

Conservation Corner

Durham Soil & Water
Conservation District

Spring 2012

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Congratulations to Danielle Adams!



Danielle Adams, supervisor for the Durham Soil and Water Conservation District, was named the 2012 North Carolina Association of Soil and Water Conservation District's Supervisor of the Year. Recipients of the award are selected by the NC Association of Soil & Water Conservation Districts.

Adams, elected to the Durham Soil and Water Conservation District Board of Supervisors in 2008, serves as an advocate for the District and the environment. According to Durham's Soil and Water Conservation District, she has held the appointed title of Secretary/Treasurer of the Durham Board since 2009. She also serves as the Soil and Water representative on the Upper Neuse River Basin Association, representing the five Soil and Water Districts in the area on issues affecting the water quality and Districts.

Additional contributions made by Adams include:

- Being instrumental in the presentation of legislation on behalf of the District in the past two years which have led to the passing of three crucial pieces of legislation to the NC Association of Soil & Water Conservation Districts standing committees and the full assembly.
- Providing educational support on behalf of the Durham Soil and Water Conservation District and the NC Association of Soil and Water Conservation District by serving as councilor at the Association's Resource Conservation Workshop during the past two years.
- Taking on additional leadership responsibilities, including serving as secretary for the NC Association of Soil and Water Conservation Districts.

Jennifer Brooks named Environmental Educator of the Year!



Jennifer Brooks, environmental educator for the Durham Soil and Water Conservation District was named the 2012 NC Association of Soil and Water Conservation District's Outstanding Environmental Educator of the Year at their annual meeting this January. In addition to serving as the District's Environmental Education Coordinator, she also serves as Soil Conservation-

ist. According to her coworkers, she has brought an abundant variety of educational opportunities to Durham County residents and has exceeded on the state level as well.

Stream Restoration and Stormwater Update

District lands another Grant

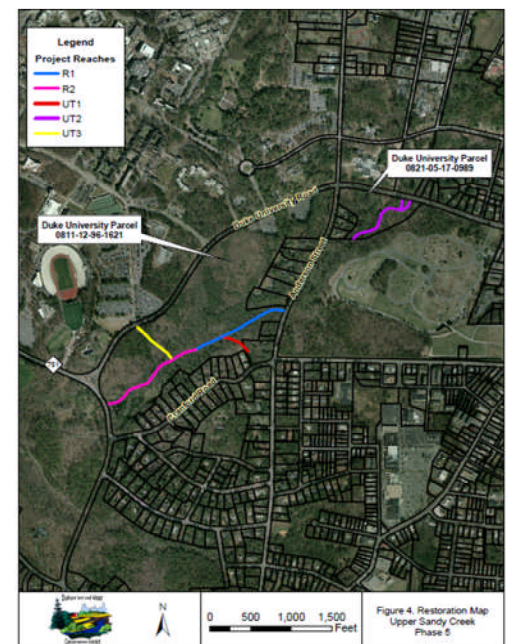
The Durham Soil and Water Conservation District recently received a grant in the amount of \$370,100 from the Clean Water Management Trust Fund (CWMTF). The grant is part of the fifth and final phase of the Upper Sandy Creek Watershed Restoration Project. This project is part of the first years initiatives listed under Goal 4 of Durham County's Strategic Plan. Due to budget constraints the CWMTF Trustees voted to fund only partial of the overall \$970,900 application. The funds awarded will be utilized to construct a Stormwater BMP and restore a 400 feet reach of a unnamed tributary (UT) to Sandy Creek.

This project advances the watershed-scale effort to improve water quality in the Upper Sandy Creek watershed. Phases I (wetland improvements), II (stream restoration of the lower portion of Upper Sandy Creek), III (stormwater wetland), and IVa (stream restoration) have been built and have resulted in documented improvements to water quality in the watershed. Phase IVb (stream restoration) has recently been constructed. The design for the Sandy Creek Phase V project was funded by a CWMTF restoration grant in 2010 (\$253,000). Each phase will improve successive upstream reaches of Upper Sandy Creek. By removing sediment and nutrient inputs downstream, this recently funded project will reduce contamination in Upper Sandy Creek and minimize the impacts of future upstream development.

