



ANNUAL REPORT

50 Years of Independence

1965-2015

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On February 2, 2015 the Durham Soil and Water Conservation District celebrated its 50th anniversary of becoming a stand-alone District. To mark this occasion the District celebrated this event on October 28th at a luncheon at Bayer Crop Science in RTP. Approximately 160 people attended the event which included representatives from the US Congress, NC Legislators, NRCS, NC Department of Ag., NC NACD Reps., NC Farm Bureau, Local Officials, Durham County Ag community and others.

As a result of the 1920's economic and agricultural devastation of the dust storms, Dr. Hugh Hammond Bennett, a North Carolina native now known as the 'Father of Soil Conservation', urged President Franklin D. Roosevelt and Congress to pass legislation. This legislation led to creation of the Soil Erosion Service and locally led conservation programs. As a way of delivering the technical assistance to local landowners, Soil and Water Conservation Districts were formed when President Roosevelt sent a letter to the nation's governors urging them to adopt the Standard State District law. Each state responded and passed such legislation. That same year North Carolina General Assembly passed Chapter 139 of the North Carolina General Statutes which allowed for Soil and Water Conservation Districts to be formed.

From March 22, 1939 to February 2, 1965 the Durham Soil and Water Conservation District was part of the multi-county Upper Neuse River Soil Conservation District; Durham, Granville, Orange, Person and Wake. On February 2, 1965 the Durham District filed appropriate papers with the Secretary of State Office and became an independent district.

Today, the Durham Soil and Water Conservation District is one of 96 conservation districts covering all of North Carolina. Each District is led by 5 elected and appointed citizens known as the District Board of Supervisors who provide leadership for local, voluntary stewardship of natural resources. Durham County is also served by Associated Board Members who voluntarily serve on the Board and provide a voice of leadership for Durham County citizens for the local, voluntary stewardship of natural resources. The Durham District's mission is 'to conserve, enhance and 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 need's. Today, the Durham Soil and Water Conservation District is a state and nationally recognized leader in natural resource conservation for its diverse and innovative programs.

SPONSORS: The District celebration of this significant milestone was sponsored by Bayer Crop Science, Durham County Farm Bureau, Civil & Environmental Consultants, Inc., Riverworks, Inc. and Page Farms.



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STREAM RESTORATION/STORMWATER PROJECTS

The Durham Soil and Water District received funding this year to restore approximately 3900 feet of stream on Mr. James Ward's property near the head waters of Falls Lake. The purpose of the project is three fold and includes: 1) conversion of 3900 feet of an unnamed tributary (UT) to Falls Lake from an eroding, degraded channel to a natural, stable system with excellent aquatic habitat, 2) reduction of sediment loading from a 303 (d) listed Falls Lake, and 3) establishment of a vegetated riparian buffer along the UT to Falls Lake Corridor which will be protected in perpetuity through a donated conservation easement. The Soil and Water Department will monitor this 9-acre easement for compliance in perpetuity. The project is divided into 2 phases. Phase 1 (1575 ft.) design and construction and the Phase 2 (2325 ft.) design will be funded with a Clean Water Management Trust Fund (CWMTF) grant (\$400,000) received last fall. Phase 2 construction will be funded with an Upper Neuse Clean Water Initiative (UNCWI) grant (\$360,000) that was received in June of this year (2016). The project will reduce the sediment delivery to Falls Lake by 968 tons while reducing the nitrogen and phosphorous load by 682 lbs. and 44 lbs., respectively.

The Durham Soil and Water Conservation District secured a third large grant (\$435,000) for the Southern High Stormwater/Stream Restoration project from the Environmental Enhancement Grant (EEG). This grant is administered through the Department of Justice with funds from the Smithfield Hog settlement. These funds will be utilized to design and construct Phase 2 of the campus project which will consist of a wetland cell for treatment of parking lot runoff and a reuse pond to irrigate the athletic fields. The projects goal is to improve water quality to Chunky Pike Creek, Little Lick Creek and Falls Lake by capturing and reducing stormwater flow, sediment and nutrients from entering watercourses. Also by capturing the runoff from the parking lots and reusing the



Construction on Southern High Project/Phase I- Summer 2016



Southern High- bio-retention basin



water on athletic fields, the schools will be reducing its dependency on potable water and saving the county \$15,000 annually. Phase 1 of the project began in July of this year (2016) with Phase 2 slated for the summer of 2017. Justin Sickle, a Durham Boy Scout, built the kiosk for the project at Southern High School for his Eagle Scout project.

Two future projects the District is working on are the Marbrey/Jackson restoration project and the Walker restoration project. Both of these projects are located in the head waters of Falls Lake. Applications to the Clean Water Management Trust Fund and Division of Water Resources have been submitted for both projects with the total price tag of \$1,259,050 for both projects.

The Marbrey/Jackson restoration project is experiencing channelization and straightening of the stream's channel as well as degradation from livestock stream access and timber harvesting. Upstream urbanization in the past has resulted in a deeply incised stream bed with eroding vertical banks and severe meander pattern. Additional urban development in this now vulnerable stream's watershed threatens to worsen a sediment pollution problem in Falls Lake. The purpose of this project is threefold and includes: 1) conversion of 3,045 linear feet of Panther Creek, a direct tributary to Falls Lake, from an eroding, degraded channel to a natural, stable system with excellent aquatic habitat, 2) reduction of sediment loading to a sediment-impaired 303(d) listed Falls Lake, and 3) establishment of vegetated riparian buffers along the Panther Creek Corridor, which will be protected in perpetuity through a permanent conservation easement. If funded, the project will reduce the nitrogen and phosphorous to Falls Lake by 529 lbs. and 34 lbs., respectively.

Continued on page 3

Stream Restoration/Stormwater-Continued from page 2



Pictured above: Walker restoration-(before)

The Walker restoration project is experiencing channelization and straightening of the stream channels as well as livestock stream access, powerline clearing, and past timber harvesting. Uncontrolled urbanization and stormwater have resulted in a deeply incised stream beds with eroding vertical banks. Additional urban development in this sensitive stream's watershed threatens to worsen a sediment pollution problem in Falls Lake.

Little Lick Creek and Falls Lake are listed on the State's Clean Water Act Section 303(d) list of impaired waters. The purpose of this project is threefold: 1) conversion of 2,200 linear feet of UTs to Little Lick Creek, a direct tributary to Little Lick Creek (LLC) just before LLC flows into Falls Lake; from eroding, degraded channels to a natural, stable systems with excellent aquatic habitat, 2) reduction of sediment loading to a sediment-impaired 303(d) listed LLC and Falls Lake, and 3) establishment of vegetated riparian buffers along the stream corridors, which will be protected in perpetuity through a permanent conservation easement. If funded, the project will reduce nitrogen and phosphorous to Falls Lake by 383 lbs. and 25 lbs., respectively.

AREA IV FARM FAMILY WINNER DURHAM COUNTY-WALLER FAMILY FARM

This year the Durham Soil and Water Conservation Districts recognized an outstanding conservation farm family who was taking the initiative to implement sound, innovative and cost-effective conservation techniques and additionally was actively involved in conservation education.

The Waller Family Farm excelled in the above criteria and is the 2016 Durham County Farm Family of the Year. After receiving the county's recognition the Waller Family Farm was awarded winners of the Area IV Farm Family competition, in which they were named best out of an eleven county area.



As an agritourist/pick-your-own strawberry operation, Waller Family Farm sees thousands of visitors a year, including hundreds of school children on field trips. The Wallers recognize the impact and perception their farm has on the public and always tries to insure that every visitor understands what a working farm is. 'Farmer

Mark', owner & operator of Waller Family Farm, is always willing to answer questions and educate others about farming and conservation. The Waller Family Farm is also a long-time participant in the Durham County Voluntary Ag District Program, in which farms pledge to keep their land undeveloped, preserving the rural heritage and natural resources of Durham County.



