HIGHLIGHTS and INITIATIVES

ENERGY, ENVIRONMENT and RESOURCES CENTER

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Oak Ridge Technology Research and Development Program
Sheila Webster, Director

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The EERC conducts unbiased, analytical, and multidisciplinary research designed to promote real-world solutions to problems in the fields of energy, environment, technology, and economic development.

PROJECTS. **Sheila Webster**, director of EERC's Technology Research and Development Program, is coordinating a course designed to help emergency-response personnel deal with mass-fatality incidents. The pilot training program, sponsored locally by EERC and Knoxville/Knox County, will be conducted by the National Mass Fatalities Institute, which is based at Kirkwood Community College in Cedar Rapids, Iowa. **Webster** will also oversee development of a student manual. For more information about the upcoming course, visit http://eerc.ra.utk.edu/what-new/conference.htm or contact Sheila Webster at 865-207-2125 or by email at <eercmeet@utk.edu>.

HONORS. The American Water Resources Association recently honored Graduate Research Assistant **Aaron Routhe** for his presentation of "Planners and the Public: The Role of Attitudes in Water Supply Planning." **Routhe** described initial findings of a study conducted with his advisor, EERC Faculty Associate **Robert Emmet Jones** (**Department of Sociology** and **Southeast Water Policy Initiative**). **Routhe** and **Jones** contend that understanding public attitudes about water resources can help citizens and decision makers resolve management disputes and promote more effective water policy. **Routhe** gave his "Outstanding Student Presentation," in November at the AWRA *Water Resources Conference* in Philadelphia during a session on resolving water conflicts.

Senior Research Associate **Catherine Wilt** received "strong consideration" for *Waste News*' 2002 Newsmaker of the Year. **Wilt** was nominated because of her work on product stewardship. Other finalists included Mayor Michael Bloomberg (New York), Senator Jim Jeffords (chairman, Senate Environment Committee), and President George W. Bush. Ultimately, **Wilt** and the other newsmakers lost to President Bush.

PUBLICATIONS. Research Scientist **Jean Peretz**, along with **Bruce Tonn** (**Urban and Regional Planning**) and Michaela Martin (Oak Ridge National Laboratory), co-authored *An Assessment of Energy-related Career Paths of Senior Industrial Assessment Center Program Alumni* (ORNL/TM-2002/226).

With Sujit Das (ORNL), **Peretz** and **Tonn** also prepared a program evaluation and assessment of benefits report on Automotive Lightweighting Materials Program research and development projects (ORNL/TM-2002/181).

Peretz, also president of the East Tennessee Chapter of the American Society for Public Administration (ASPA), presented "Evaluating the Benefits of Federal R&D Expenditures" recently at ASPA's regional *Southeastern Conference on Public Administration* (SECoPA), in Columbia, South Carolina. Each year, SECoPA addresses current challenges and problems facing public administrators in the Southeast.

Eroding Values

Each *Highlights and Initiatives* back page presents a closer look at one of EERC's projects or activities. This edition focuses on a new training program aimed at reducing construction-site erosion and sedimentation across Tennessee and improving the state's water quality.

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Eroding Values

A new training program addresses construction-site erosion and the sedimentation that impairs Tennessee's water quality. • BY KRIS CHRISTEN

TENNESSEE IS "one of the fastest growing states in the Southeast, with some counties rivaling Atlanta in terms of growth," says **Tim Gangaware**, assistant director of the University of Tennessee's (UT) Water Resources Research Center (WRRC), a subdivision of the Energy, Environment and Resources Center.

Such rapid growth means more building projects—and more dirt and debris going off site during heavy rains. A close look at Tennessee's polluted streams, rivers, and lakes points to this type of sedimentation as the state's leading cause of impaired water quality.

Although the Tennessee Department of Environment and Conservation (TDEC) and Tennessee's biggest cities—Chattanooga, Knoxville, Memphis, and Nashville—have had policies in place to control increasing stormwater discharges since the mid-1990s, the problem continues to worsen, Gangaware says.

In response, Gangaware, **John Buchanan** (**Biosystems Engineering and Environmental Science**), and **Bruce Tschantz**, a research scientist with WRRC and professor emeritus (**Civil & Environmental Engineering**), worked with TDEC to develop a training program on erosion prevention and sediment control for the construction industry. The program could soon become mandatory statewide.

Stormwater runoff falls under the jurisdiction of the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES), which TDEC administers. The regulation not only requires developers across the state to implement stormwater programs, but also mandates permits and stormwater pollution-prevention plans for sites of more specify the "best management practices" (BMPs) they plan to use.

The new course teaches proper installation and maintenance of sediment controls and what to do if the controls fail, Gangaware says, and includes sessions on erosion's impacts on natural resources, the roles and interaction among state agencies and local officials in controlling erosion and sediment, the NPDES construction stormwater permitting process, the erosion process and hydrologic cycle, and BMPs.

BMPs run the gamut from silt fences to buffer strips to mattings to sediment ponds. "No one BMP will address all problems," Gangaware says. "Multiple BMPs in the right places are necessary to keep eroded material from leaving the site."

And that's the key issue, says Buchanan, who teaches the BMP part of the course. "You're not fined until soil leaves your site," he says, "but if you don't have erosion in the first place, sediment control takes care of itself."

Ultimately, course certification may be required before developers can obtain construction permits in Tennessee. Discussions are ongoing between TDEC and municipalities for doing just that, a move the Tennessee Department of Transportation (TDOT) would support, says Dennis Cook, TDOT's assistant chief engineer for planning. TDOT is one of the state's biggest developers, with as many as 700 projects at a time representing a billion dollars' worth of road construction.

TDOT has put up $80,000 for development of the course, Cook says, to help designers and project developers across the state understand the tools and techniques that can minimize erosion and pollution. •

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