

Annual Report

FY2014

JULY 1, 2013 – JUNE 30, 2014

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Soil & Water



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Ray Eurquhart– Supervisor
Curtis Richardson– Supervisor
Kathryn Spann– Associate Supervisor
Gus Gray– Associate Supervisor
Mark Dewitt– Associate Supervisor
Melissa Rooney– Associate Supervisor

STAFF

Eddie Culberson– Director
Lisa Marochak– Senior Administrative Officer
Jennifer Brooks– Soil Conservationist/ Environmental Education Coordinator
Mike Dupree– Ag Development and Watershed Conservationist
Matthew Kinane– NRCS - District Conservationist
Ralston James– Regional Coordinator-Central



MESSAGE FROM THE DIRECTOR

The Durham Soil and Water Conservation Department is an independent county department assigned to the Durham Soil & Water Conservation District Board of Supervisors. Our duties are to carry out the District Board's locally-led conservation program. Three of its five members are elected in the general election, while the other two are appointed by the Soil and Water Commission. This Commission is headed up by a Governor appointed chair. The road map for Durham's locally-led conservation program is assembled through the development of an Annual Plan of Work. Each year the Soil and Water Department strides to accomplish the goals and objectives set forth by the District Board.

During this past year, the Durham Soil and Water Conservation Department has successfully made an impact on Durham County's Strategic Plan. The department has a direct connection to these articulated goals by one of its employees serving as a Goal Champion. I feel this connectivity has kept the department's programs focused on the 5 goals listed within Durham County's Strategic Plan. With Durham County Government transitioning into performance based-budgeting it is essential that the District Board's Annual Plan addresses the County's Strategic Goals.

The following are just some of this year's accomplishments: The completion of a \$399,995 Clean Water Management Trust Fund grant on the Upper Sandy Creek Phase 5 Stream Restoration Project. With the completion of this 3,340 feet reach, there is now 1228 contiguous acres under Best Management Practices (BMP).; A project at Southern High School was completed and accomplished through a National Institute of Agriculture (NIFA) grant. This grant enabled the establishment of an agribusiness, a soils lab and an irrigation system upgrade to the athletic fields. This upgrade is estimated to save the school 20% - 50% in potable water usage. ; Completion of 2 Outdoor Education Learning Center grants through the NC Foundation of Soil and Water Conservation Districts. One was for handicap assessable raised beds located at Northern High School, the other for shelters erected on the Dr. Roberts Environmental Education Park. This District owned property is home to our annual Environmental Field Days. ; Allocation of \$141,706 to install BMP's on private landowner's property was provided through the department's administration of cost share programs such as North Carolina Agriculture Cost Share Program (NCACSP), Community Conservation Assistance Program (CCAP) and Agriculture Water Resources Assistance Program (AgWRAP). These BMP's will help the county/city comply with the watershed rules of the state. The success of these cost share programs can somewhat be traced back to the breakfast series the department assisted with in the agriculture community as part of a Farmland Board initiative.; Finally, our educational outreach programs have continued to produce positive results. Our Envirothon teams have represented the county well at area and state competitions. This year's Awards banquet was well attended at the county's "State of the Art" Health and Human Services Building. Additionally, the Department was again recognized at the National Association of Soil and Water Conservation District's annual meeting held in Anaheim, California for its 'BETC' program implemented at a Durham Public High School.

The above mentioned is just some of the highlights you will find in this year's annual report. Our accomplishments reach well beyond the pages within this report. At this time, I would like to proudly present FY 2014 Soil and Water Conservation Annual Report.

Eddie Culberson

Phase V Stream Restoration Complete

Goal 4
Strategic Plan
Initiative

The Durham Soil and Water Conservation District recently completed construction on the fifth and final phase of Upper Sandy Creek. With the completion of this fifth phase, there is now 1,228 acres being treated in the Upper Sandy Creek watershed. River Works Construction Company started the project on September 23, 2013 and completed it on May 17, 2014. Due to the enormous amount of rain the construction of this project greatly exceeded the estimated time of completion. Typically, the construction of 3,340 linear feet of channel of the cross sectional dimension as detailed in the plans would be completed in 90 to 120 calendar days. During construction there were approximately 5 bank-full rain events thus causing the construction company to be on-site for 237 calendar days.

The design called for 88 Best Management Practices (BMP's) to be installed along 3,340 feet of the newly constructed stream. The list of BMP's installed are as follows; rock j-hook, rock vane, outlet protection, rock cross vane, single wing deflector, root wad, log j-hook, log vane, log weir, log cross vane, constructed riffle, boulder cluster, rock step pool and log step pool. A riparian buffer was planted at a density of 694 stems per acre and encumbered 18.5 acres. Additionally .15 acres of wetlands was planted during the project. The vegetation selection for the project was as follows; river birch, sugarberry, green ash, black walnut, sycamore, swamp chestnut oak, willow oak, northern red oak, persimmon, black gum, box elder and cherry bark oak.

The project was funded through a couple of Clean Water Management Trust Fund grants received by the District. The first grant (\$253,000) was received in 2010 for design and permitting. The construction grant funds (\$399,995) were received in 2013. The total cost of this project is \$894,832 of which \$241,837 was in-kind match. This includes the value of a conservation easement Duke University donated. The District will hold and monitor the 10.065 acre easement in perpetuity. It was estimated that the project would reduce sediment loads by approximately 390 tons each year.



Before
Incised channel banks



After
Final Walk Through



During Construction



After
Forebays installed to decrease velocity storm events

Cost Share Programs

AG Cost Share



In August 2013, the NC Soil and Water Conservation Commission allocated \$33,604 of funding for the NC Agricultural Cost-Share Program (NC ACSP) for fiscal year 14 (FY 14). Funding for the ACSP is allocated to NC counties from the NC General Assembly in the state budget and is used for (BMP) installation to address soil erosion and water quality issues on farms. The Durham District allocated 100% of this funding to be used by farmers and qualifying landowners here in Durham County.

The NC Agricultural Cost-Share Program (NC ACSP) is a voluntary assistance program to provide technical, educational and financial assistance to agricultural producers to address natural resource concerns on their land, particularly water quality issues. A wide variety of best management practices (BMPs) are offered through the NC ACSP to address Sediment/Nutrient Delivery Reduction from fields, Erosion Reduction/Nutrient Loss Reduction in fields, Agricultural Chemical Pollution Prevention, Animal Waste Management and Stream Protection from Animals.

Projects funded during the 2013-2014 Program Year:

- 20.27 acres of Cropland Conversion to grass to prevent erosion
- 3 Agriculture Pond Sediment Removal projects to improve water quality
- 1.5 acres in grassed waterways to prevent and treat erosion
- 2 Rooftop Runoff Management Systems to treat erosion
- 387 linear feet of livestock exclusion fencing to prevent water quality impairment
- 1 Alternate Watering System to prevent water quality impairment

The FY 14 projects were either completed in FY14 or will be completed in the next 2 years.

