

REQUEST FOR BOARD ACTION

**HENDERSON COUNTY
BOARD OF COMMISSIONERS**

MEETING DATE: Wednesday, October 18, 2006

SUBJECT: Soil & Water Conservation 2005-2006 Annual Report

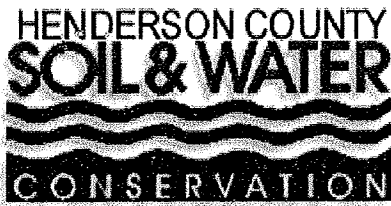
ATTACHMENTS: Yes

SUMMARY OF REQUEST:

Attached you will find a copy of the Soil & Water Conservation District 2005-2006 Annual Report. This has been provided for the Board of Commissioners' information and requires no action by the Board.

BOARD ACTION REQUESTED:

No action is required at this time.



USDA Service Center
61 Triple Springs Road
Hendersonville, North Carolina 28792

Phone: (828) 697-4949 Fax: (828) 693-5832

October 3, 2006

Chairman William Moyer
County Office Building
100 N King Street
Hendersonville, NC 28792

OCT 6 2006

Dear Chairman Moyer,

The Henderson County Soil and Water Conservation District is pleased to send you a copy of our 2005-2006 Fiscal Year District Annual Report. This report highlights some of our accomplishments during the past year. We are looking forward to continuing our conservation projects in Henderson County during the current 2006-2007 fiscal year.

Thank you for your interest in the Henderson County Soil & Water Conservation District.

Sincerely,

A handwritten signature in cursive script that reads "Andrew C. Brannon".

Andrew C. Brannon
Chairman

ACB/kdm

Enclosure

2006 ANNUAL REPORT



HENDERSON COUNTY SOIL & WATER CONSERVATION DISTRICT
61 TRIPLE SPRINGS RD **HENDERSONVILLE, NC 28792**
828-697-4949 (PHONE) **828-693-5832 (FAX)**

Environmental Quality Incentives Program (EQIP)

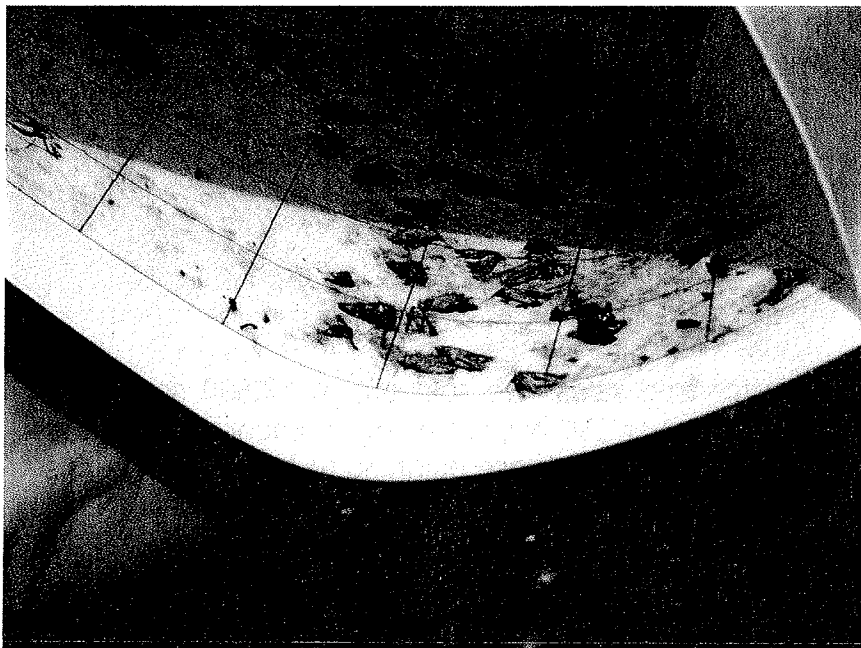
By Daniel Rosenberg

The Environmental Quality Incentives Program (EQIP) had another strong year as indicated by interest in the program by Henderson County farmers. The EQIP program is a Natural Resources Conservation Service (NRCS) program that assists farmers technically and financially with the installation of conservation practices on their land. Farmers agree to adhere to the provisions in a conservation plan that was designed specifically for their needs.

For fiscal year 2006 Henderson County NRCS received over 40 applications for the program. We were able to fund 12 contracts for a total of \$119,000. The range of projects was fairly extensive this year.

