

ANNUAL REPORT



Henderson County Soil and Water
Conservation District FY 2021



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From the Board of Supervisors

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, NCDA&CS, 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, as well as to the County Manager's office and other county departments for their assistance.

The Board of Supervisors and staff of the Henderson County Soil & Water Conservation District are very proud of the District's accomplishments during the 2021 fiscal year (July 1, 2020 through June 30, 2021), even amidst the pandemic. These accomplishments are summarized in this Annual Report.



Andrew C. Brannon
Chairman, Board of Supervisors

Greg Hoyt, Vice-Chairman
Wayne Carland, Treasurer
Daniel McConnell, Secretary
Jerred Nix, Member



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 to cooperators. 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 1 each year.

In Henderson County, the NCACSP funded the implementation of 30 BMPs in the 2021 fiscal year. In NCACSP programs alone, the Henderson County Soil & Water Conservation District received \$80,278 in program funding from the NC Division of Soil and Water Conservation. These funds were allocated to cooperators for the implementation of the following BMPs: Agrichemical Handling Facility, well supplying water to Agrichemical Handling Facility, and Critical Area Treatment in orchards/vineyards. In addition, 2,975 feet of orchard spray lanes were stabilized.



Image by lumix2004 from Pixabay.



Agricultural Water Resources Assistance Program

The goals of the North Carolina Agricultural Water Resources 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

This program was established by NC Session Law 2011-145 and is designed to assist farmers in conserving soil and improving water quality. In Henderson County, \$22,500 of AgWRAP funds were received in 2021 to meet these goals. This year's BMP was agricultural well construction to supply water for irrigation. This funding will help to increase water storage capacity on three farms.



Image by Arek Socha from Pixabay.



Community Conservation Assistance Program

The Community Conservation Assistance Program (CCAP) is a North Carolina voluntary cost-share program that is administered by each SWCD. The program is designed to address nonpoint source water pollution from residential and urban lands not directly involved with agriculture.

CCAP pays up to seventy-five percent of the costs to install conservation practices that decrease sediment, nitrogen, phosphorus, chemicals and other pollutants entering surface water and groundwater. Best Management Practices (BMPs) include Abandoned Well Closures, Rain Gardens, Critical Area Plantings, Riparian Buffers, Streambank Protection, Cisterns and others that address water quality issues.

Funding for CCAP is provided by the NC Division of Soil & Water Conservation and is awarded through a competitive regional application process. In 2021, HCSWCD was awarded \$16,500 to repair 75 feet of streambank and 25 feet of floodplain. The project will also include two backyard raingardens or wetlands, and a critical planting area. An additional 350 feet of streambank near the site needs to be repaired and adjacent landowners may be contacted to participate in those projects in the future.

Additionally, two previous CCAP projects were completed this year. Livestake planting events were held at both sites and a sedge planting event was held at one of the sites. This vegetation will help to stabilize the streambank and prevent erosion.

Additionally, the District's Conservation Engineer conducted 55 site visits to provide recommendations for improvement to landowners and provided answers to a variety of soil and water related questions. Nineteen written responses were developed for 13 homeowners, four Homeowners' Associations, and two Henderson County parks. These assessment reports provided recommendations for improvements, photos of the sites with descriptions of items to change, and resources for further study and/or assistance. All site visits and responses evaluated streambank erosion, drainage, and stormwater issues.

Grant Funded Projects

Two major grant-funded stream restoration projects are underway. First, the Mill Pond Creek project on the campus of Rugby Middle School will restore approximately 425 linear feet of streambank. The restoration will include development of a floodplain, properly sloped banks, a riparian buffer, and an educational access point, complete with educational signage. Three funders have invested in the project. Grant funders for the project include the North Carolina Department of Environmental Quality: Division of Water Resources, the Duke Energy Foundation, and the Community Foundation of Henderson County. HCSWCD staff have surveyed the site and are developing the designs for the project. Pictures below were taken in April 2021.



