

Upper Etowah River Alliance



The main office of the **Upper Etowah River Alliance** in Cherokee County has passed the test, the stormwater test that is. This office, provided by Cherokee County to this environmental education nonprofit organization, is located on the banks of the Etowah River in Canton. The landscape was modified by the Director of the UERA, Diane Minick to control all, that's 100%, of the stormwater from the 1,080 square foot roof and the extensive roadway of McClure Street where the office is located. How did they do it? By using a combination of **rain gardens, specially designed dry streams, porous parking and a retrofitted storm ditch**. What makes this unique is each of these techniques are considered soft methods of stormwater control, landscape-based, using water-gentling and slowing techniques that work with the stormwater to encourage it to soak into the ground instead of rush over it carrying soil and digging ugly gullies along the way. There are no pipes and drains installed! After the 14+ inches of rain here in September, the only damage this landscape sustained was the disturbance of some mulch and a small amount of gravel. NO stormwater went over the banks into the Etowah! ALL of the water was controlled on the property and has sunk out of site into the ground. Below the first several inches there is clay, just like everywhere else in Georgia and still this property allows water to soak into the ground. The secret is in the way the landscape is designed to level and spread out the water, slowing it so that it has time to soak into the ground. This site which was just awarded the **Yard of the Month** by the City of Canton may just be the Yard of the Year because of its ability to control and work with the stormwater that the weather sends its way. The UERA wants this site to serve as an example to the community, including business, cities and counties, industry and homeowners of how simple techniques can be beautiful and do a job, controlling stormwater effectively and without damage. This is a great way to take an ugly problem and turn it into a simple solution that is beautiful too. Minick, an ecosystems biologist with an extensive background in stormwater landscaping through her own company (www.stormwaterlandscapes.com), designed this landscape to be an educational tool for the UERA to demonstrate the effectiveness of these techniques. Cherokee County supported this effort and the UERA's Federal 319 grant money as well as money from The Nature Conservancy and product donations and discounts from local businesses including design assistance and installation work done by Callahan Specialty Landscapes, Inc (www.csls.com) brought the projects to reality.

Rain gardens are basically depressions in the ground, several inches deep, with level floors. These gardens keep the water spread out and slow moving. **Vegetated Swales** according to Minick are “ditches with a purpose, collecting stormwater, not conducting it somewhere else and allowing that water to sink into the ground”. They can look like dry streams with a few plants or can be planted with grass and blend into the landscape. Minick recommends that plant choices should include a large number of native plants, since they “grew up with the extremes that Georgia weather can dish out” or some non-natives as long as they are not invasive. She recommends that these plants be drought tolerant so that they won’t be dependent on being watered regularly except by rainfall. Minick’s own yard, including the grass, hasn’t been watered by her since 2001 and her HOA hasn’t complained.

Besides the gardens, there is a 550 gallon **cistern** (Rain Catchers, www.raincatchers.net) and a 55 gallon **rain barrel** that helps collect some of the roof water. A 1,000 square foot roof in a one-inch rain can generate 650 gallons of water. The 14-inches of rainfall produced 9,100 gallons on the roof alone. The excess water went into the landscape.

McClure Street drains significantly more water to this landscape and into the storm ditch along the side of this property. The **retrofit of the ditch** using special matting to cover the sides and floor as well as soil-filled socks (by Filtrexx and installed by Earthscapes, www.earthscapesmulch.com) prevents large amounts of soil a year from entering the river.



The **porous parking pad** consists of EnviroGrid[®] (www.geoproducts.org) with gravel in each of the honeycomb-like cells. The Filtrexx soil-filled socks (www.filtrexx.com) surround the parking pad on three sides slowing the water moving through the parking pad carrying oils and other road pollutants and filtering the pollutants out of the water as it passes through.



Many of these ideas used are just practical ways of managing stormwater that are effective, some used in the “old days” on farms and around homes. The UERA property is basically level ground which makes the use of these techniques pretty simple, but these techniques can be

used on the hills and valleys of the Piedmont, it just takes careful planning to get it right. As we all know, Mother Nature will show us how we did it wrong pretty quickly.

If you are interested in learning more about these techniques and plants used, contact the Upper Etowah River Alliance Director, Diane Minick at dminick@etowahriver.org and go to their website to learn more at www.etowahriver.org or contact the other companies mentioned above as well.

Diane Minick, Director

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