

ANNUAL REPORT



Henderson County

Soil & Water Conservation District

FY 2023



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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 2023 fiscal year (July 1, 2022, through June 30, 2023). 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 (HCSWCD) 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 18 BMPs in the 2023 fiscal year. The Henderson County Soil & Water Conservation District received \$97,907 in program funding from the NC Division of Soil & Water Conservation. These funds were allocated to cooperators for the implementation of the following BMPs: Agrichemical Handling Facility and Critical Area Treatment in orchards/vineyards. In addition, 2,085 feet of orchard spray lanes were stabilized.



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 BMPs to conserve and protect water resources;
- Increase water use efficiency; and
- 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, \$31,000 of AgWRAP funds were received in 2023 to meet these goals. This year three agricultural wells were constructed to supply water for irrigation. This funding will help to increase water storage capacity.



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. 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. HCSWCD was awarded \$25,000 for stream bank stabilization. The project will stabilize approximately 500 feet of stream bank, remove invasive plants, and install native plants. As part of the design, an educational access area was included for students to access the stream for STEM learning opportunities. The construction of the new stream corridor was completed in April 2023. Educational signs, benches, and native plants will be installed this fall.



The site before construction



Under construction



In the final stages



Community Conservation Assistance Program

Additionally, the District's Conservation Engineer conducted 36 site visits to provide recommendations for improvement to landowners and provided answers to a variety of soil- and water-related questions. Thirteen written responses were developed. These assessment reports provided recommendations for improvements, site photos with descriptions of recommended improvements, and resources for further study and/or assistance. Site visits and responses evaluated streambank erosion, stormwater runoff, drainage, erosion, and flooding. Photos below depict examples of issues seen in the County this past year.

Several CCAP projects are under construction and will be completed in the Fall of 2023.



Natural Resources Conservation Service

One of the main Farm Bill Programs that the Natural Resources Conservation Service (NRCS) administers is the Environmental Quality Incentives Programs (EQIP) to assist landowners in applying conservation BMPs on their working agricultural lands. EQIP supports the conservation priorities established for HCSWCD. BMPs 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, 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.

NRCS and HCSWCD were able to partner on several projects to best meet the needs of the landowner as well as their resource concerns. Historically, some of these have included, but were not limited to, water wells and agrichemical handling facilities, streambank restoration, livestock watering facility, and pipeline installation.



**United States
Department of
Agriculture**

Educational Programs

School Groups

It was our busiest year yet in the schools! Coming off of pandemic restrictions, the schools were excited to reach out to organizations to enhance classroom learning, and we were fortunate to be included! We delivered a record-breaking 178 presentations this year for almost 4,000 students across Henderson County. When the weather cooperated, almost all of our classes were held outside, enhancing our programming. We are very thankful to all the teachers that invited us into their schools throughout the year!

New Lessons!

In order to better meet the needs of teachers in our county, we're working to increase the number of lesson options we offer. After numerous requests from teachers we work with, we developed a number of new programs this past year! These include lessons on Ecosystems, a STEM Earthquake activity, and the Carbon Cycle. These programs are developed using input from teachers and a review of the NC Essential Standards to enhance the topics delivered in the classrooms.

Summer School

Summers have been busy! Partnering with Henderson County Public Schools has allowed us the opportunity to provide dynamic hands-on programming to students attending the Summer Learning Programs throughout the county. Elementary-aged students learned more about water through our "All About Water" program. This program combines our most popular activities from our water lessons into one exciting program. Middle school-aged students experienced hands-on learning through our STEM Earthquake activity. Students needed to build structures out of spaghetti noodles and mini marshmallows to meet certain height and base requirements. These structures then met our "Shake Table" that simulated an earthquake to see how their designs would hold up. These programs were a great opportunity for some extra hands-on learning in the summer months!

Envirothon

The NC Envirothon is an exciting natural resource education program designed to challenge students in an interactive, outdoor competition where middle and high school teams are tested in areas of Wildlife, Forestry, Aquatic Ecology, Soils and Land Use, and Current Environmental Issues. Students study large resource manuals combined with hands-on learning opportunities to discover more about the natural world.

This year Henderson County had THREE Future Farmers of America (FFA) teams participate in the Envirothon competition! Students from both North and West High schools met after school during the spring to enhance their understanding of natural resources. All three teams competed at the Area 1 Competition on March 28, 2023, at the Research Station in Waynesville. We had excellent weather and great presenters, and it was a fantastic learning experience for all involved. It was the first time attending for each of these teams and we were so proud of all the effort from the students! West High FFA placed 4th for the Area 1 Competition in the

Educational Programs

Continued: Envirothon

High School Division! While scheduling conflicts prevented them from attending the State Envirothon, North FFA Purple and North FFA Gold teams were able to qualify for the state event. Both North High teams represented Henderson County during the state NC Envirothon competition on April 28 and 29. It was a great learning experience for all involved and we're so proud of all their hard work and dedication!