Community Conservation Assistance Program, continued



Mill Pond Creek streambank restoration site



Community Conservation Assistance Program, continued

The second stream restoration project, the Lewis Creek Project, is located at the Edneyville Community Center. The project will include the restoration of approximately 2,000 feet of stream and the construction of an educational access point. Three funding sources have been secured for the project: the North Carolina Department of Environmental Quality: Division of Water Resources Water Resources Development Grant, the United States Environmental Protection Agency, and the North Carolina Attorney General's Environmental Enhancement Grant program. A Request for Qualifications was posted, and an engineering firm has been chosen to design the project. Picture below was taken in December 2020.



Lewis Creek streambank restoration site



Natural Resources Conservation Service (NRCS)

Fiscal year 2021 was a hopeful year. We saw ourselves getting back to some semblance of normalcy. In spite of all the obstacles and limitations that have been presented to us, conservation has and will always be a priority. NRCS was able to work with producers both remotely and on-site to get conservation practices on the ground.

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 forest land. NRCS uses technical, engineering, and financial resources to assist landowners with these projects.

Another Farm Bill Program that NRCS administers is the Conservation Stewardship Program (CSP) which is a voluntary program that encourages agricultural producers to improve conservation systems by improving, maintaining, and managing existing conservation activities and undertaking additional conservation activities.

During FY 2021, NRCS and the Henderson County SWCD were able to partner on several projects to best meet the needs of the landowner as well as their resource concerns. Some of these included, but were not limited to, water wells and agrichemical handling facilities, streambank restoration, livestock watering facility and pipeline installation.

In FY 2021, NRCS awarded four contracts for a total of \$385, 893 on 119 acres. They included stream restoration projects, Forest Management projects, and the construction of an Agricultural Chemical Handling Facility.



The photos above (left to right) show a stream restoration site, a livestock watering tank and heavy use protection area, and an agricultural chemical handling facility.



**United States
Department of
Agriculture**

Educational Programs:

School Groups

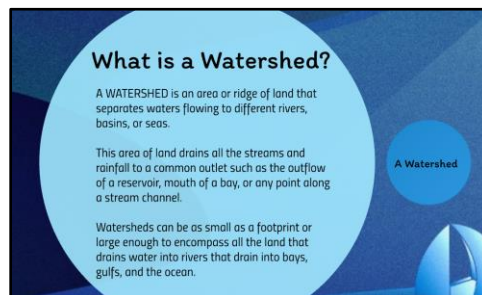
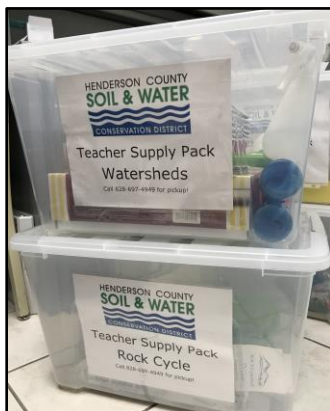
The Henderson County Soil & Water Conservation District provides in-classroom presentations on soil and water topics to local schools. Presentations align with the NC Essential Standards and provide the opportunity to enhance curriculum with hands-on activities. These lessons are provided free of charge. This year was unlike any other in the education field. Our traditional in-the-classroom model had to change in many ways to keep up with the constantly changing delivery methods of remote and in-person learning. Soil and Water Conservation staff stepped up to the challenge and provided new opportunities for learning to keep students engaged and connected. While in many ways our outreach was limited compared to previous years, we were still able to deliver 65 presentations reaching 1,623 students in Henderson County!

Virtual Learning

The pandemic restrictions limited our opportunities to interact face-to-face with students in a classroom setting. Soil and Water Conservation staff pivoted to meet the changing needs of students in a virtual setting. Staff recorded videos, learned to use new software, and created dynamic lessons in both synchronous and asynchronous options. Working with the teacher to send out supply lists for common household items allowed students to have the items needed for hands-on learning from their homes.