These Phase V grant funds will combine a Priority I and II stream restoration with a stormwater best management practice (BMP) to insulate the area from the impacts of future development. While this is considered to be a common process, Duke University will conduct comprehensive monitoring of both the restored stream and the stormwater BMP. This will provide important new data on the performance of the site that can be used to improve future stream restoration projects and quantify performance expectations.

The CWMTF contract agreement was executed at March's District Board meeting and is scheduled for construction to begin this summer. The restoration will incorporate several larger vernal pools on the floodplain in order to provide habitat for reptiles and amphibians; as well as provide stormwater storage on the floodplain (which will reduce stormwater discharge in the channel, catch sediment that would normally enter the channel, and provide pollutant removal). The stormwater BMP will reduce flash flooding produced by parking lot runoff entering UT3 (7.01 ac) 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.

During the 2012 CWMTF application season the District submitted four projects for the trustees to consider. Two stream restoration projects; Phase V's main channel which is approximately 6,000 feet (\$812,600) and Stirrup Iron Creek approximately 4,000 feet of stream (\$530,730). Additionally, two stormwater/water reuse projects were submitted for consideration. One was for Southern High School (\$856,000) and the other was for the Dr. Roberts Environmental Education Park (\$495,368). Grant awards will be announced at the Trustees August meetings. Once funded and constructed the above projects will further assist the county in implementing its Strategic Plan.



Agricultural Cost Share Program



The Durham Soil and Water Conservation District still has a limited amount of funds available for Ag Cost Share Projects to assist farmers with resource concerns such as soil erosion or water quality impairments on the farm. The funds are used for 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.

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 Durham Soil and Water Conservation District is accepting applications for assistance. Interested farmers and landowners should contact the District by May 2nd in order to take advantage of this year's funds. For more information, please contact the Durham Soil and Water Conservation District at (919) 560-0558 or Jennifer Brooks at jbrooks@durhamcountync.gov

Agricultural Water Resources Assistance Program



The Durham SWCD has a new cost-share program to offer assistance to Durham County farmers. The Agricultural Water Resources Assistance Program (AgWRAP) is a voluntary program for farmers and agricultural landowners to help address **water quantity** resource concerns/needs on farms. AgWRAP is administered by the NC Division of Soil and Water Conservation and local Soil and Water Districts and is mirrored after the NC Ag Cost Share Program.

AgWRAP is intended to; Identify opportunities to increase water use efficiency, availability and storage, Implement best management practices (BMPs) to conserve and protect water resources, Increase water use efficiency and Increase water storage and availability for agricultural purposes.

AgWRAP best management practices include; Ag Pond Repair/Retrofit, Ag Pond Sediment Removal, Conservation Irrigation Conversion, Micro-Irrigation System and Wells for crop irrigation or livestock watering.

Funding is extremely limited for this program. Interested farmers are encouraged to contact us for more information about eligibility or to sign up for future allocations. For more information, please contact the Durham Soil and Water Conservation District at (919) 560-0558 or Jennifer Brooks at jbrooks@durhamcountync.gov

Annual Pond Clinic

This year our pond clinic is going to be bigger and better than ever! We are planning to kick off the day with a catch and release fishing tournament. We will be offering CEU credits this year as well as several new trainings. We are bringing back the popular shock boat and last but not least, we will be having a fish fry for lunch and all of this is being provided **FREE** thanks to our many sponsors. Please call 919-560-0558 to sign-up for this event.



Durham SWCD



Annual Pond Clinic

Saturday, April 28, 2012
 7am-8:30am (fishing tournament)
 (9am- Pond Clinic)



Join Us!

- | | |
|-------------------|----------------------|
| •Pond Maintenance | •Pond construction |
| •Fish production | •Wildlife management |
| •Shock boat | |

New This Year

- | | |
|---------------------------------------------------------|-------------------------------|
| •catch & release Fishing tournament for adults and kids | •2.5 CEU Credits (in A,N,D,X) |
| •Weed ID | •Nutrient Reduction |

Registration

Register by **April 18th** **919-560-0558**

Location
 Property of Gerald Thacker
 4326 Bahama Rd
 Rougemont, NC 27572



FREE Lunch (fish fry)
 Must pre-register by 4/18
 919-560-0558



Fishing Tournament

Tournament 7:00am-8:30am

Ages 5 +

Prizes: Youth & Adult prizes

Register 919-560-0558 by 4/18/12

Please bring a lawn chair

Best Management Practices and Education for Equine



The NC Department of Agriculture's Division of Soil and Water Conservation has been awarded a US EPA Clean Water Act Section 319 Grant to install best management practices on equine operations within the Falls Lake watershed.