Besides contracting and designing the FY 14 projects, the District staff also oversaw the completion of on-going contracts from prior year's allocations. This included 4.33 acres of grassed waterways, 3 agricultural pond sediment removal projects and 1 livestock heavy use areas. All of these projects have a positive impact on water quality in Durham County.

In May of 2014, the Durham District program staff, with assistance from the USDA NRCS Soil Conservationist and 3 Supervisors from the Durham SWCD Board, Ray Eurquhart, Talmage Layton and Danielle Adams, conducted its annual review of NC ACSP projects. Through a random selection process, 15% of all completed ACSP projects still under maintenance by the participating applicants or landowners were visited and evaluated. During the spot checks it was determined that all sites were in compliance with the NC ACSP standards.



Cropland Conversion to grass



Heavy Use Area –before



Heavy Use Area –after

AgWRAP – Agricultural Water Resources Assistance Program

The Durham SWCD is able to assist the agricultural community through implementation of the NC Agricultural Water Resources Assistance Program (AgWRAP). Similar in design to the NC Agricultural Cost-Share Program, AgWRAP is a voluntary program for farmers and agricultural landowners to help address water quantity resource concerns/needs on farms. 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.

In FY 14, NC AgWRAP received \$500,000 in non- recurring funds from the NC General Assembly. Due to the limiting amount of funding for the 2013 – 2014 operating year, the NC Soil and Water Conservation Commission decided to award funds through a competitive regional application process instead of through individual District allocations. Furthermore, the only best management practices available for cost share in FY 14 would be new Ag Water Supply/Reuse Ponds, Ag Pond Renovations/Repairs or Ag Pond Sediment Removal projects. The Durham District submitted an application for 1 new agricultural water supply pond on behalf of a farmer in Durham and the project was approved for funding.

Besides applying for additional funding for future ponds in Durham County, District staff was busy in FY 14 implementing prior AgWRAP contracts. A well, funded in FY 12, was completed in May 2014 and will provide additional water to a livestock farm in northern Durham. Also completed was a new agricultural pond from FY 13 funding. This pond will provide much needed irrigation water for a vegetable farm in Bahama.



Before Pond Installation



After Pond Installation

If you have any NC ACSP or NC AgWRAP questions or needs, please feel free to contact staff at 919-560-0558

Pond Management



Ponds are an important tool when it comes to the environment and water quality in particular. They help the deposition process occur when suspended solids, such as sediment, are present in stormwater runoff. They reduce flooding downstream by serving as a retaining basin while providing much needed habitat for wildlife that depend on its hydrology. Ponds play an important role in keeping the city's drinking water clean. There are many ponds located in the county particularly in the watersheds of Lake Michie and Little River Reservoirs. This Best Management Practice (BMP) is one of many that landowners in these watersheds have installed over the years. The results have been lower nutrients in the drinking reservoirs thus keeping the 'chlorophyll a' below the state standard. Also, it provides more affordable water for the city of Durham.

Each year the Soil and Water Department looks at many existing ponds in the county. Citizen's pond request can be anything from a leaking dam, a weed problem or problems from wildlife just to name a few examples. This year the department assisted seventy-seven citizens in the management of their reservoirs. The department also looked at several new pond sites during the year with one new pond being constructed funded through the Ag WRAP program (see Ag WRAP Article). Older ponds eventually fill in with sediment and thus need to be cleaned out. This is another service the department offers the landowners in the county (see Ag Cost Share Article).

On May 3rd the Soil and Water Department held a pond clinic at the NC State Beef Cattle Research Farm located off of Cassam Road in Durham. During this event citizens were able to gain knowledge on topics such as pond construction, maintenance, fish production and wildlife associated with ponds. There were fifty-one participants at this year's event. Most participants already owned a pond and for the most part were interested in managing ponds for weed control and fish production. The Durham County Farm Bureau, River Works Construction Company, Foster Lake and Pond Management, NC State Research Beef Cattle Farm and the Durham Soil and Water Conservation District were the sponsors of the event that included a lunch time fish fry. The highlight of the event was the afternoon session that included the analysis of the on-farm 10 acre lake. This analysis was conducted by means of a shock boat exhibit. The shock boat sends an electronic current out approximately 10-15 feet from the front of the boat that momentarily stuns the fish. The fish are netted and stored in an onboard water box with oxygen being applied. After a representative sample is pulled the fish are weighed, measured and then released back into the water unharmed. This service will inform the owner if their pond is properly stocked with the right amount, size and species of fish.

Agricultural Building Going Green



The Durham Soil and Water Conservation District, in conjunction with the Piedmont Conservation Council (PCC), continued the planning phase of the Durham County Agriculture Building Green roof Project. This green roof demonstration project is slated to complete the design phase in 2014. The NC Department of Justice awarded PCC a \$50,000 grant in its 2011 cycle of the Environmental Enhancement Grant Program (EEG). These funds were utilized for conducting a structural assessment of the building located at 721 Foster Street as well as a detailed design for a green roof on the building's 9,000 square foot rooftop. This demonstration project will serve as a promotion for further green infrastructure development across the city of Durham.

Continued on page 7

One of the projects goals is to promote green roofs as a method of managing stormwater runoff in the Ellerbe Creek Watershed. Ellerbe Creek has been on the NC DENR 303(d) list for impaired biological/ecological integrity since 1998. NC Department of Environment and Natural Resources (DENR) maintain that urban non-point source pollution is the most significant source of water quality impairment. In regards to the Falls Lake Watershed Rules, the results of the water monitoring conducted on Ellerbe Creek show that this watershed is the biggest nutrient contributor in the lake. Furthermore, this downtown watershed has proven to be the leading cause for the chlorophyll a exceeding the state standards in Falls Lake .

CCAP-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 staff designed 21 BMP's on 11 sites and the District Board allocated \$39,605 in cost share assistance to homeowners for the installation in fiscal year 2014. The funding sources for these projects include; the district allocation of \$4,525.00 for fiscal year 2014 by the Division of Soil and Water, \$20,649 in grant funds from an EPA 319 Grant, Wells Fargo & Keep Durham Beautiful Grant for \$6000 and \$9,978 from an interlocal agreement with the city of Durham Stormwater Services. The BMP's for these sites include rain gardens, cisterns, streambank stabilization, impervious conversion to grass and critical-area riparian buffer plantings. This voluntary incentive-based cost share program is administered by the Soil and Water Conservation District Board of Supervisors, who rank the applications for assistance by the water quality benefit to be attained.



