Henderson County
Soil & Water Conservation District

Fiscal Year 2014 ANNUAL REPORT

Henderson County
Soil & Water Conservation District

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INTRODUCTION

The mission of the Henderson County Soil & Water Conservation District is to provide educational, technical and financial assistance to conserve soil, improve water quality, and enhance the natural resources of Henderson County. We could not successfully accomplish our mission without the District’s partnership with Henderson County, the USDA-NRCS, NC DENR and other private and governmental organizations.

Our partners provide the foundation and much of the needed capital and technical expertise to help us accomplish our conservation programs. We are especially grateful to the Henderson County Commissioners for their financial support, and the assistance provided by the County Manger’s office and other county departments.

The Board of Supervisors and staff of the Henderson County Soil and Water Conservation District are very proud of the District’s accomplishments during the 2014 fiscal year (July 1, 2013 through June 30, 2014). These accomplishments are summarized in this Annual Report.

Andrew Brannon, Chairman

Theron Maybin, Vice-Chairman
Wayne Carland, Treasurer
Daniel McConnell, Secretary
Greg Hoyt, Member
HENDERSON COUNTY SOIL AND WATER CONSERVATION DISTRICT

BOARD OF SUPERVISORS AND STAFF FOR FISCAL YEAR 2014

District Board Members:

Andrew Brannon    Chairman
Theron Maybin    Vice-Chairman
Wayne Carland    Treasurer
Daniel McConnell    Secretary
Greg Hoyt    Member

District Staff:

Jonathan Wallin    District Director/Conservationist
Laurie Brokaw    Soil Conservationist/Education Coordinator
Shaun Moore    Watershed Coordinator
April Hoyt    Administrative Assistant

USDA-NRCS Staff:

Emily Pohlman    District Conservationist
NORTH CAROLINA AGRICULTURE COST SHARE PROGRAM

One major cause of water quality problems in North Carolina is nonpoint source pollution. In many places, damage to our water resources comes from soil erosion, excessive fertilizer use, animal waste contamination, and improper use of agricultural chemicals. The North Carolina Agriculture Cost Share Program (NCACSP) helps address nonpoint source pollution by providing technical and financial resources. This program is administered through the Henderson County Soil & Water Conservation District to fund the installation of various Best Management Practices (BMPs) for water quality improvement. These funds become available after July 1st each year.

In Henderson County, the NCACSP funded the implementation of 22 Best Management Practices (BMPs) in the 2014 fiscal year. Combined with USDA’s EQIP program, over $173,000 was allocated to cooperators for the implementation of the following BMPs:

- Stabilized over 300 feet of eroding orchard road. The stabilization of this orchard road will prevent over 15 tons of sediment per year from entering the surface water of North Carolina.
- Funded the construction of two AgriChemical Handling Facilities.
- Partnered with USDA’s EQIP program to fund the construction of two additional AgriChemical Handling Facilities.
- Partnered with USDA’s EQIP program to fund a stream protection system. This project includes a well for livestock watering, alternative watering systems for livestock watering, livestock exclusion to exclude livestock for surface water, heavy use area protection, and streambank stabilization.
Above: Before—Pumping water for use

Below: After—Chemical Handling Facility and road stabilization
Orchard Road Stabilization—Before, eroding into orchard; After-Graded and stable
The goals of the North Carolina Agriculture Water Assistance Program (AgWRAP) are to:

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

In Henderson County $40,000 of AgWRAP funds were received to meet these goals.

- AgWRAP funded the construction of one new irrigation pond that will provide an adequate water supply for the irrigation of 20 acres of high density orchard.
- AgWRAP also funded the repair of an irrigation pond that has a damaged dam. During construction of the dam, the sediment that had built up in the pond will be removed. The removal of the sediment will provide a sufficient fresh water source for the irrigation of 70 acres of crops.
- Two ponds in Henderson County received funding for removal of the sediment that has built up in the pond. Once the sediment is removed, an adequate water supply will be available to irrigate 24 acres of vegetables.