Practices selected for funding this year included abandoned orchard removal (which functions to eliminate uncontrolled pests on abandoned orchards). Other practices selected for funding include agrichemical handling facilities (an engineered building designed to

safely store and mix agricultural chemicals, various Integrated Pest Management practices and Heavy Use Area Protection practices which serve to stabilize "heavy use" areas and reduce sediment transport from these areas. Most of the funding this year went to practices in apple orchards and row crops. In past years a majority of the funding has gone to various animal operations.



**Integrated Pest
Management**

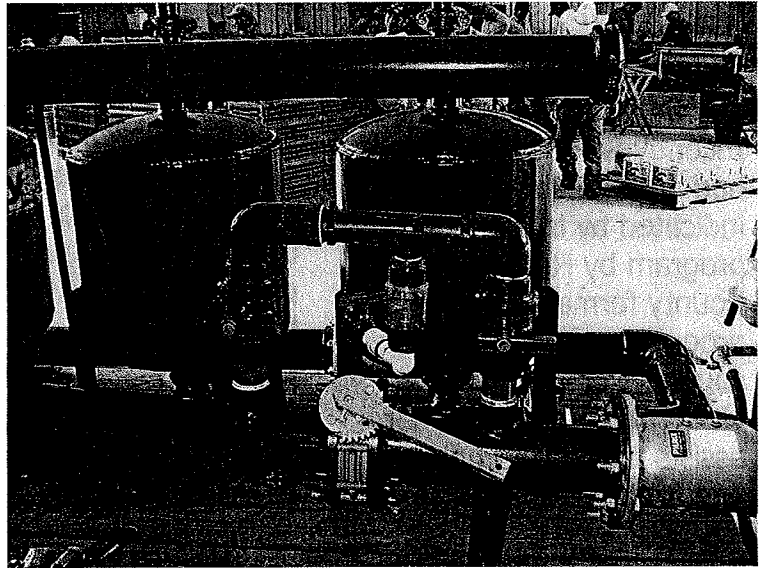
**Insect trap
being checked
in an orchard**

Chemigation Backflow Prevention

By Jonathan Wallin

What is Chemigation Backflow Prevention? Chemigation Backflow Prevention is a combination of devices (valves, gauges, injectors, drains, etc.) to safeguard water sources from contamination by chemicals used during the irrigation of agricultural crops. This practice is intended to modify or replace sub-standard chemical injection systems with components necessary to prevent backflow or siphoning of contaminants into the water supply. The Henderson County Soil and Water Conservation District was instrumental in designing these systems and getting them approved across the state for the North Carolina Ag. Cost Share Program.

During the Program Year 2006, the Henderson County Soil & Water Conservation District worked with two vegetable growers to fund two systems at a cost of \$1,500.00 each. These systems are scheduled to be in operation before the 2007 growing season.



Chemigation Backflow Prevention is a combination of devices (valves, gauges, injectors, drains, etc.) to safeguard water sources from contamination by chemicals used during the irrigation of agricultural crops.



2006 Tree Sales

By Cary Pace

2006 was a very good year for tree sales—we sold out of 13,500 seedlings! Our Earth Team Volunteers put in over 150 hours helping us count and bag the seedlings for pickup on tree sale day. For those planning to buy seedlings this year, we want to stress the importance of putting in their order early.

Emergency Watershed Protection Program (EWP)

By Jonathan Wallin

The torrential rains produced by hurricanes in the Fall of 2004 resulted in major flooding in Henderson County. These high waters flooded many areas that hadn't been underwater for more than 100 years.

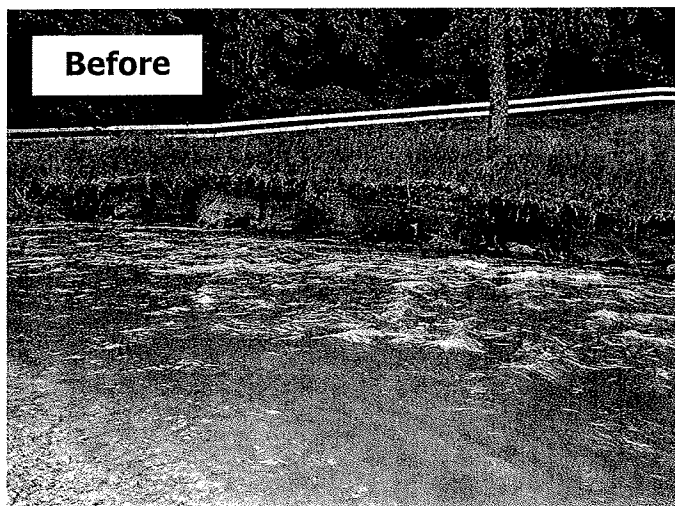
After these Hurricanes, the United States Congress responded to the disaster by providing over \$50 million to fund an Emergency Watershed Protection Program (EWP) in North Carolina. The EWP Program is designed to relieve imminent hazards to life and property

and to restore the natural function of a watershed to pre-storm conditions.