This grant was awarded in response to the recent Falls Lake Nutrient Management Rules. Nitrogen, phosphorous and sediment are impacting the water quality of Falls Lake and specific rules have been adopted to reduce nutrient loading into the lake watershed. All contributors to nutrient loading, including new and existing development, wastewater treatment plants, and others are being asked to help reduce nutrients that adversely affect water quality. Collectively, the agriculture community, which includes equine operations (horse farms), is tasked with reducing their contribution of nutrients and sediment.

This grant will provide partial funding to horse farm owners/landowners to install "best management practices" (BMPs) on select facilities in the Falls Lake watershed. The purpose is to improve water quality. Landowner participation in the grant is entirely voluntary and there is no regulatory component to this grant.

Some common BMPs used on horse farms include; installing fencing to prevent horses from entering streams, re-establishing stream buffers that have been damaged by equine use, renovating pastures and establishing "dry lots" (paddocks) to reduce erosion, and manure management practices such as composting. The horses and the property will benefit from BMPs that address site specific resource concerns. BMPs can provide many benefits to horse health and farm operation by reducing mud and erosion, improving pastures for grazing, and/or improving manure storage facilities.

Equine operations in Falls Lake Watershed where property improvements could reduce loss of nitrogen, phosphorous, and soil, and improve water quality are eligible to apply for funding. Land owners eligible for funding must demonstrate ability to contribute at least 25% of the overall cost of improvements, either by cash, or labor contributions.

After eligible horse farms are identified throughout the watershed, they will be ranked against each other based on pre-determined criteria. The criteria include, but are not limited to, proximity to surface water, the need for improvements, and whether improvements can be maintained to achieve long-term nutrient reduction. Ultimately, the operations with the greatest potential for reducing nutrients will be selected, subject to the fund limitations of the grant award.

This project is managed by the NC Department of Agriculture, Division of Soil and Water Conservation, and has a collaborative team including the NC Horse Council, Sustainable Stables LLC, and several Soil and Water Conservation Districts, including the Durham Soil and Water Conservation District.

Horse farms interested in learning more about the grant are encouraged to contact the Durham Soil and Water Conservation District by May 2, 2012 to be included in the first batch of potential applicants. For more information, please contact the Durham Soil and Water Conservation District at (919) 560-0558 or Jennifer Brooks at jbrooks@durhamcountync.gov



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 has allocated \$24,971 to date in cost share assistance for Best Management Practice installation.



Rain Garden

The BMP's installed this fiscal year include six rain gardens, three cisterns, one grassed swale, one streambank stabilization project, one impervious surface conversion with riparian buffer installation and one 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 Durham district has \$39,236.00 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 919-560-0558 or email him at mdupree@durhamcountync.gov



Students from Southern HS help with stream buffer planting.

“The Falls rules require that all agriculture operations in the watershed register their operation within twelve months of the passing of the rule.”

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.

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 560-0558 or email mdupree@durhamcountync.gov.

Envirothon

On March 23rd, the annual Area IV Envirothon competition was held at Vollmer Farms in Franklin County. Teams of middle school and high school students from across the Triangle and upper Piedmont were tested on their knowledge and understanding of the environment. Participating counties include Durham, Granville, Vance, Wake, Johnston, Wilson, Franklin, Nash, Halifax, Warren and Edgecombe.



Durham County was represented by seven high school teams from the following schools/clubs; the Durham 4-H Envirothon club, the NC School of Science and Math, Northern High School and Riverside High School. Durham's teams did exceptionally well this year, competing against 30 other teams from the 11 county Area. All of Durham's teams placed in the top half of the overall scores, with 3 teams scoring high enough to qualify for the state Envirothon competition at the end of April. Those 3 teams are; in 3rd place the 'Killer Kudzu' from the NC School of

Science and Math, in 4th place the 'Natural Disasters' from the Durham 4-H Envirothon club and in 5th place the '4 Musketeers' from the Durham 4-H Envirothon Club.