COST SHARE PROGRAMS

NC AGRICULTURAL COST-SHARE PROGRAM



As part of the NC Agricultural Cost-Share Program, the Durham County ACSP provides assistance to agricultural producers and landowners by providing technical, educational and/or financial assistance. The program is 100% voluntary on the part of the producer/landowner to help them improve the natural resources—air, soil, plant, animal and water—on their property by utilizing/ installing conservation BMPs. Participants can be reimbursed 75% of a predetermined average cost for each BMP installed, with the applicant responsible for the remaining 25% of the costs. In some situations, new or limited resource farmers can be eligible for up to 90% cost share. The BMPs improve the quality of the environment on the farm and off by contributing to the overall health of the greater watershed. Nutrient loss and soil erosion from cropland are a major concern to water quality downstream. It also affects the farm's productivity, thereby affecting the local economy in multiple ways.



Livestock exclusion fencing



Grassed waterway mid construction

The Durham County Agriculture Cost Share Assistance Program (ACSP) received \$45,379 from state appropriations for the conservation best management practices (BMPs) in fiscal year 2016. Another \$13,378 was refunded to the Durham County ACSP when a local farm with active BMPs was sold to development. This resulted in the District having \$58,757 to allocate for its locally led conservation program.

During the fiscal year, \$55,757 in funds were allocated to local Durham County producers/landowners for the following conservation BMPs; 2 Rooftop Runoff Systems, 12.8 acres of Cropland Conversion to Grass, 132.8 ac of Long-term No-Till, Grassed Waterways treating 11 acres of cropland and a Livestock Exclusion System that includes approximately 500 feet of livestock exclusion fencing, a heavy use area and an alternate watering system.



Future site of heavy use area

The BMPs will mitigate or prevent future losses of nutrients and soil from the farms, thereby improving overall water quality in Durham County. Estimates of reductions expected: 33,985 pounds per year of Nitrogen saved, 203.6 pounds of Phosphorus saved and 208.73 tons per year of Soil saved.

The District staff will be working closely with these producers over the next couple of years to provide technical assistance during the installation of the BMPs. Once completed, the District will monitor the BMPs for 10 years to ensure their function and continued use.

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NC AGRICULTURAL COST-SHARE SPOT CHECKS

To comply with state-mandated cost share program rules, the District Board of Supervisors and staff conduct annual spot checks of all active Agricultural Cost Share Program (ACSP) and Agriculture Water Resources Assistance Program (AgWRAP) contracts. Through a random selection process, 12% of ACSP and 67% AgWRAP contracts still under maintenance by the participating applicants or landowners were visited and evaluated in May 2016. District staff were accompanied by USDA NRCS District Conservationist, Matt Kinane, District Board Supervisor, Ray Eurquhart and Contract workers, Sarah Ludwig and Elizabeth Zander. During the spot checks it was determined that all sites were in compliance with the NC ACSP standards.

319 FALLS LAKE HORSE GRANT FUNDS



As a result of Falls Lake Watershed Rule, the NC Division of Soil and Water Conservation sought to launch a pilot BMP program aimed specifically at horse owners within the Falls Lake Watershed. Caught in the debate of what is “agriculture,” horses have been overlooked or ignored in the livestock/natural resource conservation area. Horse farms are often ineligible for state and federal conservation incentive programs to help them manage concerns like waste management and soil erosion. The pilot BMP project was funded in 2010 by a Non-Point Source Pollution Control Grant to a partnership of the NCDA&CS Division of Soil and Water Conservation, the North Carolina Horse Council, Sustainable Stables, LLC, and Soil and Water Conservation Districts in the Fall Lake Watershed, including the Durham SWCD. The grant provided financial and technical assistance to “equine operations” (horse farms) in the Falls Lake watershed for implementing BMPs that protect soil and water quality.

With grant funds expiring on December 31, 2015, the District and other project partners were busy in the fall of 2015 assisting the Durham County farms selected. In FY 2015 two farms were chosen to participate in the pilot, but were unable to begin the install of the BMPs until FY2016. A third farm was added to the pilot project in FY 16 due to unspent grant funds, bringing an additional \$5,977 in funds to Durham County for conservation. The third farm, Hope Reins, Inc., is a new therapeutic riding program in eastern Durham County. Like most horse farms, they were experiencing problems with excess animal waste and soil erosion, so a Heavy Use Area was installed to provide a stable surface with horse suitable materials to improve water quality.

By December 31, 2015, all 319 Falls Lake Horse Grant pilot project BMPs were installed. The grant funds assisting the 3 Durham County operations totaled \$37,836. The BMPs; 6 heavy use areas and 1 waste management system study will reduce soil erosion and animal waste pollution from washing into nearby surface waters, thereby improving downstream water quality.



heavy use area



Stock trails and heavy use area improvements

PIEDMONT COMMUNITY CONSERVATION COUNCIL

PCC is a regional nonprofit organization started in 1967 under the Resource Conservation and Development program through the USDA. PCC serves ten counties, including Durham County, implementing projects that further our communities' sustainability.



In fiscal year 2016, PCC partnered with the DSWCD on multiple grants that protect Durham's natural resources and support its local food system. On behalf of a stream restoration project along Panther Creek at the headwaters of Fall Lake, PCC submitted an application to the Clean Water Management Trust Fund for \$476,380 and to the Water Resources Development Project grant program for \$200,000. PCC submitted an application for \$30,000 to the Agricultural Development and Farmland Preservation Trust Fund for the purchase of a refrigerated truck, which would benefit many local farmers in getting their produce safely to market. PCC also submitted an application for \$60,000 to EPA's Urban Waters Small grants in order to complete the Green Roof project atop the county's agricultural building at 721 Foster Street. Finally, PCC will serve as an active project partner in DSWCD's recent submission for \$50,000 to the new Urban Agricultural Conservation Initiative grant program.



“The Durham District was awarded a \$22,000 grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund (ADFPTF) for the purchase of a No-Till Drill”.



NC AG Development & Farmland Preservation Trust Fund (ADFPTF) Grant

The Durham District was awarded a \$22,000 grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund (ADFPTF) for the purchase of a No-Till Drill. As part of the District’s new Conservation Equipment Rental Program, the drill will meet a growing need among Durham County and surrounding area farmers who want to seed or re-seed land but are financially unable to purchase a drill of their own. High demand for the few rental drills available resulted in frustration for local farmers and landowners.

In March the District purchased a Great Plains 706NT Drill with these grant funds. Thanks to a donation from the Durham County Farm Bureau, a small shed to house the drill and miscellaneous maintenance equipment/tools were also purchased. The drill will be housed at a local Durham County farm and available to producers through a rental program administered by the District. The rental rate for the drill will be \$12 per acre with a \$100 deposit. Interested renters can contact the District today to inquire about renting.

About No-Till

No-till farming is a way of planting crops or pasture without disturbing the soil through conventional tillage. No-till increases the amount of water that infiltrates into the soil, increases organic matter retention and improves the cycling of nutrients in the soil. It also reduces or eliminates soil erosion from crop fields. A huge benefit of no-tillage farming is improvement in soil health. It increases the amount and variety of life in and on the soil, making soils more resilient and capable of growing better quality crops. Farm operations that utilize No-Till farming are much more efficient and will often see a cost-savings in fuel and fertilizer usage quickly.

