



# Conservation Corner



*Durham Soil & Water Conservation District*

## District Installs Two Education Gardens

The district applied for and received two grants in the winter of 2011 from the NC Foundation of Soil & Water Conservation Districts to install butterfly gardens and other features at two educational sites in the county.

The 1st grant was for butterfly garden plants, raised bed borders, mulch, topsoil, bird bath, butterfly house, signage, a cistern and a trail at the District's education center. On September 20<sup>th</sup> Durham County General Services department along with the Durham Soil and Water staff tilled up a garden bed and incorporated topsoil. On September 27<sup>th</sup> Durham Soil & Water staff and the Durham County Cooperative Extension Horticultural agent installed a raised bed border. On

October 4, 5, & 6<sup>th</sup> Durham Soil and Water sponsored their Annual Field Days that was held at the Dr. Roberts Environmental Education Park. Since this was the location of the future butterfly garden staff decided to have the school kids help with the installation of the garden. Over 300 kids helped to install plants, water and mulch the butterfly garden. The kids also received a lesson on butterflies and on the butterfly gardens.

The second garden site is located at Mangum Elementary School. This grant included a cistern, butterfly garden and native fruit & berry garden. Planning for the project began in late winter 2011.

On August 10<sup>th</sup>, the 300 gallon cistern was the first project installed. On October 14<sup>th</sup> the installation of the butterfly and native fruit & berry garden began and was completed on November 11<sup>th</sup>. The native fruit & berry garden will be used to teach the students and community about local fruit trees and berry bushes that not only provide enjoyable treats, that were important food producers for wildlife and Native Americans and early European Settlers to the area.



Kids helped to install plants in the butterfly garden at the Dr Roberts Environmental Education Park.

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Butterfly Garden at Mangum Elementary School

## 2 Funding Sources Available for Durham County Ag Producers

*Ag Cost Share funds are available to qualifying operations to address natural resource concerns:*



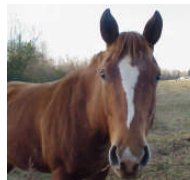
*“The Durham Soil and Water Conservation District would like to announce the availability of funds through the NC Agricultural Cost Share Assistance Program to assist farmers with the installation of conservation practices.”*

The Durham Soil and Water Conservation District would like to announce the availability of funds through the NC Agricultural Cost Share Assistance Program to assist farmers with the installation of conservation practices which help decrease the amount of sediment, nitrogen, phosphorus, chemicals and other pollutants in the surface and ground waters of the state.

The Agriculture Cost Share Assistance Program (ACSP) is a voluntary program for farmers and agricultural landowners to help address natural resource concerns on the land and nonpoint source pollution from agricultural activities. The program provides technical and financial assistance for the installation of best management practices.

A major cause of water quality problems in North Carolina and much of the United States is nonpoint source pollution. Nonpoint source pollution comes from many different sources such as construction, cities and towns, impervious surfaces and agriculture. In agricultural areas, damage to our water resources come from soil erosion, excess nutrients, animal waste contamination and accidental spills of agricultural chemicals.

If you are a landowner or renter of an existing agricultural operation, including horse farms, and have been operating for more than three years, you may be eligible to participate in the North Carolina



Agriculture Cost Share Program. Qualified participants can be reimbursed up to 75% of a predetermined average cost for each BMP installed. The applicant is responsible for the remaining 25% of the costs.

The Durham Soil and Water Conservation District is accepting applications for assistance and will be happy to further discuss the program with you. More information can be found at the District's website at [www.co.durham.nc.us/departments/swcd/index.html](http://www.co.durham.nc.us/departments/swcd/index.html)

For more information, please contact the Durham Soil and Water Conservation District at (919) 560-0558 or Jennifer Brooks at [jbrooks@durhamcountync.gov](mailto:jbrooks@durhamcountync.gov)

*Agricultural Water Resources Assistance Program funds available soon to qualifying operations to address water quantity resource concerns:*

In 2012 the NC Soil and Water Conservation Commission, the NC Division of Soil and Water Conservation and the Durham Soil and Water Conservation District will be introducing a new cost-share program for agricultural producers in the county to address water needs on the farm, Agricultural Water Resources Assistance Program or AgWRAP.