High Density Orchard efficiently supplied with water from a new irrigation pond
COMMUNITY CONSERVATION PROGRAM

The Community Conservation Assistance Program (CCAP) is a voluntary cost-share program from the state of North Carolina that is administered by each county SWCD and is designed to help address nonpoint source water pollution from residential, suburban and urban lands not directly involved with agricultural production.

CCAP can pay up to 75 percent of the costs to help landowners install conservation practices that help decrease the amount of sediment, nitrogen, phosphorus, chemicals and other pollutants in the surface and ground waters around the state. Available Best Management Practices include Abandoned Well Closures, Rain Gardens, Critical Area Plantings, Riparian Buffers, Streambank Protection, Cisterns and other well-proven SWCD designed practices.

In 2014, CCAP provided funding in Henderson County to restore the over 1,000 feet of riparian zone along the French Broad River for a homeowners association. By repairing this area, the riverbank will be more stable and tons of soil will be saved.

MUD CREEK WATERSHED PROJECT

The Henderson County Soil & Water Conservation completed this project for a partner agency. BMP funds were used to fund the construct of three Agrichemical Handling Facilities, restore over 850 feet of Byers Creek, over 800 feet of livestock exclusion along Byers Creek was installed, and stabilized over 930 feet of eroding orchard road. Over $180,000 of funds were utilized to complete these projects. Funding was made possible through an EPA 319 grant.
Fiscal Year 2014 has been a year of big changes for NRCS. FY 2014 saw the passage of the new Agricultural Act of 2014 (a.k.a. The Food, Farm, and Jobs Bill; The Farm Bill). This was enacted on February 7, 2014, and brought with it some changes to the previous conservation programs. The following chart shows the old versus new conservation farm bill programs.

Below is a quick summary of changes made to conservation programs in the new Farm Bill, enacted on February 7, 2014. These programs are administered by USDA’s Natural Resources Conservation Service. The new Farm Bill streamlines conservation programs that enable farmers, ranchers and forest landowners to get assistance.

To get started with NRCS, visit [www.nrcs.usda.gov/GetStarted](http://www.nrcs.usda.gov/GetStarted) or visit your local USDA service center.

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*NRCS is an equal opportunity provider and employer.*
NRCS for Henderson County also saw the retirement of Bob Twomey, who served the agricultural community with NRCS for 28 years, the last 3 of which he covered both Henderson and Transylvania Counties. In June 2013, Emily Pohlman was brought on board to serve as the District Conservationist for Henderson and Transylvania Counties.

*Right: NRCS District Conservationist, Emily Pohlman*

**ENVIRONMENTAL QUALITY INCENTIVES PROGRAM**

One of the main Farm Bill Programs that NRCS administers is the Environmental Quality Incentives Programs (EQIP) to assist landowners in applying conservation best management practices (BMP’s) on their working agricultural lands. EQIP supports the conservation priorities established for the Henderson County SWCD. BMP’s are used to correct natural resource concerns on a variety of land uses, including pasture, cropland, and forestland. NRCS uses technical, engineering, and financial resources to assist landowners with these projects.

During FY 2014, NRCS and the Henderson County SWCD were able to partner on several projects in order to best meet the needs of the landowner as well as the resource concerns. Some of these included, but are not limited to, water wells and agrichemical handling facilities, livestock watering systems, and stream crossings and restoration.

During the FY2014, NRCS processed 9 applications totaling $90,422, of which 3 became contracts totaling $30,637. Some of the practices that were installed in FY 2014 were stream crossings and seasonal high tunnels.

*Above: Stream Crossing  Above: Seasonal High Tunnel*
Henderson County SWCD staff participated in the annual Henderson County Farm City Day on October 5, 2013. This event highlights the dependency of farm people and city people on each other for products and services essential to modern living. The Farm City Day program was designed to encourage the exchange of ideas and development of shared activities creating a feeling of mutual understanding and good will.