These 3 teams will be competing at the NC Envirothon on April 20-21st at Cedarrock Park in Burlington, NC. The 1st place high school team from the statewide competition will be representing NC at the 2012 North American Canon Envirothon this summer in Pennsylvania. In 2010, the Durham County team 'The Vicious Vipers' won the NC Envirothon that year and traveled to California to compete at the 2010 North American Canon Envirothon.



Killer Kudzu— 3rd place at the Area IV Envirothon



Natural Disasters— 4th place at the Area IV Envirothon

The Envirothon is a hands-on, natural science academic event that challenges and engages students to think critically about the natural world and their role in it. The teams, each consisting of five students, demonstrate their management knowledge and problem-solving skills in a competition centered on five categories: soils/land use, wild-life, forestry, aquatics, and current environmental issues.



Ag Development

Southern High School

The Durham Soil and Water Conservation District staff submitted a grant proposal to the National Institute for Agriculture for \$34,122.63 to create an innovative program at Southern High School. The District staff has partnered with the administration and teachers at Southern High School to create and implement a program that integrates science, storm water engineering technology and agribusiness. This program, referred to as BETC (Bionomic Education Training Center) is designed to educate students regarding the future in Agriscience and Agribusiness in order to meet the growing need and demand in these fields. The BETC program's implementation within a school involves the construction of a small greenhouse with an attached building that will serve as an environmental science research center. The center will expose all students within the school to science research projects and green technology. This program will help students in the Occupation Course of Study department obtain valuable hours of horticulture experience that are relevant in order for 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 FOOD Market Corporation received a grant from the Rural Advancement Foundation International (RAFI) for \$8,530."

New South Durham Farmer's Market

The Durham Soil and Water District has been assisting the **Farmers Organization of Durham Market Corporation** to open a new farmers' market in south Durham. The FOOD Market Corporation received a grant from the Rural Advancement Foundation International (RAFI) for \$8,530 to assist them with their business startup expenses. The new farmer's market organization has 30 members, approximately one third of them are Durham county farmers and they will be opening the new market the week of April 14th.

Annual Tree Seedling Sale

On February 8th & 9th Durham SWCD held their Annual Tree Seedling Sale. This year's tree seedling sale was a huge success. We sold 8 different species of trees for sale with PawPaw being our top seller this year. We sold over 900 Tree Seedlings and donated close to 300 remaining tree seedlings to Central Park School for Children. All proceeds from the tree seedling sale goes toward Environmental Education Programs that the district conducts throughout the year. If you missed our tree seedling sale this year and would like to be added to our mailing list please call 919-560-0558 or email Lisa Marochak at lmrochak@durhamcountync.gov



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 are due to Durham SWCD by 5pm on May 4, 2012. Applications can be downloaded from the link below:

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 May 4, 2012. For Complete rules and application please click the below link.

http://www.co.durham.nc.us/departments/swcd/Environmental_Education.html

2012 Conservation Contest Winners

The Durham SWCD recently held its annual Conservation Contests for 3rd through 9th graders in Durham County. Each year the District invites students to participate in several different contests. The Poster Contest is open to 3rd-6th grade, the Essay Contest for 6th graders and the Public Speaking Contest for 7th-8th graders. Brand new this year were 2 more contests; a Computer Slide Show contest for 6th grade and a Computer Designed Poster for 9th grade. The theme for the 2012 contest was 'Wetlands are Wonderful'. The District awards a 1st and 2nd place entry from each contest and grade level. On occasion, the contest judges will pick a 3rd place for an honorable mention award. The first place winner advanced on to an Area level contest. The Durham county 2012 winners are:

Poster

6th grade

- 1st – Lewis Reo, Voyager Academy – Carrie Miller, teacher
 2nd – Grace Vincent, Voyager Academy – Carrie Miller, teacher
 3rd – Tilson Gitter, Voyager Academy – Carrie Miller, teacher

5th grade

- 1st – Catherine Aiden Rooney, Creekside Elementary, Waggett, teacher
 2nd – Aubrey Fletcher, Durham 4-H Envirothon club, Elaine Fletcher, leader