Two District Board Supervisors, Ray Eurquhart and Robert Rosenthal conducted its annual spot check on CCAP sites on May 8, 2014. Each year, District staff randomly selects 5% for spot checks of cost share contracts. Three sites were selected in 2014 and visited to confirm that the BMP's that were cost shared are in place and functioning as designed and met the NC CCAP standards. All three sites were in compliance and one site required maintenance.

Grant Request

The Durham staff submitted an application to the EPA 319 grant program requesting \$75,000 for the CCAP cost share projects for fiscal year 2015, 2016 and 2017 in the Jordan & Falls Lake Watersheds, specifically for the project implementation in the Third Fork Creek, North East Creek and Ellerbe Creek sub watersheds. If awarded, the District would allocate \$25,000 a year for CCAP cost share agreements over the three year grant cycle.

VNRP – Voluntary Nutrient Reduction Program



The VNRP is an initiative designed to educate and encourage homeowners to reduce fertilizer applications to their property by 40%. The program teaches homeowners how to implement five Best Management Practices and fertilizer application guidelines that will reduce nutrient loading from misapplication of nonfarm fertilizer into the Jordan and Falls reservoirs.

In fiscal year 2014 Durham SWCD staff met with 4 Home Owners Associations and community organizations to discuss the VNRP and single family residences that are within 100' of surface water. These landowners were mailed the program brochure since research indicates that properties that are adjacent to surface waters have the highest probability of nutrient contributions during rain events and from leaching

of excessive land applied fertilizer.

The misapplication of fertilizer by homeowners could be contributing to excess nutrients making its way to Jordan and Falls Lake. Reductions in fertilizer applications and implementation of BMP's is the most cost effective method of reducing nutrients in Durham's waterways.

The Durham District has developed the Voluntary Nutrient Reduction Program (VNRP) as an education and outreach component to the CCAP program. While CCAP addresses important water quality problems, such as cleaning impervious runoff with a rain garden or stabilizing a degrading stream bank, the VNRP focuses on helping residents understand the causes and issues associated with nutrient pollution to the valuable water resources of Jordan and Falls lakes. By teaching them how to correctly manage their lawn fertilizer applications,

VNRP empowers home/land owners to conserve money as well as soil and water resources. Signing the VNRP pledge allows these people to commit to reducing NPS pollution for the long-term. Those applying for CCAP assistance are also given a higher score on the ranking sheet for participating in VNRP. Together, these programs offer a more comprehensive approach to NPS pollution reduction in Durham County.

Thank to funding from the Durham County Strategic Plan Durham Soil & Water was able to create an informational video about the VNRP Program. It can be viewed by clicking on the link below:

http://youtu.be/siVr8_GpbWg

Goal 4
Strategic Plan
Initiative

SUGGESTED MAINTENANCE FERTILIZATION FOR ESTABLISHED LAWNS IN THE PIEDMONT

LAWN GRASS TYPE	Fertilization	Monthly Application Rate (lb N/1000 sq. ft.)											
		J	F	M	A	M	J	J	A	S	O	N	D
Bermudagrass	Basic	1	1	1	1	1	1	1	1	1	1	1	1
	High	1	1	1	1	1	1	1	1	1	1	1	1
Tall Fescue	Basic	0.8	1	0.8	1	0.8	1	0.8	1	0.8	1	0.8	1
	High	1	0.8	1	0.8	1	0.8	1	0.8	1	0.8	1	0.8
Zoysiagrass	Basic	1	1	1	1	1	1	1	1	1	1	1	1
	High	1	1	1	1	1	1	1	1	1	1	1	1

Recommended by Carolina Lawn Care - A Guide to Maintaining Quality Turf in the Landscape by NCSU/ATU University Cooperative Extension

BENEFITS TO YOU

- You will be a part of the solution that helps Durham County meet its nutrient reduction goals as required by the Jordan and Falls Lake Rules.
- You will become a better steward of North Carolina's land and water resources today and in the future.
- If you use less fertilizer, you may save money.
- By participating in this program, you can learn more about the sources of nutrient pollution.

NEXT STEP?
Learn more by visiting our website or contacting the Durham Soil and Water Conservation District staff.

DURHAM SOIL & WATER
Conservation District

Soil & Water
721 Foster Street
Durham, NC 27701
Phone: (919) 560-0558
www.dswcd.gov/swcd

VOLUNTARY NUTRIENT REDUCTION PROGRAM

HELP US PROTECT NORTH CAROLINA'S DRINKING WATER.

Durham Soil & Water Conservation District

721 Foster Street
Durham, NC 27701
Phone: (919) 560-0558
www.dswcd.gov/swcd



NCASWCD PRESENTATIONS

Urban Conservationist of the Year

The South Durham Green Neighbors (SDGN) was selected as the Urban Conservationist of the Year for the State of North Carolina and received recognition for their efforts on January 7, 2014 at the North Carolina Association of Soil and Water Conservation Districts Annual meeting. The SDGN organization exemplifies leadership in environmental stewardship. They have participated in the installation of storm drain decals, created door hangers that increase public awareness that they have distributed to several neighborhoods, participated in Big Sweep and Creek Week cleanup projects and have assisted city officials in local water monitoring projects and developed the curriculum, *Knowing Our Local Watershed*, available at the South Alston Library. Congratulations to the SDGN!



NACD PRESENTATIONS

The National Association of Conservation Districts held its annual meeting in Anaheim, California from February 2nd - 5th, 2014. NACD offers a number of informational sessions during the meeting, focusing on the work of districts across the country. This year the Durham District was invited to present in two of the 2014 breakout sessions.

Bionomic Education Training Center (BETC)

On Tuesday February 4, 2014 Amy Jenkins, OCS Teacher from Southern High, and District staff presented the BETC program to 48 members of the conservation community. They shared the development of the BETC program and the progress that it has made over the past three years. The program's primary goals were to increase student performance and interest in the agricultural sciences and encourage them to enter the agricultural workforce and introduce students to an agribusiness model that specializes in commodities for Green Infrastructure. The project has inspired young leadership and encouraged participation of community members, financial lenders and community development corporations while addressing non point source urban runoff. Several members of the audience have followed up, requesting addition information about the program. The BETC program is a Durham County Strategic plan initiative.

EPA 319 Grant Panel Discussions

On Wednesday February 5, 2014 Durham District staff served on a panel to discuss Conservation Districts and the role of 319 funding for local watershed work. The panel discussed case-specific lessons learned and successes using 319 funding for watershed work and to update conservation district staff and supervisors on new program requirements. The 5 member panel worked with National EPA 319 program administrators and 319 program Director and made recommendations for future 319 grant guidelines. The panel recommendations included; streamlining the 319 grant application process, allocate a larger percentage of funds to the installation of Best Management Practices and to reduce the requirement of monitoring practices after installation.