District staff hosted a booth with flyers, brochures, program information, educational information and activities for the whole family. The weather was great and many people stopped by our booth. We had a corn box for the kids to play in, which was a big hit! We also had cows for the kids to color and put out in our “pasture”, and a number of brochures and posters available to take home.

We increased our outreach by adding over 50 participants to our newsletter mailing list. Over 14,000 people attended this event and many stopped by to see our booth!

Many educators stopped by pick up materials for preschools, primary and secondary schools, and home schools, ensuring that Soil and Water Conservation is not just a one-day event!
SPOT CHECKS

Throughout the day on May 7th, a total of four staff and two supervisors conducted spot checks on various contracts. These spot checks randomly check a minimum of 5% of all active contracts to ensure maintenance agreements are being kept and no issues have arisen.

Henderson County had 99 active contracts. Spot checks were conducted for CCAP, Ag Cost Share, and AgWRAP. Nine different contract sites were visited. These contracts included: wetlands, stream restoration, heavy-use roads, agrichemical handling facilities and more! All sites were in compliance of their maintenance agreements and there were no issues to report!
The 2014 Annual Tree Seedling Sale was held on March 8th. Thankfully, after so many weeks of cold winter weather, it was a bright sunny day! This year we offered a variety of species to choose from, along with a special variety pack, allowing everyone to sample the various types of trees native to our area. Species this year included: Baldcypress, Black Cherry, Black Walnut, Eastern Redbud, Flowering Dogwood, Persimmon, Scarlet Oak, Water Oak, White Pine, and Yellow Poplar.

The Henderson County Soil & Water Conservation District sold over 2600 seedlings during the event.

Below:
Here’s the Wilde family taking advantage of our special variety pack!

Above: District Director Jonathan Wallin wraps seedlings for an order

Proceeds from the annual sale are used to fund the district’s educational programs, such as the speech, essay, and poster contests. The District also tries to donate unsold seedlings to county schoolchildren when possible.

This year with winter weather still on everyone’s minds, 900 seedlings were available for donation. The seedlings were donated to local schools that participated in our speech, essay and poster contests with additional seedlings donated to Chimney Rock State Park to be given to school groups during their Earth Day Programs.
These seedlings went to grades 1st-5th from schools in Rutherford County, Henderson County, Buncombe County, Asheville City and various homeschooling families. Just over 100 of these seedlings were given out during the Chimney Rock State Park Earth Day event.

Above: Seedlings given out during the Chimney Rock State Park Earth Day event
Below: A local dentistry office celebrates Earth Day by giving out seedlings to their patients
EDUCATION OUTREACH

Our education coordinator, Laurie Brokaw, had another busy year. Below are just a few of the education outreach programs she took part in.

- Served over 4,418 people through outreach and educational programs
- Visited 40% of Henderson County Schools
- Gave poster contest presentations at Immaculata Catholic School, Clear Creek Elementary, and Sugarloaf Elementary
- Gave essay and speech contest presentations at Immaculata Catholic School
- Presented lessons on soils and other topics at Bruce Drysdale, Sugarloaf, Upward, and Clear Creek Elementary Schools, Rugby Middle School, Immaculata Catholic School, Balfour School, Home Schooling Groups, North Henderson High School, West Henderson High School, and Lincoln Circle Head Start Center
- Held interactive stations during Farm City Day
- Helped set up and man the SWCD booth at the Mountain State Fair and supplied handout materials
- Provided information at a booth during the ESTEAM career fair
- Attended the EENC Resource fair
- Participated in the Area 1 Envirothon and worked with local schools that participated
- Promoted and participated in sending a local student to the Resource Conservation Workshop
- Participated in the Tri-County Land Judging contest
- Participated in the NCASWCD Annual Meeting
- Attended the AG in the Classroom Workshop
- Judged at the Home School Science Fair
- On the panel for the NCASWCD Area 1 Scholarship application judging
- Held an informational booth at the Blue Ridge Apple Growers Winter Apple School
- Held an informational booth at the Henderson Area Vegetable School
- Participated in the Chimney Rock State Park Earth Day event
- Provided local schools participating in the educational contests with tree seedlings
- Donated tree seedlings to Chimney Rock State Park for school groups
- Partnered with the following groups: NCDENR, NCDACCS-Division of Soil & Water Conservation, NC Forest Service, other SWCD’s, Henderson County Departments (including Ag Economic Board, Parks & Recreation, Engineering, Solid Waste/Recycling, Erosion Control, Cooperative Extension, Tax Dept., Legal Dept., GIS), Mills River Partnership, Town of Mills River, NC Foundation for Soil & Water Conservation, Farm Bureau, NC Farm Credit, USDA/NRCS/FSA/RC&D and the Henderson County Public Schools system.
EDUCATION CONTESTS

