

IS EXTREME WEATHER BECOMING THE NEW NORMAL? DROUGHT/DELUGE CYCLES LEAD TO INCREASED FLOODING AND POLLUTED WATER SYSTEMS

Middle Schoolers from North Texas to Take on This Challenge as Annual Future City Competition® Kicks Off

Over 35,000 Students Nationally Asked To Rethink Runoff and Design Clean Solutions to Manage Stormwater Pollution

DFW-May 2012, Whether the result of man-made climate change or something else as yet unexplained, most people agree that extreme weather is becoming all too common. When it's colder in May than in February, or when the season's biggest snowstorm comes in October, you know something unusual is upon us.

One of the most potentially damaging aspects of extreme weather is radical swings in precipitation. Regions throughout the world find themselves experiencing prolonged drought, then are suddenly hit with torrential storms. When this happens, rainwater quickly turns into runoff, especially in cities, where hard surfaces—like roofs, sidewalks, and parking lots—prevent rain from soaking into the ground and leads to damaging and sometimes catastrophic flooding.

Until now, the most common response has been to channel water away from urban areas. But, as it moves, runoff carries pollutants into storm drains which empty directly into the waterways used for recreation, fishing and drinking water. Now engineers are rethinking this approach. They are beginning to imagine and design new and creative ways to manage stormwater that make city landscapes act more like natural landscapes. These innovations help reduce runoff, increase the amount of water that soaks into the ground and improve water quality.

With this critical issue topping the news all across the country, National Engineers Week Foundation's annual Future City® Competition announces the essay theme for its 2012-13 challenge: ***Rethink Runoff: Design Clean Solutions to Manage Stormwater Pollution.***

The competition begins in earnest when North Texas' middle schoolers, along with more than 35,000 students from 1,300 schools in nearly 40 regions nationally, return to school this Fall. Pre-registration is now open, giving students the opportunity to sign up early and get organized. Future City is also looking for engineering and technical professionals who may be interested in serving as mentors. For information about Future City, to register, or to volunteer, visit www.futurecity.org. The deadline to register is October 31, 2012.

North Texas' regional competition culminates with the regional finals in January, 2013. The winning team from NTX will represent the region at the national finals in Crystal City, VA, which take place during Engineer's Week, in February 2013.

Participating students use *SimCity™ 4 Deluxe Edition* software to design a virtual Future City model incorporating their ideas. Then they will build a physical model using recycled materials which can

cost no more than \$100 to build. Developed by Maxis, an Electronic Arts studio, *SimCity 4* is the reigning king of city-building simulators that allows players to become mayor of their own intricately designed cities. For almost 10 years, *SimCity 4* has altered the way that people view the world around them and has inspired a generation of civic leaders and city planners around the globe. Maxis is working on an all-new entry in the franchise, *SimCity*, is set to launch for PC in 2013.

The annual Future City challenge has received national attention and acclaim for its role in encouraging middle schoolers nationwide to develop their interest in science, technology, engineering and math (STEM). Through hands-on applications, Future City participants discover by doing how engineering is both accessible and can make a difference in the world. Sixth, seventh and eighth graders are eligible to take part in the competition.

Major funding for the national finals comes from Bentley and Shell Oil Company. Additional program funding comes from Atkins and the S.D. Bechtel, Jr. Foundation.

Greg Bentley, CEO of Bentley Systems, a sponsor of the national Future City Competition for the past 14 years, says, "This year's challenge is particularly timely given the massive flooding that occurred early in 2012 in so many parts of the globe. Providing resilience to such devastation through the design and construction of better-performing, intelligent infrastructure is what engineers do to protect the world's life-sustaining potable water supplies. Having these bright young students come up with similarly rigorous solutions to a problem they know to be very real is a great way to inspire them to pursue a career in engineering – so that they, too, can make a difference in the quality of life for people around the world."

"Future City has, once again, brought forth an important issue for students to address," adds Debra Stewart, Director, Supplier Diversity, Workforce Development & Diversity Outreach, Shell Oil Company. "The *Rethink Runoff* project will not only allow students to utilize science, technology, engineering and math (STEM) concepts, but it will also promote critical and innovative thinking skills. We believe it is important to continually engage and encourage STEM education to help arm the future scientists and leaders with the necessary knowledge needed to help our country and global community. Shell is proud to be part of the Future City 2012-2013 competition."

About Future City Competition

The Annual National Engineers Week Foundation's Future City Competition, for sixth, seventh and eighth grade students, is held from September, 2011 through February, 2012. The Future City Competition is a program of National Engineers Week Foundation (NEWF), a consortium of professional and technical societies and major U.S. corporations.

For more information on the Future City Competition, visit www.futurecity.org.

About National Engineers Week Foundation

The National Engineers Week Foundation works year-round to sustain and grow a dynamic engineering profession critical to public health, safety, and welfare. The Foundation supports engineering outreach, education, and celebration through a network of thousands of volunteers in its partner coalition of more than 100 professional societies, major corporations and government agencies. Together we meet a vital need: introducing students, parents, and educators to engineering, engaging them in hands-on engineering experiences, and making science and math relevant. The Foundation and coalition are actively putting the E in STEM.

For more information, visit www.eweek.org.

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