Voluntary Nutrient Reduction program (VNRP)

The VNRP is a Goal 4 Strategic plan initiative designed to educate and encourage homeowners to reduce fertilizer applications to their property by 40%. The program focus is to teach homeowners how to implement Best Management Practices and how to properly apply fertilizer to their home lawn. This education and outreach program strives to reduce nutrient loading from misapplication of nonfarm fertilizer into the Jordan and Falls reservoirs. Research conducted in Durham County in 2013 by a Duke University Graduate student concluded

“misapplication of fertilizer by homeowners could be contributing to excess nutrients being delivered 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.”

In fiscal year 2016 Durham SWCD staff conducted 44 meetings with Home Owners Associations, community organizations, schools and nonprofit organizations to discuss the VNRP and CCAP Programs. As a result of these meetings the staff made 270 individual site visits, developed 61 conservation plans and served 1,101 Durham County residents.

Did you know that what you put on here..... Can end up here?

Help Protect our Drinking Water
Sign the Voluntary Nutrient Reduction Program Pledge to reduce your fertilizer use; help the environment and our water supply!

Durham SWCD 919-560-0558 dswcd-gov/swcd
DURHAM SOIL & WATER
DIO
Durham County Government Goal 4 Environmental Stewardship

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 wrote 34 conservation plans that resulted in contracts for 48 BMPs on 34 sites during the fiscal year. The Durham SWCD Board allocated \$117,159 in cost share assistance to landowners for the following conservation BMPs during FY16 (plus two BMP repairs not itemized below):

- ◆ Streambank Stabilization: 8
- ◆ Rain Garden: 19
- ◆ Cistern: 10
- ◆ Impervious Conversion: 1
- ◆ Grassed Swale: 3
- ◆ Critical Area Planting: 3
- ◆ Stormwater Structural Conveyance: 2



Pictured above: Rain garden and cistern



700 gallon Cistern



BEFORE
streambank stabilization



AFTER
streambank stabilization



Pictured above: Rain garden and streambank stabilization

The funding sources for these projects include:

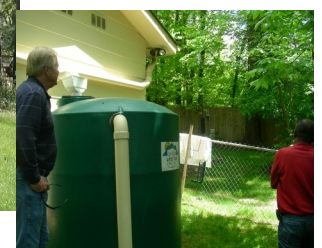
- NC Division of Soil and Water \$10,017
- EPA 319 Grant \$43,114
- Environmental Enhancement Grant, \$ 6,472
- Durham County ISIP \$20,000
- Duke Energy Water Resources Fund \$ 37,251
- City of Durham Storm Water Services \$ 216

The BMPs for these sites include rain gardens, cisterns, streambank stabilization, impervious conversion to grass and critical area and 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 benefits to be attained.



Community Conservation Cost-Share Spot Checks

District Board Supervisor Ray Eurquhart conducted the annual spot check on CCAP sites on April 30, 2015 with the District staff. Each year, 5% of sites are randomly selected for spot checks of cost share contracts. In 2016, 14 sites were 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 14 sites were in compliance and one site required maintenance.



CCAP GRANTS RECEIVED

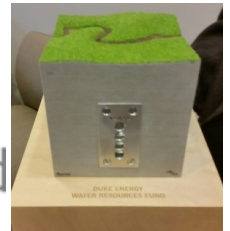
Durham Receives \$100,000 of funding for the Community Conservation Assistance Program (CCAP) from the EPA 319 Program

The Durham District was awarded \$100,000 from the EPA 319 grant program for proposed CCAP cost share projects for fiscal years 2017 to 2019 in the Jordan & Falls Lake watersheds, specifically for project implementation in the Third Fork Creek, Northeast Creek and Ellerbe Creek sub watersheds. The funds will support installation of approximately 40 to 45 BMP's.

Durham Soil & Water Conservation District (DSWCD) to benefit the Cape Fear waterways with \$100,000 grant from Duke Energy Foundation



Pictured above: Supervisor, Danielle Adams receiving the \$100,000 grant award from Duke Energy/Water Resources Fund



Durham Soil & Water Conservation District received a \$100,000 Water Resources Fund grant December 2015 to continue its commitment to protecting and enhancing regional waterways and the environment.

“This grant will help us better serve our community for years to come,” said Danielle Adams, Vice Chair DSWCD Board. “We thank Duke Energy for its support and are eager to launch this project so that we can continue serving our local waterways.”

Durham & Wake Soil and Water Conservation Districts have partnered to use the grant to implement the Community Conservation Assistance Program (CCAP) for BMP installation in the Jordan Lake Watershed, specifically in the Upper New Hope Creek sub watersheds. CCAP is a voluntary, incentive-based program designed to improve water quality through the installation of various best management practices (BMPs) on urban, suburban and rural lands not directly involved with agriculture production. Eligible landowners may include homeowners, businesses, schools, parks and publicly owned lands. CCAP educates landowners on water quality, stormwater management and retrofit practices to treat stormwater runoff. Interested landowners apply for financial and technical assistance for the installation of BMPs to protect water quality.

“The Water Resources Fund is an investment in healthier waterways and a better quality of life for communities,” said Indira Everett, Duke Energy district manager. “We look forward to our partnership with Durham Soil & Water Conservation District and the impact this grant will have in the Jordan Lake Watershed.”

The Water Resources Fund is a \$10 million commitment from Duke Energy to improve water quality, quantity and conservation in the Carolinas and neighboring regions.

Goal 4 Impaired Stream Improvement Program (ISIP)

The ISIP pilot program seeks to implement conservation best management practices on streams identified as impaired in low income neighborhoods. The projects target streams with low performance scores on the DCO Water Quality Measurement Tool (Strategic Plan Goal 4 Measurement tool). Several different conservation best management practices can be utilized in Durham County to improve the health of these urban streams; stream-bank stabilization, critical area planting, rain gardens and riparian buffers are the BMP's proposed for this program. This program is primarily aligned with Goal 4 (Environmental Stewardship), Objectives 4.1 4.3 (Improve Water Quality), 4.4 (Change behaviors to achieve environmental quality) and 4.5 (Protect Open spaces and preserve rural character).

Landowners with impaired streams, who self- certify as low income, are eligible for 100% cost share assistance in installation of BMP through this program. A 'Limited Resource Self-Certification' form has been drafted for use with this program based on the 2014 Income Limits for Durham-Chapel Hill, NC HUD Metro FMR Area according to the U.S. Department of Housing and Urban Development.

The Durham County Soil and Water Conservation District entered into two contracts with the qualifying landowner(s) allowing the conservation best management practice to be installed on their property. The contracts specified the maintenance requirements of the practice once construction is completed and also specified a 5 year lifespan of the BMP that the landowner is contractually responsible to maintain. The Durham County Soil and Water Conservation Department contracted with CFB Contracting a certified, insured environmental contractor to implement the BMP's, following the design provided by the DSWCD staff for \$20,000 .

The ISIP funding was allocated by the Durham Soil & Water Conservation District Board on February 9, 2015 to two landowners that qualified for the program. There was one adjacent landowners that did not qualify for the program but are participating in the Community Conservation Assistance Program and receiving 75 percent reimbursement. The \$20,000 of Durham County Strategic funds were used in conjunction with \$5000 of EPA 319 grant funds, \$5000 of Duke Energy Water Resource Funds and \$1320 of individual funds from the adjacent landowners as the 25% match. In total the project cost is \$31,320 on 3 parcels.

The two landowners receiving the 100% financing include:

- ◆ One landowner lives on Dunhill Dr., Third Fork Creek the Jordan watershed.
- ◆ The second landowner lives on Amberley Drive, Goose Creek, Falls watershed.

Best Management Practices

The three contracts stabilized 310' of streambank, installed 2 rain gardens and 90 linear ft. of grass swale. These BMP's will reduce the nutrients and sediment delivery to two impaired waterways.