2013-2014 Theme: “Living Soil”

This year’s contest theme was “Living Soil”. Contest poster, essay, and speech submissions and presentations were creative, thought provoking and very entertaining! Winning students receive financial awards and all students that participated received a tree seedling to plant. First place winners go on to compete against student entries from all over Western North Carolina and possibly onto the state competition!

Third Grade Poster Contest

Henderson County Soil & Water Conservation District announces the winners of its 2014 third grade Poster Contest.

1st Place—Caroline Hager—Immaculata Catholic School, Mrs. Garcia’s Class
2nd Place—Emma Sevier—Immaculata Catholic School, Mrs. Garcia’s Class
3rd Place—Tie

Christopher Contreras—Sugarloaf Elementary, Mrs. Holbert’s Class
Celeste Moreno—Clear Creek Elementary, Ms. Ledbetter’s Class

Caroline and Emma display their winning posters!
Sixth Grade Essay Contest

All winners were from Immaculata Catholic School, Mrs. Krowka’s Class

1st Place—Rachel Ursin
2nd Place—Raymond Prado
3rd Place—Tie
   Grace Canning
   Bryson McKenney
Eighth Grade Speech Contest

All winners were from Immaculata Catholic School, Mrs. Krowka’s Class

1st Place—Conner Leidner
2nd Place—Joe Maddock
3rd Place—Samantha “Sam” Hess

Conner Leidner also came in 2nd Place at the Area 1 Competition

Joe, Connor, and Sam display their ribbons after well executed speeches
In late spring of 2014, the Town of Mills River worked with the Henderson County Soil & Water Conservation District and the Henderson County Agricultural Advisory Board to bring a Voluntary Agriculture District ordinance to their town. Administered by the Henderson County Soil & Water Conservation District, the program is designed to increase pride and identity in the agricultural community; encourage economic and financial health in agriculture; and increase protection from non-farm development and other negative impacts on properly managed farms. There is no fee to property owners for participation in the VAD program.

The Henderson County GIS webpage contains a feature to display Agriculture Districts and Agriculture District Buffer layers. This is part of the public notification portion of the Voluntary Agricultural District Program. Folks buying property can find out they are near or adjacent to agricultural operations. If not currently in a Voluntary Ag District, new neighbors may not fully understand what it may mean to live adjacent to an agricultural operation. The VAD program is the first step in identifying the agricultural use of lands nearby.
On June 27\textsuperscript{th}, 2014, the Town of Mills River’s Agricultural Advisory Committee sponsored a Voluntary Agricultural District (VAD) Signup event at the Mills River Town Hall. Staff from the Henderson County Soil & Water Conservation District was on hand to assist landowners and answer questions. There was a great turn-out and staff spent the morning describing the VAD program to local farmers, assisting with enrolling agricultural land, and answering questions.

Over 600 acres of agricultural land was added to the VAD in Mills River that morning alone, with more to be added by landowners that were unable to make the event. Another 150 plus acres were added the next week. We all look forward to a long and positive working relationship and are excited to have those Mills River farmlands protected.
MILLS RIVER DAY CELEBRATION

The Soil and Water Conservation District participated in the first annual Mills River Day event held on June 1st at North River Farms. The event was a chance for the community to come out and learn about water quality projects along the Mills River.