Using the virtual learning platforms for each school, we were able to connect with the students and guide them through the lessons and hands-on activities. We also worked hard to create “Take Home Packs” that students picked up outside their schools, so everyone had access to necessary supplies. As the year progressed, teacher classroom kits were developed so all the supplies needed were available to students to follow along as we taught across the screen in their classrooms.

Working in partnership with the other Soil and Water Conservation Districts allowed content we created to be distributed to students in many western North Carolina counties and enhanced the offerings we could provide to students here in Henderson County.



The Teacher Supply Kits (left) provided all the resources teachers needed to implement lessons virtually and in the classroom. The Watershed photo above is taken from newly created virtual content made using Prezi.

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs:

Community Events and Workshops

The HCSWCD annually provides outreach and educational materials at various community festivals, events, and workshops. This year, mass gathering limits and restrictions led to the cancellation of the events in which we traditionally participate. With Spring came more outdoor events and we were proud to participate in the first ever Henderson County Compost, Agriculture, and Environmental Fair. This event was a great way to provide information on soil health to the residents of Henderson County and allowed us to debut our Conservation Learning Center to the public. We were also excited to offer information from the Food Matters Action Kit in three languages to increase outreach in our community. The Food Matters Action Kit, produced by the Commission for Environmental Cooperation, provides multiple activities to engage students in learning to prevent food waste.



These photos reflect the Compost, Agriculture, and Environmental Fair. April Hoyt is pictured at top right with Fair-goers, Dianne and Michael Gay. The photo at bottom right shows material from the Food Matters Action Kit.



Each year, the food we waste costs the North American economy \$278 Billion US dollars and could have fed 260 million people!

This is what else we waste when we waste food:

39 million m³
of landfill space, equivalent to
13 football stadiums
gets used up with our food waste each year

Educational Programs: Education Contests

Every year, the North Carolina Association of Soil & Water Conservation Districts sponsors poster, essay, and speech contests for third through eighth grade students. These contests are designed for students to become aware of and share their concerns for soil and water conservation using a predetermined theme, which for 2021 was “We All Live in a Watershed.” Entries are judged on criteria including conservation message, originality, organization, and neatness. The essays are required to be between 300 and 500 words and the speeches are to be four to six minutes in length.

The challenges of an unprecedented school year and remote learning limited involvement in this year’s annual contests. By offering contactless pickup and drop off options, we were able to continue with our poster contest. We appreciate the hard work and extra effort teachers made to give their students the opportunity to participate. Students worked hard to create visually stunning conservation posters for this year’s contest.

We are very proud of this year’s Henderson County Poster Contest participants! The winners are listed below:

GRADE	CONTEST	PLACING	STUDENT	SCHOOL
5 th	Poster	1 st	Sohana S.	Sugarloaf Elementary
5 th	Poster	2 nd	Zachary C.	Fernleaf Community Charter School
5 th	Poster	3 rd	Scarlett S.	Fernleaf Community Charter School
5 th	Poster	Honorable Mention	Maggie R.	Sugarloaf Elementary
5 th	Poster	Honorable Mention	Eliza R.	Fernleaf Community Charter School
5 th	Poster	Honorable Mention	Henry L.	Fernleaf Community Charter School
5 th	Poster	Honorable Mention	Laura M.	Fernleaf Community Charter School

Thank you to the 118 students and two schools that participated in this year’s contest!

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs: “We All Live in a Watershed” Contest Winning Posters



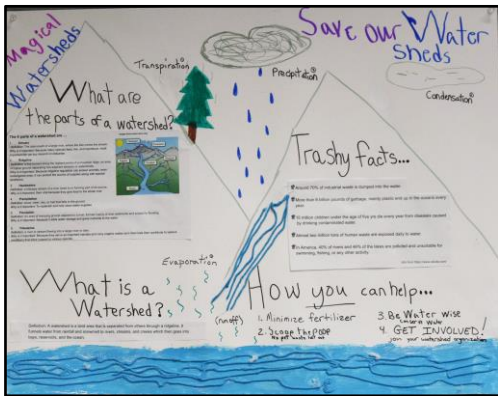
First Place – Sohana S.