The quantities of the reductions include:

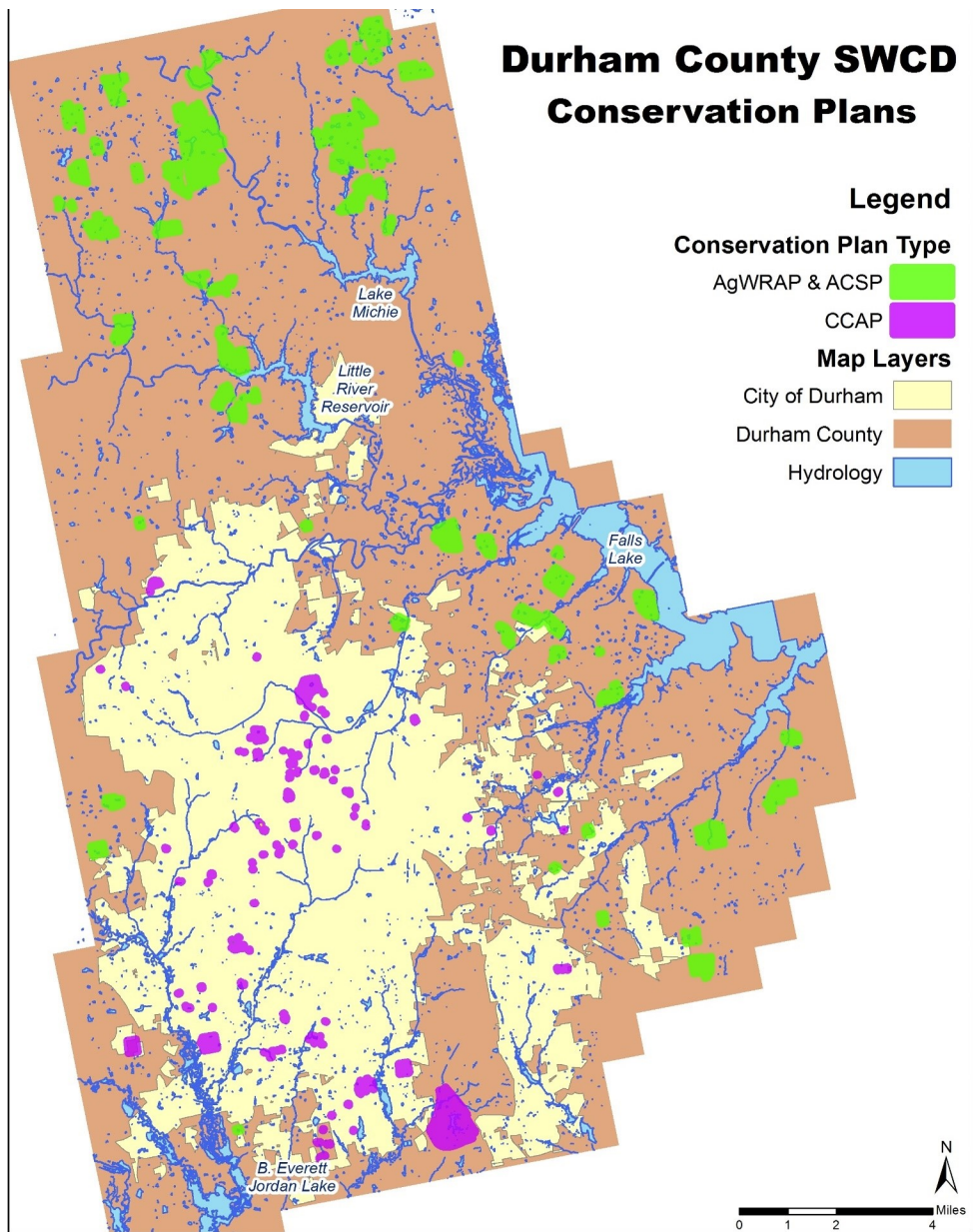
Category	Reductions
Total Soil Loss	51.85
Lbs. of Nitrogen	12.4
Lbs. of Phosphorus	3.4
Acres Impervious Treated	1.3

In Addition to the Water Quality Benefits there were significant educational and Job training skills delivered to at risk youth in the Durham community:

Southern School of Energy & Sustainability

Eleven students received 66 hours of work experience installing two rain gardens. The SSES Occupational Course of Study Department received \$1000 of income for the installation of the rain gardens.

'New' PracticeKeeper Software Live



In February 2016, Durham County Soil and Water Conservation District became the first and only District in NC to launch a new software called PracticeKeeper. This software will assist the District with the design and planning of conservation plans for its multiple natural resource assistance programs. The software purchase was made possible by a grant received in 2014. District staff spent 2 days last August in training on the software system. The rest of the summer, fall and early winter were spent testing the software, making necessary updates and practicing with it.

Designed for soil and water districts, PracticeKeeper is a unique software that interfaces with mapping software ArcGIS to allow the user to spatially represent, or map out, conservation plans and best management practices that are developed for a particular landowner's natural resource concerns. The spatial interface allows the user to identify an area for the conservation plan, in which different types of BMP's can be selected and drawn. It also provides an automatic query of the soil types, watershed, parcel ID, and addresses

within the area selected for the conservation plan. Once a plan is created, PracticeKeeper links the spatial data to an internet database which allows the user to enter additional information about the conservation plan such as nutrient and sediment removal rates, total area treated, contract approval dates, participant information, site visits, and even upload pictures and files. This database not only becomes represented in ArcGIS, but can also be exported to Microsoft Excel for further data management.

This new software will allow the department to centralize record keeping and streamline data acquisition across all programs, and even allow for onsite creation of plans and BMP's when using a mobile device in the field. In March 2016, Sarah Ludwig-Monty joined the District as a contractor to help create the PracticeKeeper database. Sarah has a Master's in Environmental Management from Duke University, where she specialized in watershed protection and geospatial analyses. Sarah has been working on creating conservation plans within PracticeKeeper for every CCAP, AgWRAP and ACSP contract implemented by the District within the past 10 years. To date she has created over 250 conservation plans and about 450 BMP's using PracticeKeeper.

Farmland Protection

Durham Farm Food Network



Pictured above: DFFN meeting held January 22, 2016

The Durham Farm Food Network (DFFN) is a grass roots, county-wide collaborative group of diverse, committed, and engaged residents and organizations. There are over 400 members of Durham County that have formed a Food Policy Council. They have formed four action circles Food Security & Food Justice, Farming & Natural Resources, Health and Economy. Pictured below is a meeting held January 22, 2016. The Durham District staff have been serving on the task force to assist the DFFN leadership with the formation of the organization by sharing information of active government strategies that are currently being implemented. Also advising the Farming & Natural Resources circle members on current state, federal and local groups that are working to protect Durham County natural resources and expand agriculture opportunities for new and beginning farmers.



Gap Training

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.

On April 6, 2016, a Post-Harvest Handling and Produce Grading workshop was conducted at Bull City Cool. The workshop had 13 farmers present and three buyers for local and national food chains. The group learned how to grade produce and package to ensure safe delivery to wholesalers and direct retail markets. The farmers were also able to network with the potential buyers and discuss product pricing and future contracts.

This is the third workshop sponsored by the Durham Farmland Protection Advisory Board to help Durham producers meet the new federal guidelines and open new institutional markets for Durham grown products such as the Durham Public Schools and the Durham County Detention facility.



