

## For the Love of BETC

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By now everyone knows that Durham city and county are providing 70-100% funding for residential cisterns, raingardens, and other best-management-practices (BMPs) that reduce stormwater runoff into local watersheds (while funds last, call Robert Louque at 560-4326 (ext. 30215) if you are a city resident in the Third Fork Creek watershed and Mike Dupree at 560-0557 if you are not in the city). This is because polluted runoff is a leading cause of impairment in at least 40% of North Carolina's waterways, including all of Jordan Lake and a significant part of Falls Lake. Forty percent of America's rivers and 46% of America's lakes are too polluted for fishing, swimming, or aquatic life, and 25% of US beaches are under advisories or closed at least once per year due to water pollution. Runoff from roads, parking lots, and neighborhood lawns tops the list of water pollution threats compiled by the river-protection group American Rivers, with runoff from farms (pesticides, fertilizers and animal waste) ranking second.

Talk about a business niche! Environmental cleanup, runoff mitigation, and sustainable agriculture may soon become America's most lucrative careers. Indeed, our current state legislative majority, by reducing environmental programs protecting our waterways, virtually guarantees increased demand for this expertise in the future.

This is what makes a new project at Durham's Southern High School so noteworthy. EC (Exceptional Children) teacher Amy Jenkins, science teacher Ruth McDaniel, and principal Kenneth Barnes have joined forces with Durham County Watershed Conservationist Mike Dupree and Soil and Water Conservation District director Eddie Culberson to develop the Bionomic Education Training Center (BETC, pronounced 'Betsy'), a multi-faceted program to provide funding, work experience, and practical math and science lessons for Southern students.

The BETC program has two parts: the School-Based Agribusiness and the Experiment Station. In the agribusiness, students grow and sell native plants for raingardens, bio-retention ponds, and riparian buffers that reduce polluted runoff into Durham waterways. The agribusiness was designed specifically for special-needs students identified for the Occupational Course of Study (OCS). Many OCS students may not successfully complete the NC requirements for a high-school diploma, but the BETC program will provide them with the tools to be productive (and environmentally conscious) citizens.

The Farm Bureau and Keep Durham Beautiful (KDB) provided startup money to purchase hundreds of perennials, which OCS students have grown into full-sized plants. Apex Nursery and The Rock Shop donated soil and pots, and KDB and Durham Soil and Water donated trees, which the students have nurtured and will soon be for sale. On June 6, the students will install plants for a client (who pays for plants but not labor), and later this year they will sell and install plants for at least two raingardens funded by another program (CCAP) facilitated by Dupree. The CCAP program funds up to 70% of approved raingardens, and Durham Soil and Water is encouraging recipients to purchase their plants through BETC. It's hoped that Durham city's Stormwater Services, which in 2010 received funding for raingarden installations in the Northeast and Third Fork Creek Watersheds, will also purchase BETC plants and use BETC students to plant them. Bobby Louque with Stormwater Services said they have contracted with the NC Botanical Garden for this. The NC Botanical Garden donated hibiscus seeds to BETC with the implication that they will use the resulting plants for the city's raingardens. Laura Smith, public education coordinator for stormwater services, said that BETC students will be invited to help plant the Northeast Creek raingardens this summer (workers from the Mayor's Summer Youth Program will dig the gardens and prepare the soil).

Motivated by the Falls Lake watershed legislation (passed in January 2011), the Experiment Station is a lab where all science students will observe and record experiments concerning water filtering/conservation and the effects of land management practices on soil and water quality. Science and math curricula have been perpetually criticized for their lack of integration and practicality. For generations, high-school students have memorized chemistry formulas, metabolic pathways, and differential equations with no notion of their 'real-world' significance. No wonder so few American kids pursue scientific careers. BETC can't help but enhance student performance and interest in agricultural, water-management, and environmental science.

Unfortunately, implementing the Experiment Station will require more funds than BETC's agribusiness can provide. For two years BETC collaborators have been applying for financial support, but funding is as tight as our waterways are polluted. The group will find out in June if their most recent application (to NIFA, the National Institute of Food and Agriculture) is funded. It would certainly be money well spent.

The public can support BETC by purchasing their native plants (which may include free installation) or making a financial contribution, both of which can be organized through Amy Jenkins at [amy.jenkins@dpsnc.net](mailto:amy.jenkins@dpsnc.net) or 560-3968 (ext. 68444).