Honorable Mention – Henry L.



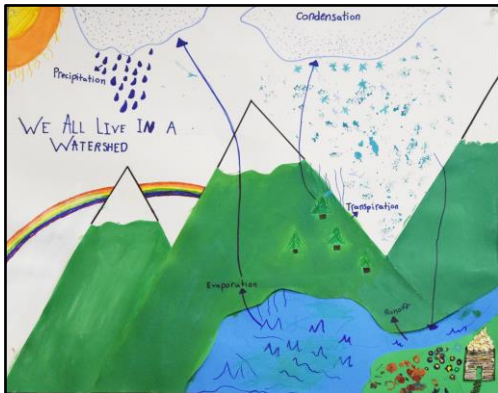
Honorable Mention – Eliza R.



Second Place – Zachary C.



Honorable Mention – Maggie R.



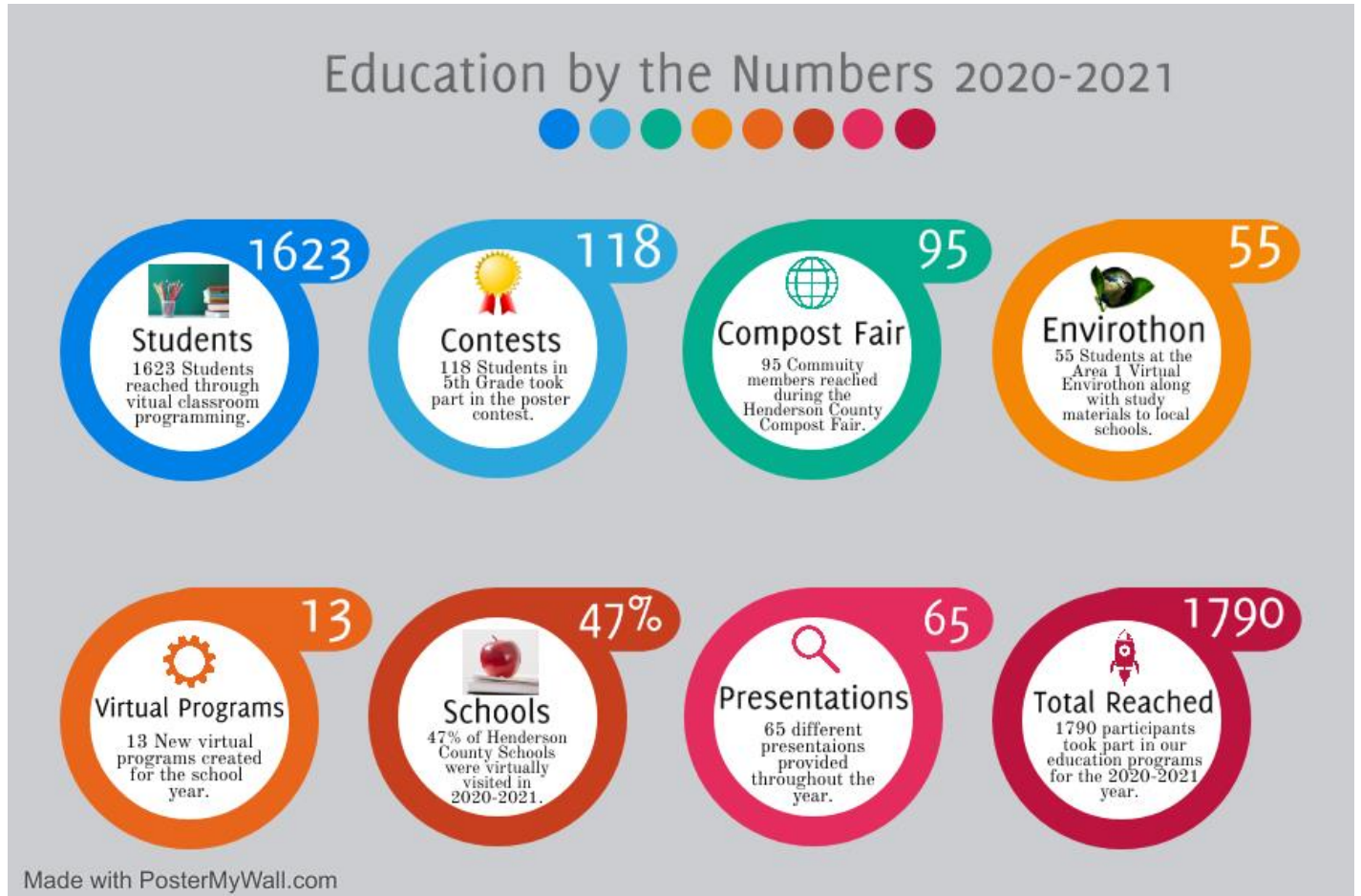
Third Place – Scarlett S.



