Tennessee Today
News and Information for the UT Community

UT Alert! UPDATE

The Tornado warning has been lifted for campus. Continue to monitor local media and the National Weather Service.

Sun, 27 Jul 2014 19:33:51 -0700

ALERT STATUS

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Headlines, Press Releases, Research, Chris Cox, College of Engineering, Department of Civil and Environmental Engineering, Department of Forestry Wildlife and Fisheries, Institute for a Secure and Sustainable Environment, Institute of Agriculture, Jennifer Franklin, John Schwartz, Jon Hathaway

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Trees: Nature's Water Filter? UT Study Hopes to Prove So

July 17, 2014

For their ideas in answering a challenge issued by the US Department of Agriculture, a team lead by UT was recently awarded a federal grant of more than $200,000.

Jon Hathaway

The project, "Storm Water Goes Green: Investigating the Benefit and Health of Urban Trees in Green Infrastructure Installations," is a multidisciplinary effort coordinated with North Carolina State University to study the impact of trees on storm water management.

UT's Jon Hathaway, an assistant professor in the College of Engineering's **Department of Civil and Environmental Engineering**, said that the team's concept came about because little research has been done on the effect of urban trees on runoff.

"There is a critical need to understand the role of trees in urban areas in terms of natural storm water treatment," said Hathaway. "The knowledge we gain will allow planners and engineers to better understand how to control floodwaters naturally."

John Schwartz

Key to the study is the concept of bioretention, the ability of green space to slow storm runoff and filter contaminants and sediments from the water.

The team—also consisting of John Schwartz from UT's **College of Engineering**, Jennifer Franklin of the **Institute of Agriculture**, and members of NC State's College of Engineering—will test a variety of tree species, checking not only which ones produce the best results, but also which trees fare better under the harsh conditions present in bioretention.

"Based on the results of these studies, design guidelines will be developed which explain how best to integrate trees into bioretention areas," said Hathaway. "We'll make the guidelines readily available online for anyone and everyone to benefit from them."

Jennifer Franklin

The team has partnered with UT's **Institute for a Secure and Sustainable Environment**. Led by Chris Cox, professor and associate head of the Department of Civil and Environmental Engineering, the institute will help the researchers collaborate with high school students, further broadcasting knowledge gained from the study.

The proposal came about in response to the USDA Forest Service's National Urban and Community Forestry Challenge, which seeks to enhance installation and stewardship of forest areas in urban environments.

Chris Cox

"Our urban and community forests provide clean water, clean air, energy conservation, and other important benefits for the health and economic well-being of communities across the country," said Agriculture Secretary Tom Vilsack, explaining that the grants are meant to help "catalyze investment and strengthen stewardship of our urban forests to maintain their many contributions amid new risks from climate change."

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