Northeast Creek Streamwatch Receives the Durham County Urban Conservationist Award

The Urban Conservationist of the Year Award recognizes any individual, organization or corporation responsible for a conservation project in an urban setting, providing outstanding leadership and achievement in conservation. The 2016 Durham SWCD Urban Conservationist of the Year Award was recently presented to Northeast Creek Streamwatch. Northeast Creek Streamwatch is an organization of volunteers who coordinate individual and group activities dedicated to the natural and cultural heritage of Northeast Creek. For several years the Northeast Creek Streamwatch has participated in stream clean-ups, water quality monitoring, public education and more. Most recently they hosted a workshop titled “Upstream Neighbors/ Downstream Neighbors project” in which the District was a key speaker. Learn more about them at www.northeastcreek.org



Pictured above: Northeast Creek volunteers receiving the 2016 Durham Urban Conservationist Award—April 26, 2016

Agriculture Development & Farmland Preservation Plan

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Breakfast Series

December 10, 2015 Breakfast Series: Full Steam Brewery The group discussed the economic opportunities available regarding supplying distilleries and breweries with grain, hops and other agricultural commodities. There were 45 people served.



November 12, 2015 Breakfast series: Beef cattle production and pasture management. Johnny Rogers with NCSU Cooperative Extension and a rancher gave a presentation of pasture management and proper rotation and grazing. There were 25 people served.



January 21, 2016 Breakfast Series: The Bull City Cool Food Hub hosted a panel discussion on Good Agricultural Practices and Economic Opportunities. The farmers on the panel included Earl Brooks, *Sunrise Market Farm*, Gary Wise, *Wise Farm*, & Cecilia Redding, *Down 2 Earth Farm* (D2E) and James Cooper, with the *Carolina Farm Stewardship Association*. After the panel discussion there was a fast track to Good Agricultural Practices (GAP) certification workshop in which 6 farmers received a training packet and template for the GAP audit process. There were 64 people served.



February 18, 2016 Breakfast Series: The group visited the Piedmont Food and Agriculture Processing center in Hillsborough. The tour was led by Eric Hallman the Executive Director of the processing center. There were 22 people served.

FY-2016 USDA-NRCS CONSERVATION

Agricultural Conservation Easement Program (ACEP) continues to be active in Durham County. During FY16, an additional easement of 32 acres of farmland, closed on property in Durham. There are now 11 working farms, protecting nearly 2000 acres, in permanent conservation easements. The strong partnership that exists between the Durham Soil and Water Conservation District, the Durham County Open Space, 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.



Pictured above: Durham County FRPP

This partnership has continued to seek out high quality agricultural land and opportunities to secure funding to purchase permanent conservation easements on these agriculture working lands. ACEP 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.



Pictured above: Spot-check of pond

Continued on page 15



Bionomic Educational Training Center (BETC)

Source Water Protection Award of Excellence

The Durham Soil and Water Conservation District received the 2016 NC Source Water Protection Education and Leadership Award from the NC Water Resources Research Institute (WRRI)/NC Source Water Collaborative. It was awarded for the District's Bionomic Education Training Center (BETC) at the Water Resources Research Institute Annual Conference on March 17th.

The Durham District is a two-time winner of a NC Source Water Protection Award, having won an Excellence Award in 2015 for its Upper Sandy Creek Watershed & Stream Restoration Project at Duke. Accepting the 2016 award was Associate Supervisor David Harris and Ag Development and Environmental Services Manager Mike Dupree. District Director Eddie Culberson and Natural Resources Coordinator Jennifer Brooks were also in attendance.



Associate Supervisor David Harris and Mike Dupree accepted the award.

The Southern High Stormwater Project & BETC Agribusiness was shared with Members of the Triangle Council of Government

On August 27, 2015, the Durham Soil & Water District highlighted the success of the projects at Southern High at the quarterly meeting of the Triangle J Council of Governments (TJCOG) Water Resources Program. The Water Resource Program leverages multiple partnerships and programs within the region to help manage water quality and supply in the Jordan and Neuse River basins. City and county leaders from 16 municipalities attended the presentation and learned about the Southern High School Bionomic Education Training Center (BETC) Agribusiness and stormwater project.

The North Carolina Association of County Commissioners Environmental Committee & BETC

On January 28, 2016, the Durham District shared the success of the Southern High BETC program with the NC Association of County Commissioners Environmental Committee (made up of 16 County Commissioners from ten counties). The presentation highlighted the stormwater curricula developed by the Durham District for middle and high school students to enhance STEM skills. This curricula, which was created by the Durham District, has been approved by the North Carolina Department of Public Instruction and is available to all teachers on the North Carolina Canvas website.

Durham County-DPS Team Presents Case Study Strategic Goal: Environmental Stewardship

Nationally, Durham County's Bionomic Education Training Center (BETC) program was selected to be a presenter at the 2016 joint Transforming Local Government (TLG) and League of Minnesota Cities Conference. On June 15th a team from the Durham County Soil and Water Conservation District and Durham Public Schools shared experiences implementing the Nationally-recognized award winning water quality laboratory and agribusiness at Southern High School. Soil and Water Conservation District employee Mike Dupree, Soil and Water Supervisor Danielle Adams and Southern teachers Len Curington and Amy Jenkins presented the BETC program to 70 conference attendees from across the country. The program was selected out of over 60 case studies considered and was identified as meeting the highest criteria and highest overall ratings for the International Conference in the twin cities.



Pictured above: Southern High School teachers Len Curington and Amy Jenkins presenting the BETC initiative at the Alliance for innovation Conference.

Bionomic Educational Training Center – *cont. from page 13*

Stormwater Managers from 11 Counties hear about the BETC program

On June 2, 2016, the Durham District shared the BETC Agribusiness concept and stormwater curricula with 18 stormwater managers from 11 counties. The presentation highlighted the 5-year track record of the Southern High BETC Agribusiness, and the group participated in a role-play simulation demonstrating how the BETC program tackles the following three universal problems for communities: poor water quality, poor performing schools and underserved unemployed youth.

BETC Summer Intern Program

The Bionomic Education Training Center (BETC; pronounced “Betsey”) is the result of an initial \$30,714 grant obtained by the Durham District in 2011 to pilot the program at Southern School of Energy and Sustainability and help students understand Bionomics (the relationship of oneself and the environment) and the impact of urban land use on water quality. BETC introduces new technology and provides school faculty with pertinent curricula and experiential learning opportunities for their students, including data-collection and scientific methodology, while demonstrating the relevance of classroom science and math instruction to teachers and students.

Currently, 17 students and five teachers are working for six weeks to install Green infrastructure at three schools. The teachers and students are installing 7 rain gardens and 2 critical area plantings at Jordan High School, Lowe’s Grove Middle School and Morehead Montessori Elementary. The teachers are receiving extended employment from the Durham Public Schools Career-Technical Education Department, and the students are receiving \$8.25 an hour, 30 hours a week for 6 weeks, as part of the Durham Youthworks intern program. This means students and teachers will work 3,960 hours this summer helping to im-



Pictured left: *The Southern High team were visited at Lowe’s Grove Middle School by Durham County Commissioner, Ellen Reckhow and Mayor, Bill Bell.*

School	Duke Energy Grant	Cost share from PTA	Total
Jordan	\$5000	\$1250	\$6250
Lowe’s Grove	\$5000	\$1250	\$6250
Morehead Montessori	\$1053	\$ 263	\$1316
Total	\$11,053	\$2763	\$13,816

prove school campuses and Durham’s water quality.

This program is possible because of the partnership developed between Durham Public Schools and the Durham District Board of Supervisors. The Executive Director of Maintenance, Kenneth Barnes, and his staff, Rick

Sheldahl Director of Career & Technical Education working with Durham Soil and Water staff and the three school administrators of the three schools and the schools’ PTA leaders. The collaboration of staff and the sharing of PTA financial resources in concert with funding from the Duke Energy Water Resource Fund will lead to the best possible outcomes for all of the parties concerned and for the Durham community as a whole.