4th grade

- 1st – Kelsey Fletcher, Durham 4-H Envirothon club, Elaine Fletcher, leader

3rd grade

- 1st – Abby Cunningham, Voyager Academy – Mrs DuBois, teacher

Essay

- 1st – Matthew Burke, Voyager Academy – Carrie Miller, teacher
 2nd – Chloe Dixon, Voyager Academy – Carrie Miller, teacher
 3rd – Brandon J Emons, Voyager Academy – Carrie Miller, teacher

Public Speaking

7th grade

- 1st – Jacob Fletcher, Durham 4-H Envirothon club, Elaine Fletcher, leader

Computer Slide Show

- 1st - Reece Roberts, Voyager Academy – Carrie Miller, teacher
 2nd - Emily Grace Allman, Voyager Academy – Carrie Miller, teacher

Computer Poster

- 1st – Chase Fletcher, Durham 4-H Envirothon club, Elaine Fletcher, leader

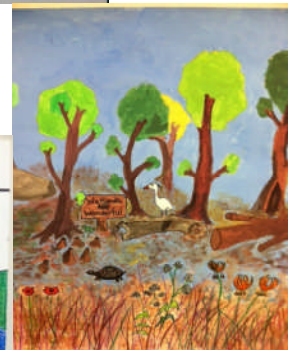
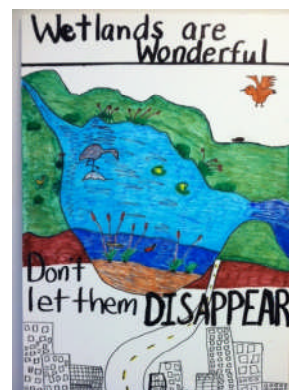
Of the first place winners who advanced on to the Area 4 contests, Durham County had 3 to take home prizes. Jacob Fletcher from the Durham 4-H Envirothon club won 2nd place at the Area 4 Public Speaking contest on March 26, 2012. Reece Roberts from Voyager Academy won 1st place in the Area 4 Computer Slide Show Contest and Chase Fletcher from the Durham 4-H Envirothon club won 1st place in the Area 4 Computer Designed Poster Contest.

Both Reece Roberts and Jacob Fletcher's entries will advance on to a state-wide competition in April. We wish them luck!



6th grade - 1st place

5th grade - 1st place



4th grade - 1st place



3rd grade - 1st place

Durham Soil & Water Conservation District

721 Foster Street
Durham, NC 27701

Phone: 919-560-0558
Fax: 919-560-0563
Email: lmarochak@durhamcountync.gov



VISION STATEMENT

To address all natural resources on every acre in Durham county in a way that will benefit the environment, wildlife, its people, and the natural resources themselves, plus produce an environmentally conscious group of citizens who will set a trend of conserving, enhancing and promoting our natural resource base.

MISSION STATEMENT

To conserve, enhance, promote the natural resources of Durham County by providing technical assistance, environmental education information, and economic incentives to County citizens and by exhibiting a diversified program to meet its changing needs.

www.co.durham.nc.us/departments/swcd

Board Members

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Ray Eurquhart— Supervisor
Curtis Richardson— Supervisor

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Eddie Culberson— Director
Lisa Marochak— Administrative Officer
Jennifer Brooks— Soil Conservationist/ Environmental Education Coordinator
Mike Dupree— Watershed Conservationist/Agricultural Development
Matthew Kinane— USDA/ NRCS District Conservationist
Steve Bennett—Area IV Coordinator

Rain Barrels



IVY

**Special Price of
\$70.00**

Normal retail price \$139

- 50 gallons green
- 100% American made
- 50% recycled plastic
- Locking lid
- All parts included
- Barrels nest for easy storage
- Linking capacity
- 2 overflow ports
- Meets EPA safety standards
- Opaque HDPE material
- Screened inlet



Moby

**Special Price of
\$100.00**

Normal retail price \$219

- 65 gallon
- Brass 3/4" spigot
- Child-proof locking lid
- Barrels nest for easy storage
- Easily attaches to your homes downspout
- Gravity feed
- Bug proof screen
- Two Built in overflow ports