AG DEVELOPMENT

Goal 4
Strategic Plan
Initiative

NIFA GRANT-BETC

Southern High School Agriculture Educational Enhancement Program

The Durham Soil and Water staff received a grant from the National Institute for Agriculture (NIFA) for the Bionomic Educational Training Center (BETC, pronounced "Betsy"), on the Southern High school campus. Exceptional-children teachers Amy Jenkins and Lennie Curington and principal Kenneth Barnes have joined with Durham Soil & Water District staff to develop the Bionomic Education Training Center to provide funding, work experience and practical math and science lessons for Southern students. BETC has two parts:

- School-based Agribusiness** In the agribusiness, students grow and sell native plants for rain gardens, bio-retention areas and riparian buffers that reduce polluted runoff into Durham waterways. The agribusiness was designed for students in the Occupational Course of Study (OCS). The students grew native North Carolina plants for rain gardens and various culinary herbs. They built small cold frames and installed an automated irrigation system. They learned how to design and build a rain garden, how rain gardens remove urban contaminants and are, thus, very important for sustaining our community and environment. This program allows students in the OCS department to obtain valuable hours of experience in order for them to pursue careers in horticulture and to develop *Green Industry* entrepreneurial skills. The program involved 25 students who participated in 1250 instructional hours related to the project. The students earned 4900 hours of work hour credit and produced an income to of \$9437 to date for the OCS Department. The students received Certificates of Achievement from the Soil & Water District for their participation in the BETC program and were honored at a reception on May 16, 2014 at Southern High School.
- Soils Lab** The lab focuses on water quality concerns and conservation so that students will develop better research techniques, data collection and analysis which are very important for students who will pursue science careers and degrees from institutions of higher learning. The effects of different land management practices on soil and water quality are the focus of the experiments, especially the complex and delicate relationship between water quality and storm water management, nutrient management, energy and sustainability and ecological diversity. Students at Southern are collecting rainfall and soil moisture data each week on the Southern High campus. The students are recording the amount of water collected in rain gauges, recording soil moisture readings with soil moisture sensors and collecting other environmental data using Data Hubs. The research equipment and lessons plans also have been used by students enrolled in Horticulture at Northern High and students at Lowe's Grove Middle School. This equipment is mobile and will be available for any teachers in Durham County that would like to incorporate hands on learning in the science or engineering programs.



Continued on page 11



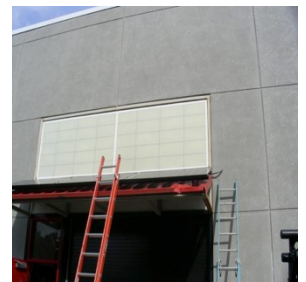
DSWCD trains DPS Maintenance Staff and upgrades Irrigation System

The grant included funding for an upgrade to the irrigation system on five athletic fields at Southern High School. The new *Smart Controller* system and weather monitoring station was installed in May 2014. DPS spends \$15,000 a year on average for the irrigation of the five fields. The system will save an estimated 20% to 50% of potable water that is currently used to irrigate the athletic fields, thereby saving DPS 20-50% of money. Also, the Sentinel Controller provides constant monitoring of water use and that data is electronically transferred to the DPS maintenance personnel daily. In the event of a malfunction, the system sends an alert to the maintenance department, identifying the problem. This technology upgrade will save the school system money, reduce water use and will likely reduce nutrient runoff and leaching from the highly managed turf operations. Future goals are to seek additional funding to upgrade the remaining schools in the district that are using potable water on the athletic fields.

Southern High BETC Program goes Solar



Yes! Solar Solutions, LLC installed an off-grid installation of three 250W solar panels on the campus. The panels installed on the roof of the building to power the growing lights. Set up was paid for with the funds from the NIFA grant. The off-grid solar system is there 24/7 producing electricity and is a great learning tool for Southern's Energy and Sustainability program.



AG DEVELOPMENT / FARMLAND BOARD

FARMLAND PROTECTION ADVISORY BOARD

Neil Frank – Vice Chairman, At Large	Douglas Daye – Flat River VAD
Kathryn Spann – Vice Chairman, Soil & Water Rep	Talmage Layton – At Large
Wendy Jacobs – County Commissioner	Will Wilson – Eno VAD
Mark Waller – Farm Bureau Representative	Anthony Lopez – Falls/Lick Creek VAD
Alicia Butler – Business Representative	Demetrius Thompson – At Large
Gus Gray – Cape Fear VAD	Samantha Gasson – At Large
	John Monroe – At Large

VAD– Voluntary Agricultural District

Under this program, farmers sign an agreement with County Government to voluntarily forego developing their property for 10 years. In FY2014 District staff met with landowners about the VAD and an additional 1,026.80 acres were enrolled in the Program. District staff also began the process of re-enrolling participants whose 10 year commitment has or will be expiring soon.



Durham County Farmland Protection Plan

In order to help Durham County agriculture thrive in Durham County, the Durham County Farmland Advisory Protection Board and the Durham County Board of Commissioners has adopted a comprehensive action plan. The Farmland Protection Plan is a road-map of sorts to help County officials develop and expand agriculture in Durham County. The following activities are initiatives of the Farmland Protection Plan that occurred in FY 14:

Continued on page:12

Continued from page 11

◆ **Farmland Breakfast**

The Durham FPAB developed a series of informal community breakfast to show their appreciation for Durham farmers and offer them opportunity to learn more about topics that are having an impact on their operations. Guest speakers and topics were selected by the FPAB. The first of the FY 14 series was held on November 14, 2013, at the Bahama Ruritan Club. The group discussed the present use taxation policies and the impact on the farming community. Farmers had a chance to ask questions with tax office personnel. The second breakfast was held on January 23, 2014 at the County Agriculture Building at 721 Foster Street and a presentation on the 10% campaign was given by Abby Piner Extension Specialist. The two breakfasts were well received by the farming community and the FPAB intends to implement the program in FY15.

◆ **Durham farmers receive GAP certification in February 2014**

Good Agricultural Practices (GAP) certification is an USDA program that insures that products meet all sanitary food handling requirements from the time seed is planted until the food is consumed. GAP training and certification is a program developed by the USDA in order to decrease the 47 million cases of food borne illness reported each year in the United States. This process is currently voluntary but has been required by institutional purchasers all farmers selling fruits, nuts and produce.

The training is a two day process with the first day covering food safety and agriculture production. On the second day, farmers complete a GAP plan outlining the food safety procedures for their individual farm. There were 16 farmers that participated in the first day of training and 8 developed their GAP plan on the second day.