Honorable Mention – Laura M.

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs: Soil and Water Education by the Numbers



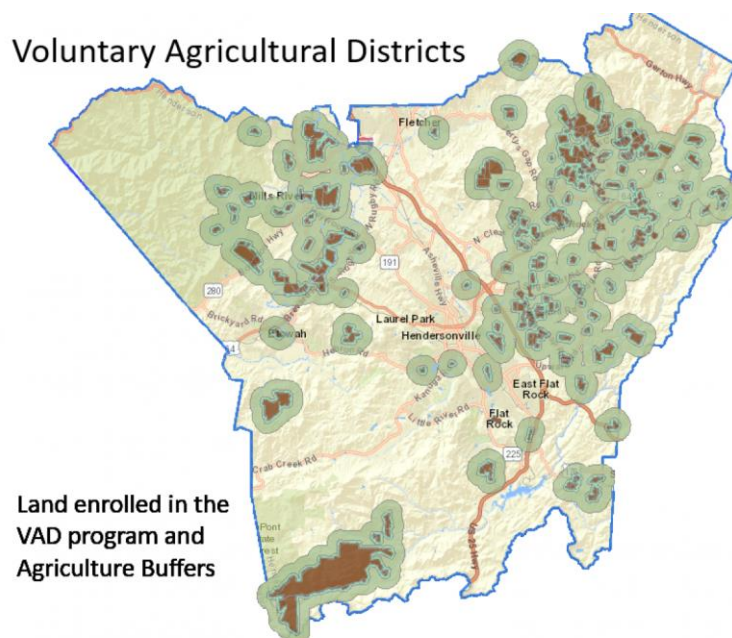
HENDERSON SOIL & WATER CONSERVATION DISTRICT

Voluntary Agricultural Districts

In 1985, North Carolina General Statute Chapter 106, Article 61, known as "The Agricultural Development and Farmland Preservation Enabling Act," authorized counties to establish farmland preservation programs by ordinance. The purpose was to encourage the preservation of qualifying farmland and to foster the growth, development, and sustainability of family farms. In 1991, the Henderson County Board of Commissioners adopted the Voluntary Farmland Preservation Program Ordinance which created the Voluntary Agricultural District (VAD) program.

The VAD program is administered by the Henderson County Soil & Water Conservation District through the five-person Henderson County Agricultural Advisory Board. Landowners interested in VAD membership apply to the Agricultural Advisory Board; there is no fee to apply. To qualify, a parcel must be in an unincorporated area of Henderson County or in the Town of Mills River; be managed in accordance with Natural Resources Conservation Service defined erosion-control practices if highly erodible land exists on the farm; and either be participating in (or qualify for) the present-use value taxation program or be engaged in "agriculture" as defined by NC General Statute 106-581.1, earning at least \$2,000 per acre in the year prior to application (or an average of at least \$2,000 per acre for five years prior to application). Landowners participating in VAD agree not to convert the land to non-farm or development use for a period of at least ten years, except for the creation of not more than three lots on a parcel.