Recent droughts have left everyone concerned with the current and future supply of water available to meet our agricultural production needs in NC. Many Durham County farmers have experienced first hand water supply shortages in dry summer months when the crops are at a critical stage. AgWRAP was authorized into legislation through session law 2011-145 in an effort to help the ag community meet current and future water needs.

Program details are still being worked out, but funding is expected at the District level very soon. Potential BMP's that will be eligible include wells for crop irrigation, microirrigation, pond sediment removal and more.

If you are an ag producer who would be interested in learning more about how AgWRAP could help address your water needs, please contact the District at 919-560-0558 or [jbrooks@durhamcountync.gov](mailto:jbrooks@durhamcountync.gov)

## Sandy Creek– Phase V



Present conditions

Sandy Creek– Phase V

Work is now complete on the design and permitting effort for the Upper Sandy Creek Tributaries Restoration Project. The original scope of work called for a natural channel design to be completed to restore and/or enhance 4,369 linear feet of stream along Upper Sandy Creek, its tributaries and a stormwater best management practice (BMP) design. This design was to include a vegetative buffer with a minimum width of 50 feet on both sides of the stream throughout the project area as measured from the top of the stream bank. In addition, the scope called for all necessary permits to be obtained.

Completed work has produced a natural channel design that restores and/or enhances 5,574 linear feet of stream along Upper Sandy Creek and its tributaries and produced a BMP design to handle runoff from parking lots on Duke University’s campus. More than 4,319 linear feet of stream length will be restored with approximately 1,255 additional linear feet of stream enhancement. The final stream length will be 5,574 linear feet, an increase of 44 linear feet from existing conditions. One stormwater BMP was designed to reduce the flashy runoff from Duke’s parking lot. Completed work has resulted in a design that exceeds the original scope by providing for approximately 1,205 additional feet of restoration/enhancement and two and a half additional acres of vegetated riparian buffer.

As this project was funded only through the design phase, water quality benefits of this project are pending successful implementation and construction of the designs. However, expected stream restoration benefits include improved riffle and pool habitat along the project reach and a 95 percent reduction in sediment load from the stream banks that will result in an annual sediment reduction of 1,600 tons per year into the Jordan Lake Reservoir. The estimate bank erosion rates before and after the project implementation are 1,700 and 100 tons/year respectively. Stable riparian buffers exceeding 12 acres will also be established and preserved. According to the NC DWQ Stormwater Best Management Practices Manual, this stormwater BMP will reduce flashiness of the parking lot runoff entering the watershed while removing nitrogen (40% and 5.14 lbs/ac/yr), phosphorus (40% and 0.52 lbs/ac/yr), and suspended solids (85% and 233.71 lbs/ac/yr). These efforts will provide local water quality benefits as well as contributing to nutrient reduction efforts taking place throughout the Jordan Lake Watershed.



Future Stormwater BMP site

While a phase (stormwater BMP) of the project scored high on Clean Water’s ranking system it was not immediately funded for construction. It presently is listed on Clean Water’s “active list” as the third project in line to be funded.

## Annual HOLIDAY SALE



We are approaching the Holiday Season and we know how hard it is to find that perfect gift. If the person on your list loves the outdoors, we have the perfect gift for you to give them.

We have composting bins, 65 gallon rain barrels, blue bird boxes, wood duck boxes, blue bird feeders, wild flower seeds & tree seedlings FOR SALE. For a complete list of our products and prices please visit our website at [www.co.durham.nc.us/departments/swcd](http://www.co.durham.nc.us/departments/swcd)

Quantities are limited so please place your orders early.