The event provided a chance for local families to come and learn about the farming practices that are protecting water quality along the Mills River. The Mills River Watershed is approximately 47,000 acres. The Mills River was listed as an impaired waterway in 1998 due to erosion and pollution issues. Since that time, a number of partnerships have worked to “clean up” the Mills River and protect its waters.

Laurie Brokaw uses an Enviroscape to demonstrate run-off and soil erosion

The day provided a number of opportunities for families to learn about choices that impact the watershed. Soil and Water Conservation District staff were on hand to provide information and activities. SWCD staff had an educational booth, brochures and information for educators, crafts for kids, an enviroscape to show runoff issues, and led a Best Management Practice hayride to show on the ground examples of BMPs, such as Agrichemical Handling Facilities, backflow prevention, road stabilization and grassed waterways, among others.
Volunteers were on hand from SWCD, NCDA&CS, Mills River Partnership, ECO, Trout Unlimited, CMLC, Mills River Fire Dept., and many more. The event showcased a band, Best Management Practice hayride, Soil Pit Demonstration, Water Quality events for kids, Animals, Fire Trucks and Ice Cream. A few hundred community members turned out for this great event!
NO-TILL DRILL

The Henderson County Soil & Water Conservation District was able to purchase a No-till Drill through the TVA Ag & Forestry Fund sponsored by the NCDA&CS. With the purchase of a TruAx FlexII Seed Drill, the Henderson County Soil & Water Conservation District has been able to benefit both the land and the farmers in Henderson and Transylvania counties. The high cost of a No-till Drill is often prohibitive for small farmers that could use this method on their lands to improve soil quality and reduce erosion and run-off.

The FLEXII Series Grass Drill is designed to plant grasses and legumes on a variety of site conditions and can be accomplished through no-till and interseeding in most conditions. A common shared drill provides benefits to local residents by eliminating high initial cost investments, while providing pastureland improvement. The grass drill is for agriculture use and can assist landowners in pastureland improvement by providing excellent erosion control, soil moisture conservation, minimizing fuel and labor costs, and building soil structure and health.

No-till drill in action
The availability of a No-till Drill for Henderson and Transylvania Counties provides the options for local farmers and landowners to effectively and sustainably manage pasture, hayland fields, and grasslands. No-till drill seedling allows for reduced water runoff and sedimentation, efficient tractor passes through a field, soil stability and pH balance, and economic benefits to the farmer.

The Henderson County Soil and Water Conservation District had been continuing its efforts to put a Truax No-till Drill into the field. The District worked with its board and Henderson County local government to create a Request for Proposal for a Manager/Operator of the drill through many months of discussion and feedback. This individual would be responsible for all maintenance of the drill and to keep it in good working condition. This individual would also schedule, transport, and conduct seeding operations for the drill. The Soil & Water Conservation District invited individuals to submit proposals and the final Request for Proposal was advertised both electronically on the internet as well as advertised in a variety of local feed stores, chemical companies, and farm and equipment supply stores.

A mandatory bidders meeting was held at the USDA Service Center on April 28th, 2014. Potential bidders were able to look over the drill, manual, and parts and to also speak with Conservation District staff about the drill. Bidders then submitted their bids for the operation and maintenance of this drill. All proposals were in by May 12th, where the Soil and Water Conservation District Board reviewed all proposals and worked with the winning bidder, Darryl Fullam, to set up the drill for use.

SWCD Staff pose with the new drill
By the time the proposals were submitted, The Soil and Water Conservation District already had over 100 acres on a waiting list to be planted. With increased visibility and advertising in the community, the acreage seeing benefits will continue to increase.