Teaming up with the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and the State of North Carolina, Henderson County received over \$2.4 million to repair 3 landslides and 110 streambank sites that included the removal of debris blocking waterways.

Hobbs, Upchurch and Associates administered the EWP Program in Henderson County. The EWP Program

funded 75% of the costs associated with the stabilization of the landslides, 75% of the costs associated with repairing major streams and river streambanks, and 75% of the costs associated with the removal of debris in all the major streams and rivers in Henderson County. The remaining 25% of the costs were funded by the State of North Carolina. All work was completed by February 2006 for the areas damaged.



Green River Site before and after repair.

Financial Assistance for Water Quality Improvement

By Jonathan Wallin

Nonpoint source pollution has been identified as the primary source of degradation of rivers and streams in North Carolina. Nonpoint source pollution is defined as pollutants that enter bodies of water over large areas rather than being concentrated at a single point of entry. The Henderson County Soil and Water Conservation District offers cost share funding to address agriculture's contribution to the nonpoint source water pollution problem in Henderson County.

The Henderson County Soil and Water Conservation District encourages voluntary participation by the agricultural community to address any water quality problem a farmer may have. A financial incentive is provided through the North Carolina Agriculture Cost Share Program (NCACSP) for the design and installation of Best Management Practices (BMP's) to address these water quality problems.

The North Carolina Cost Share Program was authorized in 1983 to address the nonpoint source water quality problems in North Carolina. This program offers participating farmers 75% of a predetermined average cost for the installation of BMP's. The remaining 25% of the cost will be paid by the farmer directly or through in-kind contributions, such as use of their own

equipment to complete the work needed.

The Soil and Water Conservation District administers the North Carolina Agriculture Cost Share Program in Henderson County. Any farmer can apply for this program as long as it can be shown that water quality will be improved by using the funds provided. Applications are taken throughout the year and are ranked and reviewed monthly by the Soil and Water Conservation District (SWCD) Board based on water quality improvements. The SWCD Board consists of five members (three are elected and 2 appointed) who are residents of Henderson County. Members of the board include: Andrew Brannon, Wayne Carland, Greg Hoyt, Theron Maybin, and Danny McConnell.

Some of the more common BMP's installed in Henderson

County using NCACSP Funds include: AgriChemical Handling Facility, Chemigation / Fertigation Backflow Prevention Systems for irrigation equipment, Feed/Waste Storage Structure, SmartSpray Technology, Livestock Exclusion (fencing), Watering Tanks, Stock Trails, Cropland Conversion, and Streambank Stabilization.

An AgriChemical Handling Facility is a permanent structure that provides an environmentally safe way of mixing agrichemicals and filling sprayer tanks for application onto the crop. These structures include a fresh water holding tank and chemical storage room where extra chemicals can be properly stored. The benefits of these structures are the reduced risk of accidental spills and degradation of surface and ground water.



Financial Assistance for Water Quality Improvement (cont.)

Another NCACSP Best Management Practice (BMP) provides apple producers with cost share funds to retrofit their apple sprayers with one of the latest spray technologies called *SmartSpray*. *SmartSpray* uses waterproof ultrasonic sensors linked to an on-board computer and tractor-mounted controller to seek and target trees that need spraying. When a tree is not present, the sprayer automatically stops spraying the ground or space in between trees. The *SmartSpray* system does more than just detect trees. It also reads the shape and size of the tree and then activates only the nozzles needed for that particular tree. Henderson SWCD Board has recently approved funding for two *SmartSprays* and in the future hopes to have the practice approved for the NCACSP so that more *SmartSprays* can be funded.

Chemigation Backflow Prevention is a combination of devices (valves, gauges, injectors, drains, etc.) to safeguard water sources from contamination by chemicals used during the irrigation of agricultural crops. This practice is intended to modify or replace sub-standard chemical injection systems with components necessary to prevent backflow or siphoning of contaminants into the watersupply.