The Henderson County GIS system, GoMaps (www.hendersoncountync.gov/gis), contains a feature to display Agricultural Districts and Agricultural District Buffer layers, which is part of the public notification portion of the VAD Program. Those interested in purchasing property in Henderson County can determine if they are near or adjacent to agricultural operations. Currently 360 parcels, owned by 148 landowners and consisting of 10,788.62 acres, are enrolled in the nine agricultural districts in the county.



Mills River Partnership

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. 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 has formalized its efforts due to increased 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, landowners, and residents in the watershed 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.

The Henderson County Soil & Water Conservation District (HCSWCD) has been working with MRP to install Best Management Practices (BMPs) on the ground within this watershed. This includes facilitating the connection between cooperating farmers and MRP to implement the BMPs. HCSWCD is also providing technical guidance and services to MRP for the design and installation of the BMPs.

Two practices were installed in FY2021 and three projects were planned. The first completed project involved the repair of a stream bank and field berm where the river had left its banks and scoured a large hole in a tomato field. See photo below. The second project was the installation of livestock exclusion fencing with mobile cattle watering equipment along the Mills River for rotational grazing. Three additional projects are in the planning phase and involve the following best management practices: farm access road with heavy use area improvements, a grassed waterway, and an improved riparian buffer. These BMPs will help reduce nonpoint source pollution into the Mills River and improve water quality.



No-Till Drill

The Henderson County Soil & Water Conservation District (HCSWCD) purchased a No-Till Drill through the TVA Ag & Forestry Fund sponsored by the NCDA&CS in 2014. With the purchase of a Truax FLEXII Series Grass Drill, the HCSWCD 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 land 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 agricultural use and can assist landowners in pastureland improvement by providing excellent erosion control and soil moisture conservation. It minimizes fuel and labor costs and builds soil structure and health.

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

Through implementation of 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 ensure the upkeep and good working order of the drill. This project will be self-sustained and not require any outside funding to continue.

The HCSWCD is proud to help strengthen local agriculture through assistance in efficiency, promoting sustainability, and improving water quality and soil health. The HCSWCD will continue to provide support and information to landowners wanting to improve the soil health and water quality in their community. This year, the no-till drill was used by five operators for a variety of purposes to improve their pastures.



HENDERSON SOIL & WATER CONSERVATION DISTRICT

Spot Checks and District Sponsors

SPOT CHECKS

Each year the Henderson County Soil & Water Conservation District (HCSWCD) is required by the NC Division of Soil & Water to conduct spot checks on a minimum of five percent of all active contracts installed in the county. When conducting the spot checks, the HCSWCD Board and staff visit landowner's properties and check the condition and maintenance of the practice that was funded using NC Agriculture Cost Share, NC Agricultural Water Resources Assistance, or Community Conservation Assistance Program funds. This year's spot checks were conducted in April and May.

HENDERSON COUNTY SOIL & WATER CONSERVATION DISTRICT SPONSORS

The businesses listed below support the work and programs of HCSWCD. We are very grateful for our sponsors!