A BETC STEM Training Workshop- was conducted on April 6th for 16 teachers from multiple counties at the North Carolina School of Science & Mathematics (NCSSM). The workshop focused on the BETC program’s stormwater curriculum that was created for the State of North Carolina Department of Public Instruction. The curriculum introduces the engineering principles of designing and installing rain gardens and cisterns. The teachers spent the morning reviewing the BETC curriculum and then toured three rain garden projects that have been engineered & installed by approximately 28 students from NCSSM’s Accept the Greener Challenge Club.



UL Innovative Education Award

The UL Innovative Education Award serves to award non-profits that motivate K-12 schools through E-STEM programming and education about the environment. This year the BETC program received national attention for its achievements by the North American Association for Environmental Education (NAAEE). In 2016, the BETC program was selected from over 100 applicants and was one of 12 finalist from across North America.

The program received the following comments from the judges:

“The judging panel saw BETC’s key innovation to be its ability to leverage public funds for conservation, earned income for schools, and sustainability improvements for local homeowners. Judges appreciated BETC’s scalable model that had a strong foundation and well-conceived incremental building blocks to expand the program; its solid foundation including a teacher-training that enabled program materials and curriculum to reach more students; solid partnerships with public organizations, government, and additional schools; and successful implementation in both high-achieving and lower-resourced schools. The panel also admired that BETC benefits institutions, homeowners, and students: schools earn revenue and students gain workforce and public speaking skills, while homeowners increase their knowledge of stormwater runoff and sustainability. Finally, judges felt that BETC was exemplary in how programs inspire youth to participate in local environmental challenges in real-world service and solutions for homeowners in Durham, NC.”

FY-2016 USDA-NRCS Conservation- *continued from page 12*

The Environmental Quality Incentives Program, EQIP, continues to provide financial assistance to address resources concerns and issues in Durham County. During FY16 Durham increased submission of eligible applications by 50 percent. Durham County had two applications funded in July 2015, providing protection to 37 acres of farmland encumbering approximately \$7,917.00 in financial assistance. This past May 2016, an additional \$20,412.00 was obligated to two more EQIP applications. These two applications will provide natural resource enhancement to another 38 acres in Durham County.



Animal Trail and Walkway under construction



A buffer of Black-eyed Susan's along a hay field

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.



No-tilled soybeans in small grain

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

EDUCATION

BIG SWEEP



Hurricane Joaquin put a damper on the 2015 Big Sweep with several days of rain. Even though Big Sweep stretches out over a two month period of September and October, the biggest participation occurs right around the 1st Saturday of October, the official “Big Sweep” day. We began with 23 groups registered to clean up various sites around Durham County, with 10 groups registered for clean ups on the 1st Saturday, Oct 3rd. Of those only 2 groups ended up battling the wind and rain to collect trash. In the end 15 groups, with about 260 volunteers, cleaned up 16 tires, 42 bags of recyclables, 200 bags of trash and 955 pounds of various trash items too big for bags. Resulting in an estimated 6,235 pounds of trash collected from throughout the watershed and community.



The 2015 Durham Big Sweep was again coordinated by a partnership between the Durham County Soil and Water Conservation District, the City of Durham Public Works Department Storm-water and GIS Services Division, and Keep Durham Beautiful, Inc., with the support from the Durham County Department of General Services and the City of Durham Neighborhood Improvement Services Department, which picked up trash and recyclables at each cleanup site.



Durham Big Sweep is an annual environmental service event and the Durham SWCD has been the coordinating agency for it for over 16 years now. Durham residents, organizations, and groups interested in receiving information about volunteering for the 2016 Durham Big Sweep can find out more on the Durham Big Sweep website at <http://Bit.ly/DurhamBigSweep> or by contacting the Durham SWCD.

Conservation Sales

FY2016– the district sold the following items:

All proceeds go towards Environmental Education



Moby Rain Barrels
Sold-12



Ivy Rain Barrels
Sold- 9



Bluebird Houses
Sold- 1



Compost Bins
Sold- 3



Wildflower Seeds
Sold- 1



Aqua Shade (Pond Dye)
Sold- 3

ENVIROTHON



On March 18, 2016 District staff and Board members volunteered at the Area IV Envirothon competition, held in Nash County at Rosehill Farm. The area contest is the qualifying event for the statewide NC Envirothon. The top 7 scoring teams from each division, high school and middle school, qualify to advance on to the NC Envirothon event.

Six Durham County high school teams competed on this day, testing their knowledge of natural resources; The 'Kewl Kidz' and the '(Not So) Kewl Kidz' from Northern High School, the 'The Bears' and the 'The Dandy-lions' from Voyager Academy, the 'Fighting Ferns' and the 'Killer Kudzu' from the NC School of Science and Math (NCSSM) and the 'Sassyfrass' team from the Durham Co 4-H Envirothon Club.



Durham's teams, and 45 other high school and middle school teams from an eleven county area, were tested on their knowledge of soils, aquatics, wildlife, forestry and current environmental issues. The tests incorporate book-learned knowledge and hands-on practical skills. Some of the hands-on test questions included determining the amount of usable lumber in a tree for harvest, the age determination of a tree, the identification of aquatic insects to determine water quality, the identification of various NC wildlife species, use of the Nash Co Soil Survey to determine land management practices and more.



The tests scores were compiled and teams were ranked according to their scores. Durham had two teams place in the top 7 of the high school division, thereby advancing them on to compete at the NC Envirothon state-wide event. The 'Fighting Ferns' team placed 6th and the 'Killer Kudzu' team took home the 2nd place win for Durham County.



On April 29-30, 2016 these 2 teams traveled to Cedar Rock Park in Burlington, NC to compete in the NC Envirothon, competing against teams from across North Carolina. In addition to the 5 standard testing areas of soils, forestry, wildlife, aquatics and current environmental issues, high school teams have an added component, the Oral Presentation. The Oral Presentation component is a mock environmental scenario that teams have to brainstorm a solution to and present to a panel of judges for scoring. This part of the event utilizes all the students have learned in all five areas to problem-solve a real-life issue.

After 2 days of training, testing and presentations the Durham County 'Fighting Ferns' placed 22nd overall out of 50 teams and the 'Killer Kudzu' placed 13th overall and tied for 1st place at the wildlife station.

The Envirothon program 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 three to 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.

Please call the Durham SWCD at 919-560-0558, visit www.ncarea4envirothon.org and www.ncenvirothon.org or follow the NC Envirothon on Facebook at www.facebook.com/NCEnvirothon to learn more about the Envirothon program.

Education

Resource Conservation Workshop

The Durham District awarded scholarships to 2 local students that allowed them to attend the 2016 NC Resource Conservation Workshop at NC State University, June 26-July 1, 2016. The Resource Conservation Workshop (RCW) is a weeklong camp for high school students who are interested in conservation, the environment, or our state's natural resources. The camp is sponsored by the NC Division of Soil and Water Conservation and the NC Association of Soil and Water Conservation Districts. The RCW targets potential future environmental professionals by giving students a first-hand look at a wide array of conservation careers that they may not have known about.



During the 2016 RCW, Durham County was represented by Maddie Sauer from the NC School of Science and Math and Taylor Brinkley from Voyager Academy. During the week, scientists, foresters, biologists, wetland specialists, wildlife experts and engineers provided classroom instruction and outdoor study in environmental sciences. Students also received information and insight into college degrees and careers in natural resource management. Study locations for the workshop included N.C. State University and the University's Lake Wheeler Research Farm, Clemmons Educational State Forest and Falls Lake State Recreation Area.

Environmental Field Days



Our Environmental Education Field Days event is traditionally held towards the beginning of October, but Hurricane Joaquin in Oct 2015 forced us to cancel. However, instead of cancelling outright, the schools were so eager for the opportunity, we decided to try to reschedule for April 2016. A damp spring, again made holding the event outdoors difficult, but with a revised schedule we were able to host two schools at the District's Dr. Roberts Environmental Education Park in Bahama, NC; RN Harris Elementary School and Eastway Elementary.