◆ **Farmland Preservation Grant Applications and Community Partnerships: Local Food Promotion Program Grant**

In FY14, District staff collaborated on a grant application with Reinvestment Partners Inc. requesting \$100,000 of funding from the North Carolina Department of Agriculture and Consumer Services, Agriculture Development and Farmland Preservation Trust Fund for a unique development project in Durham County. If funded the District would assist in establishing “Bull City Cool”, a food hub for Durham. By offering a combination of production, aggregation, distribution, and marketing services, food hubs make it possible for producers to gain entry into new and additional markets that would be difficult or impossible to access on their own. This is especially necessary for small and medium sized producers to be able to sale to large volume wholesale channels, such as local institutions like the Durham County Detention facility or Durham Public Schools.

If funded the District would purchase cool storage equipment for the Bull City Cool Food Hub; install an Urban Agriculture Training Center on Geer Street and provide matching funding to assist farmers who are interested obtaining Good Agricultural Practices (GAP) certification.



FY-2014 USDA-NRCS CONSERVATION PROGRAM ACTIVITIES

For the past several years, the Farm and Ranchland Protection Program (FRPP) has provided financial assistance to Durham County to purchase conservation easements and to protect high quality agriculture land with permanent easements. The strong partnership that exists between the Durham Soil and Water Conservation District, the Durham County Open Space & Real Estate Division, and USDA Natural Resources Conservation Service has enabled the Durham SWCD to do their part to slow the conversion of agriculture land to non-agricultural uses of the land. This partnership has continued to seek out high quality agricultural land and to seek opportunities to secure funding to purchase permanent conservation easements on these agriculture working lands. With the passage of the new 2014 Farm Bill on February 07, 2014, the Farm and Ranchland Protection has been consolidated with several other easement programs into the Agricultural Conservation Easement Program (ACEP). This “New” program provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Agricultural Conservation Land Easement protects the long-term viability of the nations’ food supply by preventing conversion of productive working lands to non-agricultural uses and Durham County is doing their part to protect the working lands.

NRCS's natural resources conservation programs help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. Public benefits include enhanced natural resources that help sustain agricultural productivity and environmental quality while supporting continued economic development, recreation, and scenic beauty.

USDA-Natural Resources Conservation Service (NRCS) program activities remained steady in Durham County this past fiscal year

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audio tape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).



WATERSHED RULES

Durham County has an important part in improving the water quality of two reservoirs serving triangle residents. The NC legislature passed nutrient management strategies for the two lakes, Jordan Water Supply Nutrient Strategy (August 11, 2009) and the Falls Reservoir Water Supply Nutrient Strategy (January 15, 2011). These nutrient reduction strategies have specific requirements for local governments and landowners to implement in order to improve water quality.

The Falls Rules and Local Advisory Committees (LAC)

The Durham Soil and Water Conservation District staff and the LAC are required to complete the following tasks:

- ◆ **Register all agriculture operations** in the watershed. The registration forms are available at the Durham district office or online. To date, 50 agriculture operations have registered in Durham County, which is approximately 29% of the estimated total of operations in the county. The DSWCD staff will continue to contact landowners and register local agriculture operations.
- ◆ **Develop a Local Nutrient Control Strategy (LNCS).** The local nutrient control strategy that is to be developed must specify the numbers, acres, and types of agriculture operations in the area; numbers of BMP's that could be implemented by enrolled operations; estimated nitrogen and phosphorus loading reductions; schedule for BMP implementation; operation and maintenance requirements.

In FY 2014, DSWCD staff recruited a Duke University intern who assisted with the initial screening of Present Use Value (PUV) Ag parcels. The intern worked from March to June reviewing parcels. Working with the tax office and geographic information system (GIS) computer programs District staff has identified 800 PUV Ag & Forestry parcels in the county that either contain surface water or are within 100' of surface water. This list of agriculture operations is the starting point for the development of the LNCS and was shared with the BOCC at a work session on November 4, 2014. The parcels are first reviewed using the GIS system and imagery as an initial screening to verify the need for a stream determination. The screening phase has been completed and the next step is landowner interviews and site visits.

Annual report—The Durham LAC met on March 13, 2014 to compile the Neuse report as required. In crop year 2013 there were 7505 acres of crop land reported and an estimated 41.4% edge of field reduction in Nitrogen according to the Nutrient Loss Estimation Worksheet (NLEW). The annual report from the Durham LAC documenting the progress toward the nutrient reductions required by agriculture producers operating in the Neuse River Basin and Falls Rules.

Jordan Lake Watershed Baseline for Agriculture (2014 report submitted to the EMC)

Upper New Hope Sub-watershed					
Chatham	43,826	22,807	48%	19,709	55%
Durham	39,043	11,726	70%	18,156	53%
Orange	64,594	44,310	31%	66,488	-3%
Wake	9,649	3,624	62%	6,538	32%
Total	157,112	82,467	48%	110,891	29%

The Durham agriculture producers documented a 53% reduction in nutrients losses in crop year 2011 than they reported in the baseline period between 1997 and 2001. This reduction exceeds the requirement of a 35% Nitrogen reduction required by the Jordan rules passed in 2009 for agriculture producers. Unfortunately, Durham's reduction is part of collective compliance with the other counties listed above so as a collective the reduction threshold has not been met. Annual reporting and nutrient accounting is required by the DSWCD staff to the Jordan Water Oversight Committee until such time as the EMC determines

that the annual reports are no longer needed to fulfill the purposes of the rule.

STRATEGIC PLAN



The Durham Soil and Water Conservation District continued its close involvement in the Durham County Government's Strategic Plan during 2013 and 2014. District staff continued the role as co-champion for Goal 4: Environmental Stewardship, along with Tobin Freid, County Sustainability Coordinator. The Strategic Plan's five major goals; Community and Family Prosperity and Enrichment, Health and Well-being for All, Safe and Secure Community, Environmental Stewardship and Accountable, Efficient and Visionary Government, made great strides in FY 14.

Throughout the year a number of soil and water projects were also Strategic Plan initiatives such as; the completion of the Sandy Creek Stream Restoration phase V, the launch of the Voluntary Nutrient Reduction Program outreach campaign and the launch of the Bionomic Education Training Center at Southern High School. *(More can be learned about these initiatives in corresponding articles in this annual report)* Other initiatives the District participated in include a Social Marketing Campaign called 'Charge Ahead Durham', a Durham County teacher/educator's resource guide website with itemized list of programs, activities and more to help teachers in the classroom, bit.ly/GuidetotheEnvironment, and a tree campaign called 'Trees Across Durham'.