Feed and Waste Storage Structures are designed to reduce many of the problems associated with feeding livestock during the winter months. A roofed concrete pad provides a solid area for livestock to feed. The concrete pad also provides a place to store manure until it can be spread on the fields where crops or forages can utilize the nutrients. This practice prevents runoff from

contaminating groundwater or surface water. Livestock watering tanks are located in the structure to provide a clean source of drinking water and to insure that the maximum amount of manure is collected in the structure. Feed and Waste Management Structures are designed according to the number of livestock.

During the 2006 Program Year the Henderson County Soil & Water Conservation District funded the repair of over 5,200 feet of eroding orchard roads, two Fertigation/Chemigation Backflow Prevention Systems, four alternative livestock watering systems, one Feed/Waste Storage Structure, over 4,200 feet of livestock exclusion from streams, and one AgriChemical Handling Facility. These NCACSP projects totaled over \$114,000 and helped Henderson County farmers install Best Management Practices on their land.

If you think you have an existing water quality problem that will qualify, and are interested in participating in the North Carolina Agriculture Cost Share Program, you may contact Jonathan Wallin at 697-4949 or stop by the Henderson County USDA Service Center and sign up today.



After

Educational Activities

By Cary Pace

The Henderson County Soil and Water Conservation District facilitates learning about the conservation of our county's natural resources through our educational activities. We present programs in the Henderson County schools as well as other groups. Last year we helped the Home School 4H team with their Wildlife Program and they were State Winners this year. We also spoke to Cub Scouts and Boy Scouts that were working on their conservation badges.

Outdoor Education is held at Camp Arrowhead in Tuxedo each year and is open to all of the schools in Henderson County. Outdoor Education is held at no cost to the school system because Camp Arrowhead donates the use of their camp. We make learning about conservation fun, and we have been asked by the school system to participate for the past 16 years. This year Cary spoke to all of the fifth graders at Outdoor Ed. about the importance of riparian buffers, and he received a letter of appreciation from Dr. Stephen Page, Superintendent of Henderson County Schools.

Cary visited most of the fifth, sixth and eighth grade classes and spent up to an hour per classroom speaking about "Water . . . The Cycle of Life" which was this year's topic for our educational contests. He encouraged students to learn about conservation and to participate in the our fifth grade poster contest, sixth grade essay contest and eighth grade public speaking contests.



**East Henderson High School
Envirothon Team**

Through our educational activities students learn about natural resource stewardship and possible careers in the field of natural resources.

We also sponsor high school teams for both the Area I and State Envirothon. In the Area I Envirothon held at the research station in Waynesville, one of our teams from

East Henderson High School was in the top 7, and they were sent to the State Envirothon in Burlington. Our FFA team from East Henderson High School came in third place in this year's Soil Judging contest held in Polk County.

The Henderson County Soil and Water Conservation District also sponsors a high school student for the week-long Resource Conservation Workshop held at NC State University in Raleigh. This Year Amanda Noble from East Henderson High School attended the Resource Conservation Workshop, and she reported back to the Board on what a wonderful time it was. Amanda has already applied to enter NC State University in the fall of 2007.

Our District Technician Cary Pace and his wife Rebecca (an Earth Team Volunteer) served as counselors for the Area 1 students at the Resource Conservation Workshop. They spent one week on campus in the dorms with the students.

We would like to encourage other high schools in the county to take an interest in this outstanding program and apply to send a student.

2005-2006 Educational Contests

Eighth Grade Public Speaking Contest

"Water the Cycle of Life" was the theme for this years' Educational Contests involving Henderson County eighth graders competing in a Public Speaking Contest, sixth graders competing in an Essay Contest, and fifth graders competing in a Poster Contest. **Betsy Shogren** from Flat Rock Middle School won first place in the Public Speaking Contest with her excellent presentation. **Lindsey Fore** of Rugby Middle School came in a very close second, **Jacob Medd** of Apple Valley Middle School won third, and **Olivia Palmer** of Hendersonville Middle School earned an honorable mention. Each student did a wonderful job making it very difficult for our three judges. Judges were **Mike Byrd**, **Mary Jo Padgett** and **Lynn Carter**.