The 160 students, plus teachers, volunteers from NC Central university and parents were able to meet various resource professionals, participated in hands-on activities and learned about the environment. The Durham Soil and Water Conservation District, in partnership with various County, City and State departments as well as local non-profits, presented a variety of topics to the groups such as soil quality, climate change, water quality, plant ID, wildlife identification, recycling, and the always popular forest ranger demonstration show & tell.

Presenters at this year's Field Days included the Durham Soil and Water Conservation District, City of Durham Water Management, City of Durham Stormwater Services, the Durham County Forest Services and other local environmental educators. The event was sponsored by the Durham Soil and Water Conservation District and Durham County Government.



EDUCATION



Teacher of the Year

To spotlight the amazing conservation education work of Durham County teachers, the District Board recognizes outstanding individuals &/or groups with a Durham County Outstanding Teacher of the Year in Environmental Education Award. To be eligible, educators must be teaching full time in the classroom and be personally responsible for utilizing a conservation education program, shown concern, scope, and originality by integrating environmental education into his/her curriculum and provide a positive environmental role model for their students.



The 2016 Outstanding Teacher of the Year Award went to Voyager Academy teacher Meghan Sauer. Ms. Sauer teaches AP Earth and Environmental Science, where she leads hands-on experiential studies with her students, encouraging them to learn by experiencing the world not just reading about it. Through her guidance, students have studied water quality on Voyager's campus, identifying invasive alligator weed in the campus' wetland pond. She has led the class in the creation of an Outdoor Learning Classroom. Ms. Sauer also led her students to participate in the NC Envirothon for the first time, learning hands-on skills in forestry, aquatics, wildlife and soils/land management. She plans to continue participating in the NC Envirothon next year with her students by incorporating it into her classroom curriculum.



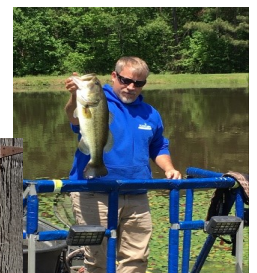
This award is part of a state-wide award program sponsored by the NC Association of Soil and Water Conservation Districts. The District will be submitting Ms. Sauer for consideration for the NC Outstanding Conservation Teacher of the Year. If awarded, Ms. Sauer will be presented the award at the Associations Annual Meeting in January of 2017.

Pond Clinic

On Saturday, May 7, 2016 the Durham & Orange Soil and Water Conservation Districts held a joint pond clinic at the beautiful Blackwood Farm Park in Orange County. Approximately 78 people attended this session to gain more knowledge on construction, maintenance, fish production and wildlife found around a pond. Those in attendance also learned about the important role ponds play in water quality and how they qualify as a best management practice (BMP). The highlight of the event was the shock boat demonstration where an analysis is conducted to check the health and population balance of the fish in the pond. Foster Lake and Pond Management, Biscuitville of Mebane, Durham Farm Bureau, Durham Soil and Water Conservation District, Orange Soil and Water Conservation District and Orange County DEPR (Department of Environment, Agriculture, Park and Recreation) helped sponsor the event. The District staff received positive feedback from the those in attendance.



Pictured above: fishing tournament



Shock boat



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)

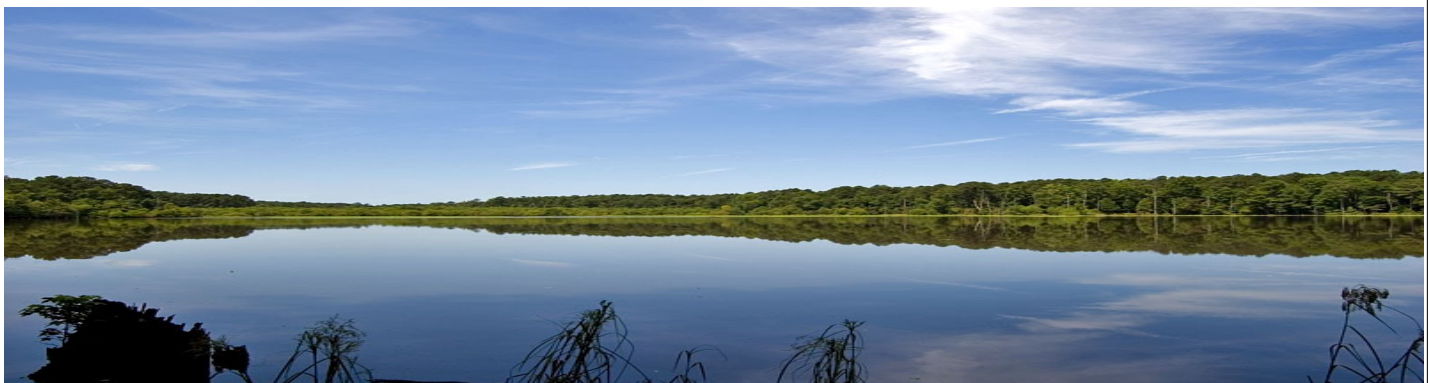
The Durham Soil and Water Conservation District staff and the LAC are required to complete the following tasks:

- Register all agriculture operations in the watershed. The registration forms are available at the Durham district office or online. To date, 57 agriculture operations have registered in Durham County, which is approximately 23% of the estimated total of operations according to the agricultural statistics. 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 will be implemented by enrolled operations; estimated nitrogen and phosphorus loading reductions; schedule for BMP implementation; operation and maintenance requirements.

In FY 2016, DSWCD staff managed two contractors who assisted with the initial screening of PUV Ag parcels. During the site visit the contractors conducted an interview with the landowner and completed a buffer evaluation. This process is necessary in order to complete the nutrient control strategy, specifically the BMP design, estimated reductions, the schedule of BMP's implementation and the operation and maintenance requirements. All of this has been compiled and tracked in the Practice Keeper software package. The work completed to date indicated:

1. Of the 419 Agricultural Land parcels reviewed, 229 of them had horses and other livestock. 54.6%
2. Total percentage of parcels that have Blue Line Streams (as identified by Go Maps): $196/419 = 47\%$
3. Total percentage of Equine parcels with Blue Line Streams: $103/229 = 45\%$
4. Total percentage of parcels with Blue Line Streams that are already in compliance: $71/103 = 69\%$

Annual reports The Durham LAC met on April 16, 2016 to compile the Neuse report as required. The crop acres and nutrients applied were submitted to the Division of Soil & Water and will be reported to the Watershed Oversight Committee in the fall of 2016. Since the baseline year of 2006 the Durham Ag community has reduced the amount of estimated edge of field nitrogen losses by 82%.



Conservation Contest



During the 2015-2016 school year, the Durham Soil and Water Conservation District sponsored 5 different conservation education contests for students in Durham County as follows: 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 this year was ‘We All Live in a Watershed’.

Our annual Awards Celebration was held on Tuesday, April 26th, at the Agricultural Building. The 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 to an area-level contest, where we had a number of Durham entries place and take prizes.