The Charge Ahead Durham campaign is a social media campaign to engage the Durham community in participating in "charges" that will make a positive impact on the environment. Each week participants are given a choice of tasks to complete, such as switch your lightbulbs to LED lights, check your plumbing for leaks, recycle more, carpool to work for a week, etc... Most tasks will calculate how much savings to the environment their actions have saved. There are 701 households in Durham signed up and they have saved (or will save this year) approximately 164,000 gallons of water; 211,000 kwh; 12,000 lbs of waste; spent 400 hours in nature; avoided 229,000 lbs of CO2; contributed 250 hours of community engagement.



Trees Across Durham (TAD) is a partnership between the County, the City, local non-profits and private Citizens dedicated to making Durham a healthier and greener community now and in the future through the planting and protection of trees, the education of tree care, and the measurement and communication of the benefits trees provide to our environment and community. There are more than 25 different stakeholder groups involved in TAD. Durham it's first year, TAD organized the planting of 1,000+ trees. Many of these trees were planted at 29 elementary schools, 3 County libraries, the County stadium, a few City parks and various neighborhood streets.

ENVIRONMENTAL EDUCATION

The Durham Soil and Water Conservation District continued its active environmental education program in 2013-2014.

Expansion into more schools and more programs/projects keep the staff busy all year teaching, training, or-

ganizing and recruiting. A few of our more active programs are highlighted below and on the following pages.

Envirothon

During the 2013-2014 school year, 10 teams of students from 8 Durham County schools or clubs participated in the Envirothon competition. 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, wildlife, forestry, aquatics, and current environmental issues. The Envirothon consists of a middle school and high school competition level.

District staff spent numerous hours working with and training the teams in forestry management practices, wildlife identification, aquatic sampling, soils determinations and more. Some of the hands-on skills the students learned included how to measure the height of a tree using a Biltmore stick, how to identify and track NC wildlife, how to sample macroinvertebrates and determine a stream's water quality and how to texture test soils. The hands-on training the students learn are all skills that resource professionals use in the field each day.

After months of study and training, the teams competed against others from an 11 county area at the Area 4 Envirothon event in Warren County on March 21, 2014.

The teams to represent Durham County at the 2014 Area 4 Envirothon were as follows:

- ‘Killer Kudzu’ from the NC School of Science and Math
- ‘Raiders’ from Sherwood Githens Middle School
- ‘Enviromatics’ from Sherwood Githens Middle School
- ‘Riverside Pirates’ from Riverside High School
- ‘The Expendables’, high school homeschool team
- The ‘Cheetah Chicks’, middle school homeschool team
- The ‘Kewl Kidz’ from Northern High School
- ‘Eco Minions’ from Rogers Herr Middle School
- ‘Spacerocket’ from Voyager Academy High School
- ‘#Forestlife’ from Voyager Academy High School



Enviromatics

Githens Middle School



Kewl Kids

Northern High School

At this qualifying event, three teams from Durham placed in the top 7 of their division, thereby allowing them to participate in the state level Envirothon event, the NC Envirothon. The ‘Killer Kudzu’ team placed 3rd and the ‘Kewl Kidz’ placed 7th in the high school division and the ‘Enviromatics’ team placed 6th in the middle school division.

Continued on page 17

Envirothon-*continued from pg. 16*

On April 25-26, 2014 these three teams competed in the NC Envirothon competition held annually at Cedar Rock Park in Burlington, NC. There they competed against teams from across North Carolina. The 'Killer Kudzu' high school team from the NC School of Science and Math placed 4th overall at the state event and received a first place medal in the Oral Presentation portion of the competition. The 'Kewl Kidz' team from Northern High School placed 16th out of 43 teams. The 'Enviromantics' team from Sherwood Githens Middle School, competing for the first time at the state-level event, placed 27th out of 44 teams.



Killer Kudzu

Please visit www.ncarea4envirothon.org and www.ncenvirothon.org to learn more about the Envirothon program or follow the NC Envirothon on Facebook at www.facebook.com/NCEnvirothon

NCSSM Stormwater Curriculum

The District staff has been working closely with Dr. Linda Schmalbeck at the North Carolina School of Science and Mathematics to teach a cistern design seminar. The seminar on engineering, design and installation of cisterns was offered on each Tuesday afternoons beginning in November through May 2014 with students earning .5 credits towards graduation. The project was to design a cistern to harvest runoff from the campus to replace potable water that is being applied to the athletic fields. During this seminar students completed a site survey, calculated runoff volume and the peak flow using two rain water harvester models & engineering equations. The results were shared at the yearend campus wide science and research project discussion. DSWCD staff met with the Chancellor of NCSSM to discuss potential grants to pursue to fund the installation of the rain water harvesting cistern. The project if implemented would reduce the nutrients entering Ellerbe creek and would replace the annual usage of 350,000 gallons of potable water that is applied to the fields.

Classroom Presentations

Throughout the school year, the District staff is asked to present various natural resource topics to schools and children's groups from grade levels pre-K to 12th grade. Classroom presentations range from a variety of topics. Some of the more popular topics from the last school year included; Halloween Critters in NC, composting, vermicomposting, soils, wetlands, animal identification skills, life cycles and salamanders.



OUTDOOR LEARNING CENTER GRANTS

School Garden Accessibility Success at Northern High School

School Gardens are an increasingly popular trend in schools across Durham County, providing valuable outdoor experience and education to students. Many schools in Durham have one or more school gardens. However, being able to work in the garden is limited for students with mobility disabilities. A garden in the ground or in a low-lying raised bed is awkward for students who rely on wheelchairs or crutches and cannot easily bend down to reach the plants. Student with these challenges can also benefit from the positive aspects of gardening, but only if the garden is accessible to them.



Northern High School (NHS) is undergoing a multi-phase project to turn an open courtyard into a multi-use garden that will include a fruit and berry garden, memorial garden, outdoor environmental learning classroom and culinary garden.

The Occupational Course of Study (OCS) department is leading the planning, construction and maintenance of the project. However, 5 of the OCS students are wheelchair bound, greatly limiting their ability to work in the courtyard, gaining valuable work experience and educational benefits of just being outdoors.

During the initial planning of the multi-use garden, NHS teacher, Susan Poole, reached out to the Durham Soil and Water Conservation District for help in planning multiple gardens. Recognizing the need to increase accessibility for wheelchair bound students, the District and teachers proposed incorporating a wheelchair accessible raised bed garden. Receiving a grant from the NC Foundation for Soil and Water Conservation and Walmart Foundation, the District was able to fund the project utilizing staff, community volunteers and students for the construction of the garden.



Students and volunteers at work on the wheelchair accessible garden at Northern

Completed in May, the new NHS Wheelchair Accessible Garden has eliminated the barrier wheelchair bound students face, allowing them access to an outdoor environmental learning classroom and access to vital work experience.