8th Grade Public Speaking Contest

First Place: **Betsy Shogren** of Flat Rock Middle School
Pictured here with Teacher **Michelle Furbee**



8th Grade Public Speaking Contest

Second Place: **Lindsey Fore** (right)
with Teacher **Susan Higdon**



8th Grade Public Speaking Contest

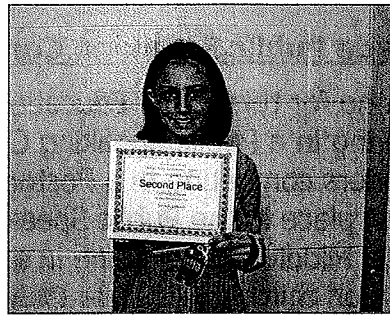
Third Place: **Jacob Medd** (right)
with Teacher **Chuck Palmer**

Sixth Grade Essay Contest



6th Grade Essay Contest

First Place: Caleb Oates,
Mountain Community School



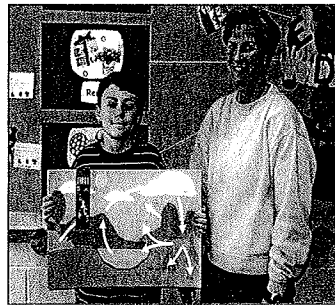
6th Grade Essay Contest

Second Place: Kennedy Galloway,
Rugby Middle School

W. Caleb Oates won \$50.00 for first place, plus \$10.00 for winning his school competition. **Mrs. McCarter** received \$100.00 to purchase class room supplies for having the first place winner. **Kennedy Galloway** won \$25.00 for second place, and \$10.00 for winning her school competition.

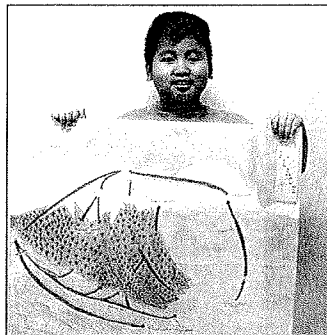
Fifth Grade Poster Contest

We collected and judged the top three posters from each class that participated. Each year, the first place poster goes on to an Area 1 Contest held in Waynesville. If the poster wins the Area 1 Contest, it is then sent on to the NC State Contest. **Mrs. Brown**, teacher of our first place winner (**Brandon Dorn**) received \$100.00 to spend on class room supplies. If not for our county teachers, we wouldn't be in the position to get our conservation message out to our county students.



5th Grade Poster Contest

First Place: Brandon Dorn,
Atkinson Elementary School
with Teacher Kim Brown



5th Grade Poster Contest

Third Place: Jeremy Huffstetler
Clear Creek Elementary School



5th Grade Poster Contest

Second Place: Grant Doane
Clear Creek Elementary School

Mills River Watershed Protection Project 2006

By Shaun Moore

Increased Local Support Leverages Federal Dollars

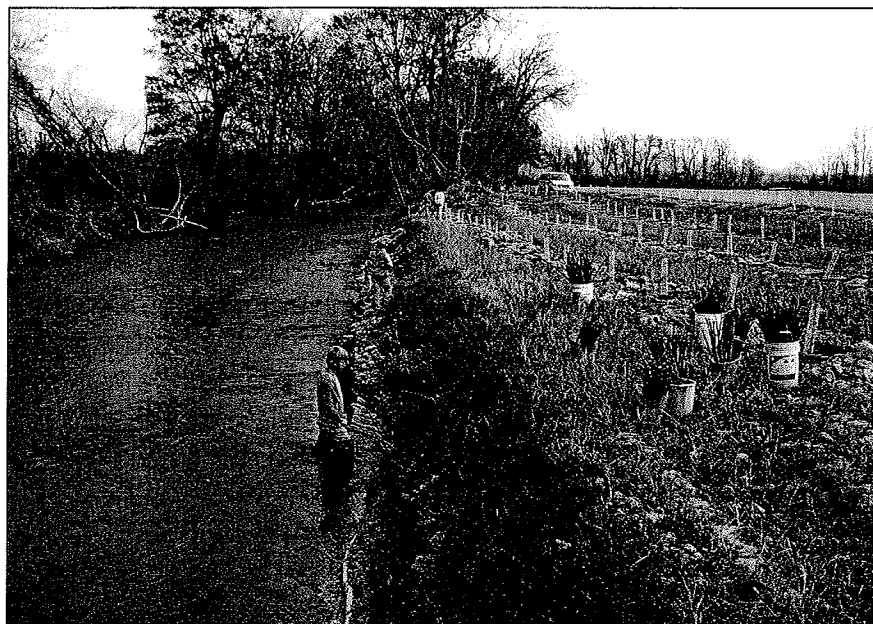
Three local governments, up from two the previous year; have voted to financially support the Mills River Watershed Protection Project. The city council of Hendersonville is continuing with their annual contribute to the Mills River Watershed Protection Project. This continues their support from the previous four years. They cited the good work the Project was undertaking in protecting their drinking water supply as a reason to continue the support. The commissioners of Henderson County also continued their support of the Project with an increased contribution over last year. Finally, the City of Asheville has once again started financially supporting the project. The Asheville City Council made a one time contribution this year and sited the cost effectiveness of the work being done as a reason for support.