Community Events and Workshop

Every year, HCSWCD provides outreach and educational materials at various community festivals, events, and workshops. This year we were proud to participate in NCSU Tomato Field Day, the Mountain State Fair, Winter Apple School, Land Judging events, and various Voluntary Agricultural District presentations. We also brought our Conservation Learning Center educational trailer to Hendersonville's first EarthFest event. Great weather and an amazing location brought a huge crowd to our trailer to learn more about soil and water conservation. Families participated in our interactive exhibits and in a soil scavenger hunt in our new trailer. The Conservation Learning Center was even featured by the local news channel WLOS 13 during the event!



Our educational trailer at a community event

Educational Programs

Kids in the Creek STREAMING Ahead!

The Henderson County Soil & Water Conservation District would like to thank the numerous partner organizations and various community members that volunteered their time to make the Kids in the Creek program a success during the year. This year we were able to expand our program to meet the needs of four local schools!

Students spent the days attending seven to ten sessions related to water quality. Students had hands-on opportunities to survey the stream and collect aquatic life, properly identify macroinvertebrates found in the river; take water samples and conduct water quality testing, learn more about the process of water filtration through the water cycle, learn about stormwater in Henderson County, learn about recycling and its effects on water quality, and even play a game where students were able to “be” aquatic life.

In order to meet the needs of the school and the amount of planning involved, these Kids in the Creek events are spread throughout the year to reach the most students possible. Local Henderson County STEM camps kicked off the season with 40 students attending two different “mini” Kids in the Creek events during their STEM Camp weeks. In the fall, Hendersonville Middle brought 187 students to Mills River Park to learn more about water quality. A few weeks later the local Homeschool Co-op had the opportunity to also learn more about Kids in the Creek with 26 participants. In October, we partnered with Flat Rock Middle to join them for their Kids in the Creek at Dupont State Park. The entire eighth grade (240 students) was able to learn more about macroinvertebrates and stream health along with the hydrologic cycle. This was also a great opportunity for Soil & Water Conservation to interact with 65 community members hiking the local trails who were curious about macroinvertebrates and water quality in Western North Carolina.



A collection of macroinvertebrates

Educational Programs

Continued: Kids in the Creek STREAMING Ahead!

After a winter break, we were back in the streams this spring, with Rugby Middle School bringing 250 students to Mills River Park. This was followed by Fernleaf Community Charter School bringing 48 students in eighth grade to also learn more about water quality. Over the course of the year, we've worked hard to expand this program to reach more students and members of our community. In our busiest Kids in the Creek programming year yet, we reached 856 participants over nine days of programming. Our goal is to always be available to all local schools who want to partner for this event, with the hopes that every eighth-grade student in the county has the opportunity to learn more about water quality through hands-on exploration.

Great weather and great host sites allowed students to reinforce concepts discussed in the classroom. This event could not have been a success without the volunteer efforts of the Henderson County Soil & Water Conservation District, The Division of Soil & Water, Farm Service Agency, City of Hendersonville Stormwater, City of Asheville Water, Mills River Parks and Recreation, Dupont State Park, Riverlink, Henderson County Environmental Programs, Mills River Partnership, Greenworks, The Community Foundation, MountainTrue, Henderson County Public Schools, Hendersonville Middle School, Flat Rock Middle School, Fernleaf Community Charter School, Rugby Middle School, and various community members who gave their time for this event. We truly appreciate all our great partner organizations that make these events a success! It takes an entire crew to make these programs dynamic and a great hands-on experience for students!

Professional District Employees Program

The Professional District Employees Program is managed by the District Employees association. This program has the following goals:

- To make the position of District Employees more professional,
- To make the general public more aware of the duties and responsibilities involved with the position of District Employees,
- To stimulate Employees of Districts to augment their education and to increase their general knowledge,
- To become better qualified for the position by completing the course work and other activities which will enhance the work that is being performed, and
- To create and enhance the District Employees' pride in their chosen profession.

This year April Hoyt, our Education Coordinator, earned a plaque for obtaining the Master I Certification level. This level takes years of work to obtain. Congratulations to April for her hard work!

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs

Education Contests

Every year, the North Carolina Association of Soil & Water Conservation Districts sponsors poster, essay, and speech contests for third- through twelfth-grade students. This contest year added the slideshow competition and additional contests for middle school and high school 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 2023 was “Water ... The Cycle of Life.” 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.

