to enhance curriculum in areas such as earth science, geography and physics. The geospatial tools taught at the workshop included geographic information systems (GIS), global positioning systems (GPS) and remote sensing. Funding for the workshop was provided by federal grants from NASA via the Upper Midwest Aerospace Consortium's Education Public Access Resource Center (UMAC EdPARC) and the South Dakota Space Grant Consortium and from USGS via the AmericaView program. During the intensive four-day workshop, the teachers learned how to collect data using GPS units, where to look for various types of geospatial data, how remote sensing imagery is collected and used, and how GIS software is used to integrate and analyze various types of geospatial data. Presentations by EROS scientists and the City of Sioux Falls GIS department manager exposed the teachers to real-world examples of how geospatial technology is becoming an increasingly important part of today's society. Each participant received a GPS unit and geospatial data and software. This year's GTE workshop marked the 14th year that it has been offered. Instructors for the workshop were Mary O'Neill, SDSU; Dr. Bill Soeffing, USF; and Cassie Soeffing, Institute for Global Environmental Strategies.



SDSU Climate Extension and Water Resources Institute took part in the 2012 Western South Dakota Personnel Hydrology Conference in Rapid City. Presentations by B. Shmagin and J. Kjaersgaard are available from the conference website at: <http://sd.water.usgs.gov/WSDconf/>



Pictured are Trista Koropatnicki - WRI, Laura Edwards-SDSU Climate Extension, Boris Shmagin - WRI, & Jeppe Kjaersgaard—WRI.

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