 <p>Saint Paul MOUNTAIN VINEYARDS</p>	 <p>AgHC AGRIBUSINESS HENDERSON COUNTY</p>	<p>Liz Taylor, AFIS, CISR, CPIW Farm & Crop Insurance Agent Morrow Insurance Agency 800 Beverly-Hanks Centre Hendersonville, NC 28792 (828) 694-5146 Desk (828) 768-6197 Cell</p>	<p>We Would Like To Thank Our Sponsors!</p>
<p>Service comes standard with your auto coverage.</p> <p>828-698-5534 www.ncfarms.com Helping you in what we do best. Get Real Auto-Home-Life-Health</p> 	 <p>Burntshirt VINEYARDS Producing Award Winning Wines</p> <p>2695 Sugarloaf Road Hendersonville, NC 28792 828-685-2402 www.burntshirtvineyards.com</p>	 <p>Moore Farm Equipment, Inc.</p> <p>201 Duncan Hill Road Hendersonville, NC 28792 (828) 693-4968 Fax (828) 692-1532</p> <p>Jerry Moore General Manager Bobby Moore Parts Manager Wendie Chastain Sales</p>	 <p>HILLSIDE NURSERY WHOLESALE COMPANY "For the Best in Trees and Service" P.O. Box 1390 1 Summerwind Drive Etowah, NC</p> <p>KEN ALLISON 828 / 891-3893 FAX 828 / 891-2871</p>
 <p>Custom Printing • Copies Multi-Part Invoices • Forms Envelopes • Letterheads • Invitations Business Cards • Labels • Tags Newsletters • Graphic Design WIDE-FORMAT 12" - 44" WIDE</p> <p>Serving Henderson County Since 1921!</p> <p>127 3RD AVE. WEST • HENDERSONVILLE, NC 28792 828-693-7380 www.flanaganprinting.com</p>	 <p>RI RESOURCE INSTITUTE</p>	<p>NORTH RIVER FARMS Specializing in High Quality Horse Hay</p> <p>Hay • Grains • Forage • Produce Jason Davis, owner/operator Candace McLaughlin 3333 North Mills River Road Mills River, NC 28759 828-890-5316 NorthRiverFarms3333@gmail.com NorthRiverFarms.co</p>	 <p>Kirby Johnson Vice President</p> <p>Mailing Address: Toll Free: (866) 721-7988 P.O. Box 609 Office: (828) 890-3630 Horse Shoe, NC 28742 Ext. 237 Physical Address: Fax: (828) 890-1019 331 Banner Farm Road Mobile: (828) 329-8622 Mills River, NC 28759 Email: kirbyj@flavor1st.com</p>
 <p>Fernando Villa Contractors license #3447 1fercito87@gmail.com (828) 551-8740 2023 Old Spartanburg Rd Hendersonville, NC</p> <p>Villa's Landscaping High Quality Landscaping www.villaslandscapingnc.com</p> <p>We are focused to create the best and high quality landscapes. We are professional, licensed and insured.</p>	 <p>FARM CREDIT</p> <p>Brooks Owenby Commercial/Ag/Consumer Loan Officer www.brooksowenby@carolinafarmcredit.com 2549 Chimney Rock Hwy., Hendersonville, NC 28792 office 828.693.0272 ext. 1103 cell 828.774.9772 fax 828.693.0274</p> <p>CAROLINAFARMCREDIT.COM NMLS # 1840397</p>	 <p>FLETCHER LAWN & GARDEN HARDWARE</p> <p>Sammy Johnston, Owner 38 Johnston Street, PO Box 96 • Fletcher, NC 28732 Telephone (828) 684-0561 www.fletcherlawnandgarden.com</p>	 <p>TURF MOUNTAIN SOD, INC.</p> <p>3277 Chimney Rock Road Hendersonville, NC 28792</p> <p>www.turfmountain.com Email: turfmountain@bellsouth.net</p> <p>828-685-3642 Fax: 828-685-1121</p> <p>Blessed by Our Heritage - Legacy Farming For Generations</p>

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Board of Supervisors and Staff

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DISTRICT SUPERVISOR



Chairman
48 Years of Service

GREG HOYT
DISTRICT SUPERVISOR



Vice-Chairman
33 Years of Service

WAYNE CARLAND
DISTRICT SUPERVISOR



Treasurer
20 Years of Service

DANIEL MCCONNELL
DISTRICT SUPERVISOR



Secretary
33 Years of Service

JERRED NIX
DISTRICT SUPERVISOR



Member
4 Years of Service

DISTRICT AND NRCS STAFF



**Left to Right: Emily Nelson,
April Hoyt, Jonathan Wallin,
Betsy Gerwig, and Caroline
Wicker**