\*Gift Certificates available in any amount

**919-560-0558**

721 Foster St  
Durham, NC 27701

# Tree Seedling Sale

- All tree seedlings are Bare Root– 1yr
- Supplies are Limited!
- Tree Seedlings go on sale 9/21/11
- (sold until supplies run out)
- PICK UP February 8, 2012



Southern Waxmyrtle  
10 for \$15



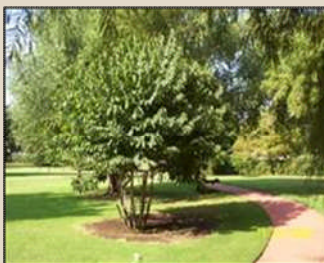
Beauty Berry  
10 for \$15



Chickasaw Plum  
10 for \$15



Silky Dogwood  
10 for \$15



Pawpaw  
10 for \$15



Southern Crabapple  
10 for \$15



Elderberry  
10 for \$15



Red Mulberry  
10 for \$15



## Community Conservation Assistance Program

The CCAP program is a voluntary state-funded program intended to assist landowners with best management practices in order to improve water quality on urban lands. The Durham district currently has projects in various stages of installation, totaling \$22,874. The BMP's in these projects

include four rain gardens, five cistern, one grassed swale and a critical-area planting. This program is a voluntary incentive-based cost share program that is managed by the soil and water conservation district board of supervisors, who rank the projects and applications for assistance. The Dur-

ham district has \$12,008 for projects for the spring of 2012. If you have an erosion or storm water issue on your property or would like more information on the CCAP program please contact Mike Dupree at 919-560-0557 or email him at [mdupree@durhamcounty.nc.gov](mailto:mdupree@durhamcounty.nc.gov).

## Agricultural Development

One important goal of The Durham Soil and Water Conservation District is to promote the expansion of agriculture education within the Durham Public School System. Since June of this year, the staff has been assisting Southern High School with a project that improves agriculture education.

*“The project has received a \$500 donation from the Durham Farm Bureau Board of Directors.”*

## Southern High School

The Durham Soil and Water staff has been working with Amy Jenkins, the Occupation Course of Study teacher at Southern High School, to develop a school-based industry. Mike Dupree taught students the basics concerning soils and soil mixtures used in nursery container operations. He also instructed the students in basic plant propagation methods. The project has received a \$500 donation from the Durham Farm Bureau Board of Directors. The money from the dona-

tion allowed the students to buy seed, pots, and soil to begin their growing operation. The students sold plants that they produced to three landowners in Durham and assisted the landowners with the installation of two rain gardens and a stream Buffer. The students generated over \$1700 from the plant sales. Those funds will be used to expand the gardening program and the school-based business. This program will help students in the OCS

department obtain valuable hours of horticulture experience that are viable in helping them to pursue careers in agriculture and horticulture fields. These industries are a major portion of the economic engine of Durham County and the City of Durham. The Durham Soil and Water staff is working to secure a full time Agriculture Education teaching position and program for Southern High School and is currently applying for additional grants to further fund the program.

## Watershed Updates

Durham County has an important role in the water quality of two important reservoirs serving Triangle residents. Rules have been passed for the Jordan Lake Reservoir and have been in place since August 11, 2009 and the Falls Lake rules were passed by the legislature in January of 2011. These plans have very different approaches to improving water quality and different requirements for landowners in Durham County.

The **Falls** rules require that all agriculture operations in the watershed register their operation within twelve months of the passing of the rule. The registration forms are available on line at the Soil and

Water Department website or the staff is available to assist agriculture producers with the registration process. <http://www.co.durham.nc.us/departments/swcd/Agriculture-Watershe.html>

The **Jordan** rules require landowners that apply fertilizer to more than five acres of land in the Jordan watershed shall either:

1) Complete a nutrient training class provided by Cooperative Extension or the Division that provides an understanding of the value and importance of proper management of Nitrogen and Phosphorus in regards to water quality( and receive a

completion certificate), or

2) Apply fertilizer in accordance with a certified nutrient management plan.