In order to make the garden wheelchair accessible, two 27" high raised beds were constructed. These beds are slightly narrower than traditional raised beds in order to allow convenient access to the whole bed from one side of the bed. They are also higher in order to eliminate the need to bend over. In addition, the pathway between the two beds has been laid with pavers to provide a firm, stable ground that wheelchairs can easily roll across. Finally, a sign designating sponsors has been installed.

This garden is a welcome asset at NHS and will hopefully serve as a model for other schools .



Raised beds at Northern High School garden that will make the gardening experience accessible to wheelchair bound students

North Carolina Foundation for Soil & Water Conservation, Inc.



OUTDOOR LEARNING CENTER GRANTS

Dr. Robert's Environmental Education Park

The Durham District received a grant in fall 2013 to install an Outdoor Environmental Learning Center (OELC) in Durham. The \$2500 grant was awarded to the District by the NC Foundation for Soil and Water as part of a larger grant from Walmart, Inc.

The Dr. Roberts Environmental Education Park OELC grant helped the District be able to install two educational shelter, educational signs, and four picnic tables. The District received volunteer help from citizens across Durham County. Don Ramsey's class at Southern High School made the picnic tables and several Southern High students from Amy Jenkins and Len Curington's class helped to level and install the two shelters. The Occupational Course of Study Department at Southern High School also donated garden fabric and installed it under both shelters to help keep the weeds out.

The OELC project was completed in late Spring of 2014. The Dr. Roberts OELC is being maintained by the District staff.



North Carolina Foundation for
Soil & Water Conservation, Inc.





BIG SWEEP 2013

Each fall, the Durham Soil and Water Conservation District coordinates the annual Durham Big Sweep clean up event as part of the NC Big Sweep. Durham Big Sweep, sponsored in part by the City of Durham's Stormwater Services Division and Keep Durham Beautiful Inc., tackles the task of removing litter from Durham. In 2013, trash disposal assistance was provided by Durham County's General Services Department and the City of Durham's Solid Waste Department.

October 5, 2013 was the official statewide Big Sweep day, and while many volunteers do participate on that day, in Durham County groups are allowed to participate on the day of their choice throughout the months of September and October. During that 2 month window, over 411 volunteers cleaned up 23 different sites across the county. An estimated 10,790 pounds of trash was cleaned out of various city parks, neighborhoods and roadsides, as well as local streams, rivers and other water bodies around the county.

Much of this trash was fished directly out of streams that flow directly to Falls and Jordan Lakes, polluting two major drinking water sources. Volunteers were able to bags about 358 trash bags of litter, 78 bags of recyclables and over 900 pounds of trash too big for garbage bags. Some of these items include 45 tires, toilet, radio, cane, plywood, sign, bike frame, 2 vacuum cleaners, rug, 4 florescent light tubes, 1 plastic crate, 5 bed mattresses/box springs, roll of wire fencing, carpet & padding, 6 TVs, 7 shopping carts, one newspaper stand, large road closure sign, two blankets, metal pole from street sign, wooden boards, plastic shelving unit two shelves high, 3 bicycle frames, a long metal strap (six feet), wooden stool/furniture, orange cone, car tailpipe, signage, scrap iron, large rusted metal piece, planter, 2 basketballs, 1 basketball hoop base, one exercise ball, one door to a kids playhouse, a roll of chicken wire and 2 five gallon drums.

The Durham County Big Sweep is part of the NC Big Sweep, a 20+ year old state-wide event to clean our state's beaches, streams, rivers and lakes. NC Big Sweep is an award winning, 501(c)(3) grassroots nonprofit organization whose mission is a litter-free environment.

The Durham Big Sweep events can be learned about by visiting the Durham Big Sweep website at bit.ly/DurhamBigSweep. There interested volunteers can learn about upcoming clean ups and register online to volunteer. For information on the 2014 Big Sweep event, check out the website or contact the District at 919-560-0558.

The Durham SWCD would like to thank the following groups for participating in the 2013

Big Sweep: (The sites they chose to clean follow the group's name)

- Boy Scout Troop 424 - Lyon Park, •Girl Scouts Troop 870 - Rocky Creek Park, •South Durham Green Neighbors/Pack 486 - Third Fork Creek & Trail, •Ellerbe Trestle group - Ellerbe Creek at railroad trestle and Falls Lake, •Northgate Park Neighborhood Association - Ellerbe Creek, •Cub Scouts Pack 424 - West Point on the Eno, •Duke Project BUILD/Christopher Ammons - Warren Creek neighborhood, •NC School of Science & Math - Ellerbe Creek, •Central Park School for Children, 4th graders - Ellerbe Creek Trail, •The Commons at Colony Hill Homeowners Association - Sandy Creek, •Durham Academy, 4th graders - Durham Academy Campus, •Duke School - Hwy 751 at Duke Forest, •EPA volunteers - Sandy Creek Park, •Girl Scouts troop 142 - Garret Park, •#TeamAdams/Sean Doig - Goose Creek, •Forest Hills Neighborhood Association - Forest Hills Park, •Walltown Neighborhood - Ellerbe Creek, •3rd Fork Creek group/Bob Brueckner - Third ForkCreek, •ACRP - Little Like Creek at Birchwood Park, •Brightleaf Audubon Committee - Lick Creek at Brightleaf-in-the-Park, •AW NC - Penny's Bend on Eno River, •UNC Service Fraternity - New Hope Creek Waterfowl Impoundment



Field Days: Durham County Environmental Field Days for 3rd Graders



On October 8-10, 2013 the Durham District was supposed to hold its annual Durham County Environmental Field Days event for 3rd graders in Durham County. However, due to colder than average temperatures and rain, the events were unfortunately cancelled. Schools were

given the option to schedule a make-up day for a mini-field day event at



Conservation Contests for kids



During the 2013-2014 school year, the Durham District sponsored 6 different conservation education contests for students in Durham County. The contests are: a Poster Contest for 3rd – 6th grade; an Essay Contest for 6th grade; a Public Speaking Contest for 7th and 8th grade; a Computer Slide Show contest for 6th grade and a Computer Designed Poster contest for 9th grade. The theme for all of the contests was ‘The Living Soil’. 1st place winners received a plaque and \$50. 2nd place winners received a certificate and \$25. Teachers of the 1st place winners also received a cash reward for their participation. These contests are part of a statewide event sponsored by the NC Association of Soil and Water Conservation Districts. 1st place winners from Durham advanced on to an area level contest, where we had a number of Durham entries place and take prizes.

For younger students, the District again held a spring Bookmark contest for K – 2nd graders with the theme of ‘*Trees across Durham*’. We had a number of wonderful, creative entries from across the county. 1st place winners in each grade level received an award certificate and laminated copies of their bookmark for their entire class.