POSTER: 6th Grade

1st place – Faith Murray
School: Voyager Academy
Teacher: Carrie Miller
Principal: Gwen Johnson

2nd place – Isabella Anderson
School: Voyager Academy
Teacher: Carrie Miller

Pictured left:
1st Place Durham
County 6th Grade
poster winner
and
1st place Regional
Contest Winner
(NC Area IV Association of Soil & Water Conservation Districts)

POSTER: 4th Grade

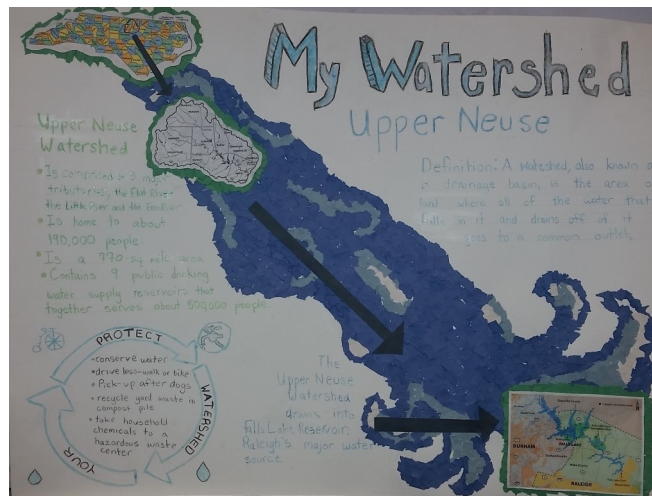
1st place – Kacy Fletche
School: Southview Academy
Teacher: Elaine Fletcher

POSTER: 5th Grade

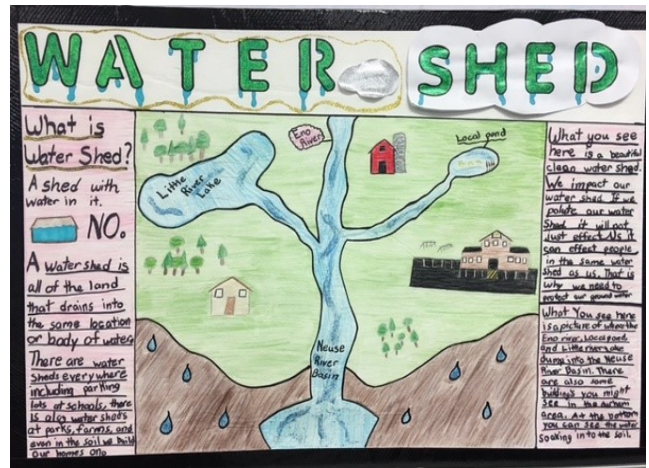
1st place – Eli Konvalinka
School: Mangum Elementary
Teacher: Beverly Clark
Principal: Karen Kellett

2nd place – Owen Stirrup

School: Mangum Elem.
Teacher: Beverly Clark



Pictured left:
1st Place 5th
Grade poster



SLIDESHOW: 6th Grade

1st place – Riley Fernandez

School: Voyager Academ

Teacher: Carrie Mille

Principal: Gwen Johnson

2nd place – Jayden Matthew Livan

School: Voyager Academ

Teacher: Carrie Miller

Principal: Gwen Johnson



April 26, 2016– Annual Awards Celebration

PUBLIC SPEAKING: 8th Grade

1st place – Sarah Tolman

School: Rogers Herr MS

Principal: Kecia Rogers

2nd place – Kelsey Fletcher

School: Southview Academy

Teacher: Elaine Fletcher



COMPUTER DESIGNED POSTER 9th Grade

1st place – Keith Gibbs

School: Josephine Dobbs

Clement Early

College High School

Teacher: Marjorie light

2nd place - Aubrey Fletcher

School: Southview Academy

Teacher: Elaine Fletchers



Pictured above:

- ◆ 1st Place Durham County 9th Grade Computer Designed Poster winner
- ◆ 1st place Regional Contest Winner (NC Area IV Association of Soil & Water Conservation Districts)
- ◆ 2nd place State Contest Winner (NC Association of Soil & Water)

ESSAY: 6th Grade

1st place – Esther Adesina

School: Voyager Academy

Teacher: Carrie Miller

Principal: Gwen Johnson

2nd place – Zachary Zilles

School: Voyager Academy

Teacher: Carrie Miller

BOOKMARK

This past Spring the District held its annual bookmark contest for K – 2nd graders with the theme of 'Birds and Butterflies'. 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. The 2nd place winners received a certificate and 1 laminated copy of their bookmark.

Kindergarten

1st place

Adriana Torres



Second Grade

1st place

Tony Smith



First Grade

1st place

Jolee Mangum



First Grade

2nd place

Raina Williams

Second Grade

2nd place

Tony Smith

New Employee

Heather Dutra joined the Durham Soil & Water Conservation District as a Watershed Conservationist in December 2015. She assists citizens with erosion and drainage issues, designs stormwater best management practices (BMPs), and administers cost-share for BMP installation through the Community Conservation Assistance Program (CCAP). She previously served as an NPDES Program Specialist and Community Restoration Coordinator for Frederick County, Maryland's Office of Sustainability & Environmental Resources. Heather received her Bachelor's degree in Environmental Science from the University of Virginia and is a certified Project Management Professional and ISA Arborist.



Contractors

Elizabeth Zander is working as a contractor with Durham County Soil and Water to survey and inventory all agricultural operations within Durham County. She has her Masters in Environmental Management from Duke University and serves as the Executive Director for the Piedmont Conservation Council, Inc.



Sarah Ludwig-Monty is working as a contractor with Durham County Soil and Water to help enter data into their new software, Practice Keeper. She has a Masters of Environmental Management in Water Resources from Duke University.



Durham SWCD Hosted Area IV Spring Meeting



On February 25, 2016 Durham SWCD hosted the Spring meeting for Area IV Soil and Water Conservation Districts. The meeting was held at the Frontier Building in RTP. Area IV Chair, Danielle Adams called the meeting to order, and Brenda Howerton, Vice Chairman of the Durham County Board of Commissioners, provided

the welcome. There are eleven counties that make up Area IV: Durham, Granville, Wake, Franklin, Wilson, Nash, Vance, Edgecombe, Halifax, Warren and Johnston.





Soil & Water

MONTHLY NEWSPAPER ARTICLES

Have you seen our monthly column? The District has published a monthly article in the Durham Herald Sun since 2013. Readers can find our article on the 3rd Sunday issue each month. Topics range from District happenings to local/state environmental issues to seasonal nature-related conservation information. The District would like to thank the Durham Herald Sun for giving us this opportunity to be a voice for conservation.

**Interested in joining
our e-mail list?**

Email:
LMAROCHAK@dconc.gov

DURHAM SWCD SUPERVISORS

Talmage Layton – Chairman
Danielle Adams – Vice Chairman
Katie Locklier – Secretary/Treasurer
Ray Eurquhart – Supervisor
Curtis Richardson – Supervisor
Kathryn Spann – Associate Supervisor
David Harris – Associate Supervisor
Mark Dewitt – Associate Supervisor

STAFF

Eddie Culberson – Director (eculberson@dconc.gov)
Lisa Marochak – Senior Administrative Officer (lmarochak@dconc.gov)
Jennifer Brooks – Natural Resources Coordinator (jbrooks@dconc.gov)
Mike Dupree – Agribusiness & Environmental Services Manager (mdupree@dconc.gov)
Heather Dutra – Watershed Conservationist (hdutra@dconc.gov)
Sarah Ludwig –Monty – Contractor for Durham Soil and Water
Elizabeth Zander – Piedmont Community Conservation Council
Matthew Kinane – NRCS -District Conservationist (Matt.Kinane@nc.usda.gov)

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.

2016-2017 Durham SWCD Board Meetings

The Durham SWCD Board meets on the First Monday of every month at 5:30 P.M. The meetings are held at 721 Foster Street, Durham, NC 27701 (2nd floor conference room). Exception: The board will meet on the 2nd Monday of the month during the month of July and September. No meeting January 2017.

2016-2017 meetings: July 11, 2016; August 1, 2016; September 12, 2016; October 3, 2016; November 7, 2016 ; December 5, 2016; February 6, 2017; March 6, 2017; April 3, 2017; May 1, 2017; June 5, 2017.