Students worked hard to create visually stunning conservation posters and slideshows for this year’s contest and to write essays reflecting the contest theme.

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

GRADE	CONTEST	PLACING	STUDENT	SCHOOL
4 th	Poster	1 st	Amari L.	Bruce Drysdale Elementary
4 th	Poster	2 nd	Skylar A.	Bruce Drysdale Elementary
4 th	Poster	3 rd	Reagan M.	Classical Scholars
5 th	Poster	1 st	Evelina K.	Upward Elementary
5 th	Poster	2 nd	Wright A.	Bruce Drysdale Elementary
5 th	Poster	3 rd	Naomi B.	Upward Elementary
5 th	Poster	School Winner	Evie K.	Classical Scholars
5 th	Poster	School Winner	Lilleanna P.	Sugarloaf Elementary
5 th	Poster	School Winner	Brianna P.	Etowah Elementary
5 th	Poster	School Winner	Nancy G.	Etowah Elementary
5 th	Poster	Best Bilingual	Stefany R.	Upward Elementary
6 th	Essay	1 st	Alex L.	Classical Scholars
6 th	Essay	2 nd	Autumn B.	Classical Scholars
7 th	Essay	1 st	Brooks M.	Classical Scholars
7 th	Essay	2 nd	Amelia P.	Classical Scholars
7 th	Essay	3 rd	Paxton K.	Classical Scholars
8 th	Essay	1 st	Ava W.	Classical Scholars
8 th	Essay	2 nd	Caleb B.	Classical Scholars
8 th	Essay	3 rd	Aislean E.	Classical Scholars
8 th	Slideshow	1 st	Aria B.	Classical Scholars
8 th	Slideshow	2 nd	Seth F.	Classical Scholars

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs

Continued: Education Contests

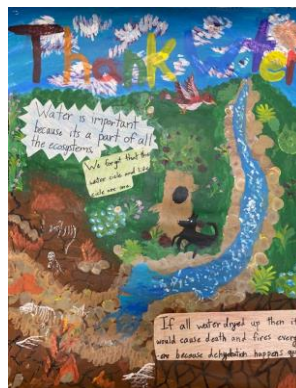
GRADE	CONTEST	PLACING	STUDENT	SCHOOL
HS	Essay	1 st	Ashton B.	Classical Scholars
HS	Essay	2 nd	Abigail D.	Classical Scholars
HS	Essay	3 rd	Isabella D.	Classical Scholars
HS	Slideshow	1 st	Marie M.	Classical Scholars
HS	Slideshow	2 nd	Amy M.	Classical Scholars
HS	Slideshow	3 rd	Natalie M.	Classical Scholars

Thank you to the 182 students and five schools that participated in this year's contests!

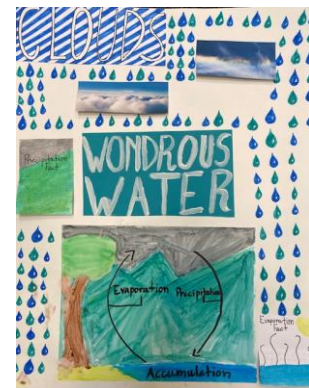
Two of our winners placed at the Area 1 competition! Congratulations to Ava and Marie for placing 1st out of all entries from 16 western NC counties! Their submissions then advanced to the State Level Competition! Congratulations to AVA for being the 1st Place STATE WINNER for the eighth-grade essay. Congratulations to MARIE for being the 2nd Place STATE WINNER for the high-school slideshow. We are so proud of these ladies for their hard work and the efforts of their teacher Mrs. Yvonne Krowka! State winners competed against other students from soil and water districts across the state of North Carolina.



Amari L. – 4th Grade 1st Place



Skyler A. – 4th Grade 2nd Place



Reagan M. – 4th Grade 3rd Place

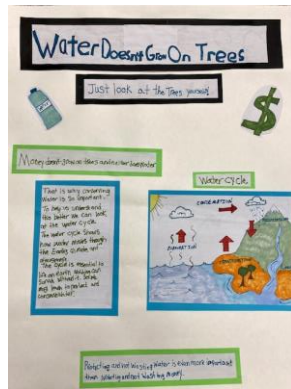
HENDERSON SOIL & WATER CONSERVATION DISTRICT