The deadline for landowners to comply with these rules is August 2012. The Soil and Water Department staff along with the Cooperative Extension Service will be offering Nutrient Management Training each month. The course takes three hours to complete is free.

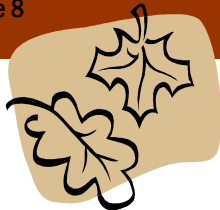
If you have any questions or would like additional information please contact Mike Dupree at 560-0557 or email him at [mdupree@durhamcountync.gov](mailto:mdupree@durhamcountync.gov).



## New South Durham Farmer's Market

A new farmer's market is being organized and will be open in April of 2012 at a location in south Durham. Members of the Farmland Protection Advisory Board have been hosting meetings for local producers that will be selling at the new market next year!





## Nominate Someone for the 2012 Urban Conservationist Award

Recognizing outstanding leadership and achievement in conservation. Open to any individual, organization or corporation responsible for a conservation project in an urban setting. Nominations are open to the public and the winner will be chosen by the District's awards committee and judges. Applications can be downloaded from: [http://www.co.durham.nc.us/departments/swcd/Environmental\\_Education.html](http://www.co.durham.nc.us/departments/swcd/Environmental_Education.html)

## Nominate Someone for the 2012 Teacher of the Year Award

In recognition of outstanding conservation education in Durham County. Open to all Elementary, Middle and High school teachers in Durham County who have incorporated conservation and environmental education into their classroom curriculum. Nominate yourself or an outstanding teacher you know. Applications are due to the Durham SWCD by 5pm on April 6, 2011. For Complete rules and application please click the below link.

[http://www.co.durham.nc.us/departments/swcd/Environmental\\_Education.html](http://www.co.durham.nc.us/departments/swcd/Environmental_Education.html)

## Two New Contests in 2012



*"1<sup>st</sup> place winner will receive \$50, a plaque and a chance to advance on to an Area-level competition. 2<sup>nd</sup> place will receive \$25 and a certificate. "*

**2012 Contest theme:  
Wetlands are Wonderful**



The Durham SWCD is excited to introduce 2 new contests this year for 6<sup>th</sup> and 9<sup>th</sup> grade. This school year, 6<sup>th</sup> graders can compete in a Computer Designed Slide Show Contest and 9<sup>th</sup> graders can compete in a Computer Designed Poster Contest. As with the existing contests the District already offers, these two contests are open to all Durham County students in 6<sup>th</sup> or 9<sup>th</sup> grade. A 1<sup>st</sup> and 2<sup>nd</sup> place countywide winner will be selected for each contest. 1<sup>st</sup> place winner will receive \$50, a plaque and a chance to advance on to an Area-level competition. 2<sup>nd</sup> place will receive \$25 and a certificate.

The 6<sup>th</sup> grade Computer Design Slide Show Contest is a Microsoft PowerPoint designed presentation that will educate viewers about the current year's theme, "Wetlands are Wonderful".

The 8<sup>th</sup> grade Computer Designed Poster Contest is a computer designed poster that will educate viewers about the current year's theme, "Wetlands are Wonderful".

Both contests will allow students to combine their creativity, knowledge of computer programming and science knowledge into a slide show presentation.

The District will continue to offer its other, tradi-

tional contest for 3<sup>rd</sup> to 8<sup>th</sup> grade. The current 2011-2012 theme for each contest is "Wetlands are Wonderful". This encompasses a wide range of topic ideas that the students can incorporate in their entries, such as ecology, conservation, natural resources, and will meet the NC DPI Standard Course of Study in a variety of Goals & Objectives.