Through landowners paying a rental fee for use of the No-till Drill, this pastureland improvement project will be able to continue over the life of the equipment. This small fee covers all maintenance needed to cover expenses needed to insure the up-keep and good working order of the equipment. This project will be self-sustained and not require any outside funding to continue.

The Henderson County Soil & Water Conservation District is proud to help strengthen local agriculture through assistance in efficiency, promoting sustainability, and improving water quality and soil health. The Henderson County Soil & Water Conservation District will continue to provide support and information to landowners wanting to improve the soil health and water quality in their community.

No-till Drill Project Funded By:

TVA Ag & Forestry Fund
Beginning in 2008, the Henderson County SWCD began the process of qualifying a site for creation of a stormwater wetland. In October of 2010, the SWCD was awarded a $96,000 grant from the Clean Water Management Trust Fund. This grant covered approximately two-thirds of the project with a local match, primarily from the landowner, providing the remainder.

The project site is a greenhouse facility owned by Van Wingerden International Inc. The site is located on Highway 191 in the Mills River watershed above the Regional and Hendersonville Water Treatment Plants’ drinking water intakes. Previously, runoff from the sites existing 18 acres of greenhouse roofs and other impervious surfaces flowed into a single outfall and into an existing 1.5 acre pond before discharging into a tributary of the Mills River.

The original pond was insignificant to manage stormwater runoff, allowing increased flashed flooding during rain events, increased stream bank erosion and elevated water temperatures. The project converted the existing pond and outlet into a shaded stormwater retention structure. The stormwater wetland area was graded to form both low and high vegetated areas and also deep pool areas. The existing outlet was replaced with a new structure and low-flow outlet to draw storm water flows down slowly over a 2 to 3 day period. An emergency spillway also safely routes high flows.

The new stormwater wetland employs internal water storage to maximize water-soil contact for cooling purposes, pollutant filtration, groundwater recharge and reduction of flood frequency and intensity. This results in improved quality and quantity of the drinking water supply. The project site is also protected in a permanent easement and is inspected by SWCD staff. This is the fourth water quality project Van Wingerden and the SWCD have partnered on and one of many they hope to do in the coming years.
The finished stormwater wetland
The Mills River Partnership (MRP) is a regional non-profit organization that works to monitor, preserve, protect and enhance the quality of public drinking water supplies in Henderson County, NC. It relies upon the voluntary cooperation of participating landowners and focuses on watersheds that provide the drinking water supply for all of Hendersonville’s and a portion of Asheville’s public drinking water customers.

The MRP began as an informal organization in 1998 and is now formalizing its efforts as a result of increasing demand for a cleaner and more sustainable drinking water supply. The MRP incorporated as a non-profit organization in August 2011 and has received 501(c)3 status from the IRS. The MRP is working with various agencies, conservation organizations, agricultural businesses, land owners, and residents in the watershed to work together to protect and improve the water supply for consumers and other users. The MRP has received a 319 Non-Point Source Pollution Control Grant for the Mills River Watershed. The Mills River has historically moved on and off the 303(d) impaired listing.

Working with the MRP, through 319 Grant and other funding sources, the Henderson County Soil & Water Conservation District, has been working to put Best Management Practices (BMPs) on the ground within this watershed. The SWCD is designing, implementing, and monitoring the technical aspects of this project. This includes facilitating the connection between the cooperating farmers and MRP to implement the BMPs. The SWCD is also providing technical guidance to MRP on the design and installation of the BMPs.

Best Management Practices within this watershed include Field Borders, Grassed Waterways, Riparian Buffers, Agrichemical Handling Facilities, Road Stabilization, and Streambank Protection, among others. The SWCD has been working in conjunction with MRP to designs and implement these practices this past year. These BMPs will help to reduce non-point source pollution into the Mills River, and will improve water quality for 50,000 households in Henderson and Buncombe Counties.
AgriChemical Handling Facility:
Top to bottom:

Inside of almost completed building with contained chemical room

A view of the building from the field

Inside containment system keeps all chemicals and sprays within the building during the mixing process and contains any possible spills