Educational Programs

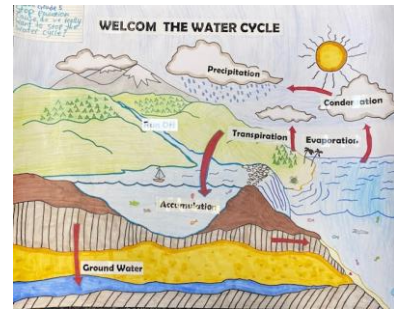
Continued: Education Contests



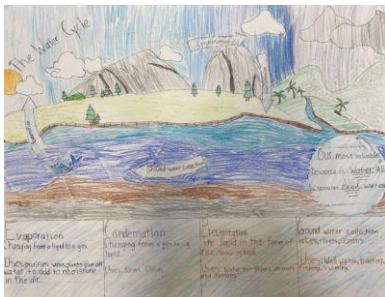
Evelina K. – 5th Grade 1st Place



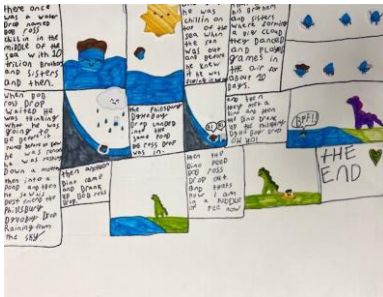
Wright A. – 5th Grade 2nd Place



Naomi B. – 5th Grade 3rd Place



Evie K. – 5th Grade School Winner



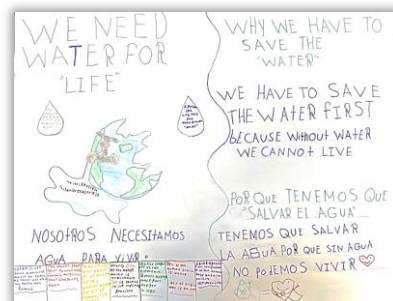
Brianna P. – 5th Grade School Winner



Nancy G. – 5th Grade School Winner



Lilleanna P. – 5th Grade School Winner



Stefany R. – 5th Grade School Winner

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Education Highlights

3
Envirothon
Teams



178
Presentations

182
Contest
Submissions

Including 2 Area and State winners!



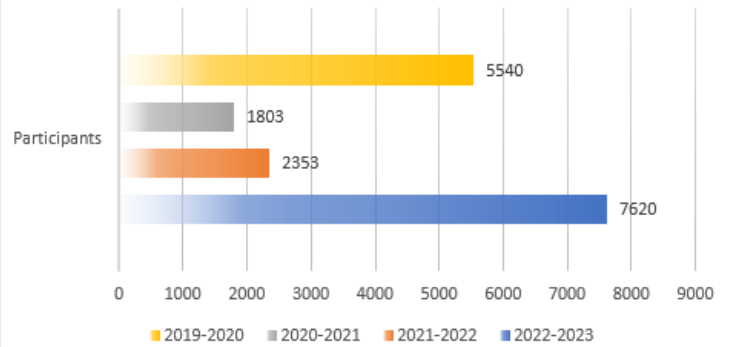
7620
Participants in
Educational Programs

856
Participants in
Kids In the Creek

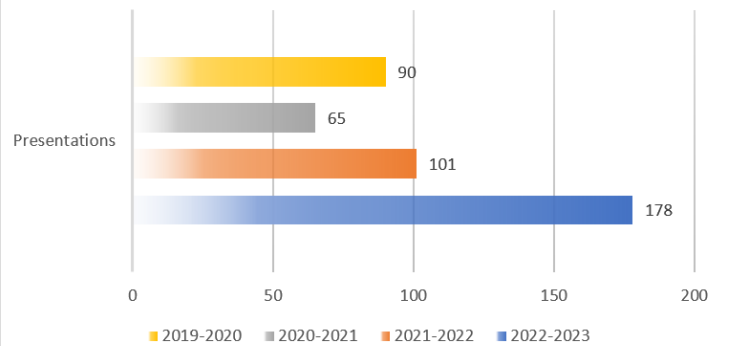


Our water programs were most popular this year!

PARTICIPANTS BY THE YEARS



PRESENTATIONS BY THE YEARS



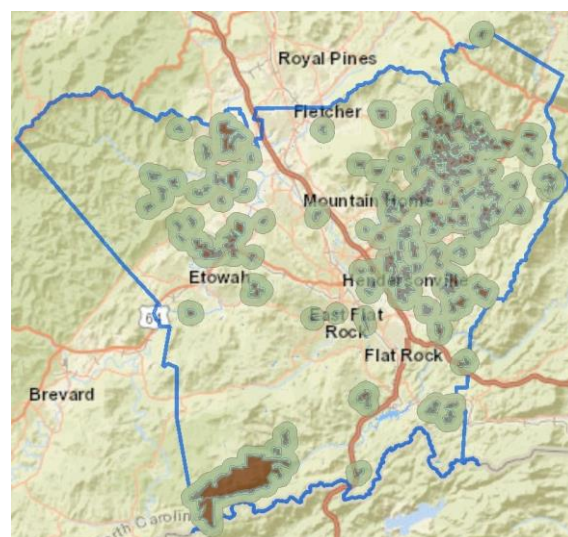
HENDERSON SOIL & WATER CONSERVATION DISTRICT

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 386 parcels, owned by 152 landowners and consisting of 11191.99 acres, are enrolled in the nine agricultural districts in the county.