Local financial support is the major way to leverage grant funding. This year the \$45,000 these local governments contributed leveraged \$215,034 in federal grants. That is a 477% return on local investment to our community.

Streambank Restoration

The Project undertook a major stream bank restoration projects this year restoring approximately 700 linear feet of stream bank. This work was funded by an EPA 319 Nonpoint Source grant. This project incorporated stream bank restoration, riparian restoration, along with flood plain restoration. It also involved setting an existing levee back from the top of the stream bank, restoring some of the flood plain.

**Warren
Wilson
College
Students
plant trees
on
restoration
project**



Mills River Watershed Protection Project 2006 (cont.)

Flood Plain Restoration

This year the Mills River Watershed Protection Project has restored approximately 1 acre of flood plain. This was done by setting levees that were at one time directly on top of the streambank back from the river. This will relieve flooding to some extent upstream of the sites, but most immediately the land owner will see reduced pressure on the levee and subsequently on his field as has been seen when those old levees failed causing catastrophic loss of top soil. This was funded by an EPA 319 Nonpoint Source grant. The land between the top of the stream bank and the location of the newly relocated levee is being restored to a forested buffer. This is a win-win combination for the farmer and for water quality.

Educational Outreach

The Mills River Project coordinator partnered with the Mud Creek Project coordinator this year to organize Kid's-in-the-Creek (KIC) this year. KIC is an active, hands-on, water quality education program for 8th grade students. Students participate in a 3-4 hour field experience in which they conduct real scientific work in the field under the guidance of professional scientists and educators from natural resource management agencies. This year the Mills River Project coordinator undertook the "chemical analysis" part of the program, teaching 250 Rugby Middle School students about stream chemistry.

Land Use Study

In the winter of 2006 the Project contracted with an organization to conduct a land use study of the Mills River watershed. With the large amount of data that will be collected from this study which is based on detailed aerial photos the Project will be able to update its Mills River Watershed Management Plan. With land uses changing in the Mills River this new data will be critical for continuing a scientific based strategy in the watershed.

EPA Success Story

The efforts of the Project have made a measurable improvement in the water quality of the Mills River. So much so, that it has been removed from the 2007 Draft version of the 303d list of impaired waters. It is very rare for the efforts of a watershed project to see such great improvements. Because of these achievements the efforts have been nationally recognized by the EPA as a Success Story. The story can be read about on the EPA website at www.epa.gov/nps/Success319/.

Wetlands Reserve Program (WRP)