★ Annual Awards Celebration ★

The Durham Soil and Water Conservation District held their Annual Awards Celebration to honor students, teachers and Durham Citizens that participated in the FY 2014 Soil and Water Conservation contests on May 15, 2014. The 2014 Awards Celebration was held at the Durham County Health and Human Services Complex.

Those awarded this year included first through second place winners in the District’s Poster, Essay, Computer Poster, Public Speaking and Computer Slide Show. The theme for these contests was The Living Soil. We also recognized the first place bookmark contest winners, Big Sweep Group of the Year, The Durham County teams who participated in the NC Envirothon Event, Urban Conservationist of the Year and Teachers of the Year.

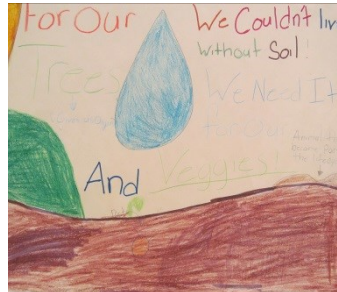
Poster- 1st place District Winners

3rd Grade

Toni Roberson

School: Spring Valley

Teacher: Ms. Holloway



4th Grade

Lindsey Castaneda

School: Burton Elementary

Teacher: T. Altman-Lewis & Dewanna Eubanks

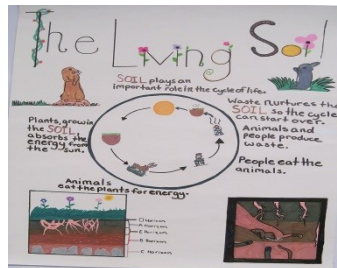


5th Grade

Olivia-Michelle Goldsmith

School: Camelot Academy

Teacher: Amy Cummings



6th Grade

Rosie Scott-Benson

School: Voyager Academy

Teacher: Carrie Miller



*NC Area IV Association of Soil & Water Conservation Districts
2nd Place Winner

Essay Winners– 6th grade

- 1st place– Kelsey Fletcher, Southview Academy
- 2nd place– Kaitlyn Aycock, Lowes Grove

Computer Slide Show Winners– 6th grade

- 1st place– Rosie Scott-Benson, Voyager Academy
- * NC Area IV Association of Soil & Water Conservation Districts- 1st Place Winner
- * NC Association of Soil & Water Conservation Districts– 2nd place 2nd Place Winner

Computer Poster Winners– 9th grade

- 1st place– Jacob Fletcher, Southview Academy

Public Speaking– 7th grade

- 1st place– Aubrey Fletcher, Southview Academy

Bookmark Contest Winners– 1st place

- 1st grade-Tanaysha Thompson, Eno Valley
- 2nd grade– Ava McCown, Bethesda Christian Academy

Urban Conservationist Winner

- Southern High School OCS Program

Teacher of the Year Winners

- Elementary School– Amy Beebe, Pearson Elementary
- Middle School– Barb Kanoy, Durham Academy
- High School– Amy Jenkins & Len Curington, Southern High School of Energy & Sustainability

Poster –2nd Place District Winners

- Mira Sandiford, Spring Valley, 3rd grade
- Kiana Cruz, Burton, 4th grade
- Josephine Wilson, Morehead Montessori, 5th grade
- Lauren Steiner, Voyager Academy, 6th grade

Poster –Honorable Mention

- Andre Timblin, Newton Academy, 5th grade

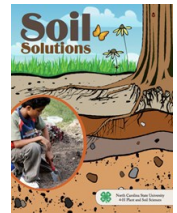
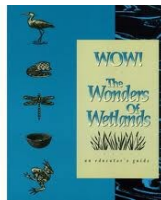
Big Sweep Special Achievement

- Sean Doig

TEACHER WORKSHOPS



Durham Soil & Water, NC Cooperative Extension and the City of Durham held a week long teachers workshop July 22-26, 2013. The workshops were held at the beautiful West Point on the Eno. The workshops offered were Project Learning Tree (PLT); Food, Land and People (FLP); The Wonders of Wetlands (WOW); Project WET and Soil Solutions. Facilitators were : Laura Webb-Smith, Jennifer Brooks, Lisa Marochak, Susan Woodard & Michelle Wallace. Participants received Criteria I towards their NC Environmental Education Certification Program for Continuing Education Credit for teachers.



Technical Employee Of The Year



January 2014 Ag Development and Watershed Conservationist , Mike Dupree received the Technical Employee of the Year award from the North Carolina Association of Soil & Water Conservation Districts. The North Carolina Association of Soil and Water Conservation Districts' Technical Employee of the Year award recognizes an employee who has excelled within their job description and has made significant contributions for the overall improvement and promotion of soil and water conservation in North Carolina. Congratulations Mike!

Intern/Consultant—Katie Locklier



Intern- Katie Locklier joined Durham Soil & Water as a intern December 2013–May 2014. Katie served as an intern through the Nicholas School of Environment while completing her Master of Environmental Management from Duke University.

Katie worked on the Voluntary Nutrient Reduction program while serving as an intern. Locklier create a video on the Voluntary Nutrient Reduction program that can be shown at HOA meetings, local community meetings, and social media.

Consultant– After completing her Master’s degree Katie served as a consultant for Durham Soil & Water from May 2014-June 2014. Katie conducted GIS determination on farm parcels in Durham County. Katie taught staff how to use ArcView and created templates to track CCAP and Ag Cost Share data.



Boy Scout Volunteer



Durham Soil & Water received a \$500 grant from Duke Energy to create a outdoor learning area in the FY 2013. Dylan Sikora a Boy Scout with troop 424 designed and constructed the outdoor learning area with benches, a fire pit and a wood storage shed at the Dr. Roberts Environmental Education Park. The Project was completed June 2014. This projected not only helped the Soil & Water Board but it also helped Dylan to earn his Eagle Scout Award. Congratulations Dylan!

Resource Conservation Workshop Video

FY2013 The Durham Soil & Water Board received a grant from Duke Energy to produce a video on the Resource Conservation Workshop. The video was completed December 2013. Below is a link to view the video: <http://youtu.be/3QiBfkAUPtE>

The RCW is a week long intensive study and hands-on conservation workshop requiring student application and participation in a wide range of conservation topics. Students are housed in NCSU campus dormitories under the guidance of live-in counselors.



Soil & Water

Durham Soil & Water Conservation District

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Fax: 919-328-6192
Website: dconc.gov/swcd



Conservation Sales

FY2014– the district sold the following items:

All proceeds go towards Environmental Education



Rain Barrels

Sold– 34



Tree Seedlings

Sold– 800



Bird Boxes

Sold– 6



Composting Bins

Sold– 10



Wildflower Seeds

Sold– 2