**Henderson County
Voluntary Agricultural Districts**

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 Nonpoint Source Pollution Control Grant for the Mills River Watershed. The Mills River has historically moved on and off the 303(d) impaired listing.

HCSWCD has been working with MRP to install 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.

There were no projects in FY 2023 that SWCD was involved in. MRP was focused on completing other projects that had been delayed because of COVID-19 restrictions. Staff did provide technical assistance to several homeowners in the Mills River Watershed.



HENDERSON SOIL & WATER CONSERVATION DISTRICT

Spot Checks and District Sponsors

SPOT CHECKS

Each year, 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 on April 13, 2023.

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>Sammy Johnston, Owner 38 Johnston Street, PO Box 96 • Fletcher, NC 28732 Telephone: (828) 684-6564 www.fletcherlawnandgarden.com</p>	 <p>KIRBY JOHNSON VICE PRESIDENT 828-329-8622 Office: 828-890-3630 kirby@flavor1st.com</p>	 <p>Fernando Villa Contractors license #3447 1fercto87@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>AGRIBUSINESS HENDERSON COUNTY</p>
 <p>Kieran Roe Executive Director Office: 828.697.5777 x201 Cell: 828.231.9550 kieran@conservingcarolina.org 847 Case Street Hendersonville, NC 28792 conservingcarolina.org</p>	 <p>HILLSIDE NURSERY WHOLESALE COMPANY, LLC "For the Best in Trees and Service" P.O. Box 1390, 1 Summerwind Drive Etowah, NC 28729 KEN ALLISON 828 / 891-3893 sales@hillsidenurseryllc.com FAX 828 / 891-2871</p>	 <p>SAINT PAUL MOUNTAIN VINEYARDS</p>	 <p>NORTH RIVER FARMS EST. 1999 agriculture MILLS RIVER, NC 828-890-5316</p>
<p>Service comes standard with your auto coverage.</p> <p>828-698-5534 www.ncdms.com Helping you in what we do best. FARM BUREAU INSURANCE Get Real Auto-Home-Life-Health</p>	 <p>Moore Farm Equipment, Inc. 201 Duncan Hill Road Hendersonville, NC 28792 (828) 693-4966 Fax: (828) 692-1332 Jerry Moore General Manager Bobby Moore Farm Manager Wendie Chastain Sales</p>	 <p>TURF MOUNTAIN SOD, INC. 3277 Chimney Rock Road Hendersonville, NC 28792 www.turfmountain.com Email: turfmountain@bellsouth.net 828-685-3642 Fax: 828-685-1121 Blessed by Our Heritage - Legacy Farming For Generations</p>	 <p>RESOURCE INSTITUTE</p>
 <p>Brooks Owenby Commercial/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 CAROLINAFARMCREDIT.COM NMLS # 1840297</p>	 <p>MORROW Insurance Agency, Inc. 800 Beverly Hanks Centre Hendersonville, NC 28792 www.morrowinsurance.com E: ltaylor@morrowinsurance.com P: 828-694-5146 M: 828-768-6197</p> <p>Liz Taylor Vice President Crop Insurance</p>	 <p>Burntside VINEYARDS The Vintner's Table Restaurant Now Open! 2695 Sugarloaf Rd Hendersonville NC 28792 828-685-2402 burntsidevineyards.com</p>	<p>We would like to thank our sponsors!</p>

HENDERSON SOIL & WATER CONSERVATION DISTRICT

Board of Supervisors and Staff

ANDREW BRANNON
DISTRICT SUPERVISOR



Chairman
50 Years of Service

GREG HOYT
DISTRICT SUPERVISOR



Vice-Chairman
35 Years of Service

WAYNE CARLAND
DISTRICT SUPERVISOR



Treasurer
22 Years of Service

DANIEL MCCONNELL
DISTRICT SUPERVISOR



Secretary
35 Years of Service

JERRED NIX
DISTRICT SUPERVISOR



Member
6 Years of Service

DISTRICT STAFF



**Left to Right: April Hoyt,
Jonathan Wallin, and Betsy
Gerwig (not pictured:
Rebecca Hanna)**

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