The complete rules on the 2 new contests and all the other contest can be found at the District's website at [www.co.durham.nc.us/departments/swcd/Environmental\\_Education.html](http://www.co.durham.nc.us/departments/swcd/Environmental_Education.html) or by emailing [jbrooks@durhamcountync.gov](mailto:jbrooks@durhamcountync.gov)



## 2011 Big Sweep

A huge Thank You to City and County of Durham residents who came out for the 2011 Big Sweep cleanup! With so many dedicated citizens, Durham County had great volunteer participation with 334 volunteers!

Those volunteers cleaned 19 different sites around the County, helping to clean up an estimated 11,085 pounds of trash from our environment. This trash was found in various parks, roadsides, as well as local streams, rivers and other water bodies around the county.

This year's event was sponsored in part by the City of Durham Stormwater Services Division, along with Keep Durham Beautiful, Inc. Trash disposal assistance was pro-

vided by Durham County's General Services Department and the City of Durham's Solid Waste Department.

This year's clean up was also a special occasion because it marked the 25<sup>th</sup> anniversary of NC Big Sweep, Inc. North Carolina Big Sweep was founded as Beach Sweep in 1987 and officially became Big Sweep in 1989. Since its founding, NC Big Sweep has had more than 200,000 volunteers and collected over seven million pounds of trash from North Carolina watersheds.

Some of the more unusual items collected include: fenders, a hand garden trowel, a milk crate, 2 rusted drums, plastic bowls, old nursery

materials, burned out car debris, scrap aluminum, tire rims, 12 stormwater grates, 2 paint buckets, drainage pipes, 2 motor covers, a hand cart, balls, 2 meter covers, rugs, a baby car seat, TV parts, vacuum parts, plastic chair, hose, stove parts, cash register till, 2 table tops, plywood, lumber, a mattress frame, steel plates, 3 five gallon buckets, a mountain bike, a boogie board, a three-gallon jug, large wire brush, a plastic child's tricycle, metal pipes, a real estate sign, metal siding, 2 shopping carts, a rusted chair, golf clubs, window frame, a wooden chair seat, aluminum bar, boards, floor joists, rolling staircase, soccer balls, PVC pipe, wood blocks, a fence post, and a fire proof safety deposit box.



*"volunteers cleaned 19 different sites around the County, helping to clean up an estimated 11,085 pounds of trash from our environment."*

## 2011 Field Days

Third graders from 3 different elementary school participated in the District's annual Environmental Field Days event this year. From October 4-6, 2011, Mangum Elementary, Eno Valley Elementary and Burton Elementary spent the day learning about nature and our natural resources. The event was again held in Bahama, NC at the Dr. Roberts Environmental Education Center.

Beautiful October weather greeted presenters and students each day of the 3 day event. The students visited with local resource professionals to learn more about their career or a specific subject matter. Some of the students assisted the District with the installation of a new butterfly garden planted on site.



The District would like to thank all the teachers, volunteers, sponsors and presenters for making this year's event possible. Organizations that contributed presenters included; Durham Soil and Water Conservation District, Eno River Association, NC Forestry Service, City of Durham Stormwater Services, City of Durham Dept of Water Management, Neuse Riverkeeper Foundation, EPA and the NC Division of Soil and Water Conservation. Sponsors for this year's event include; Durham Soil and Water Conservation District Board of Supervisors and the Durham County Farmland Protection Board. Thank you one and all!



## *Durham Soil and Water Conservation District*

721 Foster Street  
Durham, NC 27701

Phone: 919-560-0558  
Fax: 919-560-0563

We're on the Web!

[www.co.durham.nc.us/departments/swcd](http://www.co.durham.nc.us/departments/swcd)

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Danielle Adams- Secretary/Treasurer

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Mike Dupree- Watershed Conservationist/  
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Matt Kinane- NRCS District Conservationist

Steve Bennett- Area IV Coordinator

### Supervisor receives award



Durham SWCD Supervisor, Talmage Layton received his 10 years of service award from the NC Association of Soil & Water Conservation Districts. The award was presented to him during the Area IV Fall meeting on November 17, 2011. Talmage Layton is a huge asset to the Durham Soil & Water Conservation District Board.