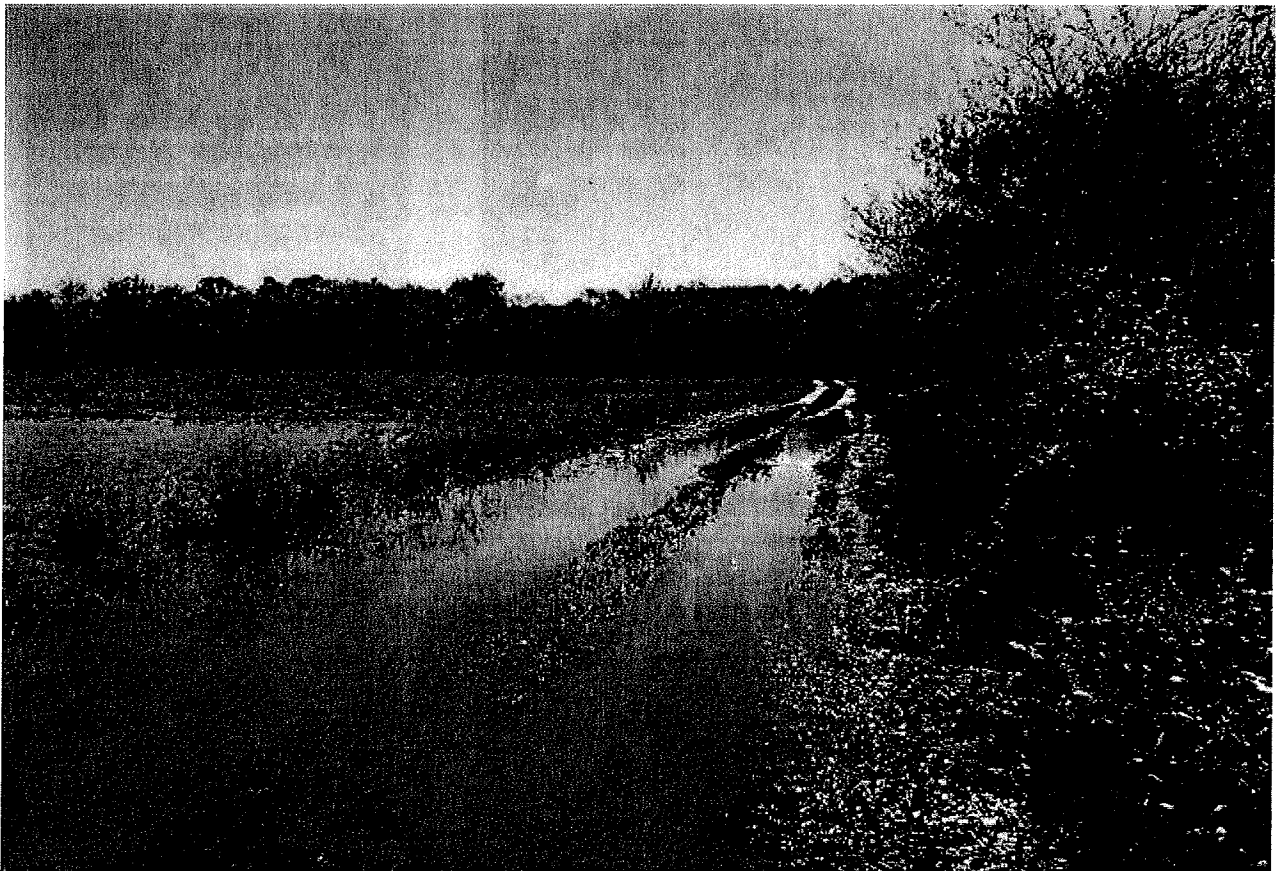
By Daniel Rosenberg

The Wetland Reserve Program (WRP) is a voluntary Natural Resources Conservation Service (NRCS) program. The program provides technical and financial assistance to eligible landowners that wish to preserve wetlands and surrounding lands that support wetland functions. Landowners work with NRCS

and place a combination of either a 30-year or permanent easement on the land and a cost-share restoration agreement which restores wetlands and increases wildlife habitat.

Henderson County finalized one WRP agreement in Fiscal Year 2006. During the 2005/2006 fiscal year 56 acres of land was signed into

the WRP program with a permanent easement being granted to USDA. These 56 acres will be restored to their natural wetland functions and will increase and diversify wildlife habitat on the property. In addition the land will serve as a permanent buffer between a housing development and the French Broad River.



These 56 acres at the Muddy Bottom Hunt Club will be restored to their natural wetland functions

Farm City Day

By Cary Pace

Farm City Day brought a lot of kids and Moms looking for our famous "Corn Box". We still haven't broken our record of 18 kinds in the box! Our booth displayed many pictures of the floods and water damage from the hurricanes and heavy rains that we've had in Henderson County during the past year. We also welcomed our new NRCS employee, Dan Rosenberg.

We hope to see you Saturday October 7th, 2006 at Farm/City Day in Jackson Park from 10 am till 4pm. This year at our booth we will have the famous "Corn Box" again as well as an Invasive Species display along with the newest members of our staff. Remember, it's free!



Henderson County Soil
and Water Conservation
District's famous
"Corn Box" at Farm City
Day 2005

Earth Team Volunteers



We would like to thank our Earth Team Volunteers for all of the many hours that they gave this year to Henderson County. They helped put up and take down our booth at Farm City Day, helped count and bag seedlings at our tree sale, worked at the Envirothons, took flood pictures, and even helped answer phones in the office. We thank you all and appreciate your hard work!