

Winter
2014-2015



Zyashia Jones
2nd Place, 5th Grade Poster
Arden Elementary School

WWW.RCGOV.US/RSWCD

Richland Soil and Water Conservation District



In Memory of Chairman John V. Green



Richland Soil and Water Conservation District (RSWCD) Chairman John V. Green passed away on Tuesday, August 5, 2014, at the age of 84.

Born in Alexander, NC, Chairman Green was a son of the late Rufus Edgar Green and Thelma Gamble Green. He graduated from Ft.

Mill High School, attended Gardner Webb College, Clemson College, and graduated from the University of South Carolina (USC) with a Bachelor of Arts degree. He also attended the USC School of Law and received extensive military education.

With a long and distinguished military career including U.S. Army Korean War Service, 30 years in the Air Force Reserve, and numerous military awards, Chairman Green retired as a colonel from the U.S. Air Force Reserve and as a major general from the S.C. Military Department, where he served as the commander of the Joint Service Department.

Chairman Green was the president and owner of the John V. Green Realty Company and was the State Chair of the SC Committee for Employer Support of the Guard and Reserve. He also volunteered his time and leadership to more than a dozen civic and service organizations in the Columbia area, as well as to Richland County Council, where he served terms as Vice Chairman and Chairman.

South Carolina recognized Chairman Green's service with the State Commendation Ribbon, State Merit Ribbon, and State Honorable Service Ribbon, as well as the Order of the Palmetto—SC's highest civilian honor. The state legislature also named a state highway interchange in Chairman Green's honor.

Surviving are Chairman Green's wife of 62 years, Nora Jane Williams Green; daughters, Amanda Green-Fontaine (Ray) and Janet Holland (Sam); grandchildren, Grant Fontaine and Townes Holland; brother, Jerry L. Greene and his family; many nieces, nephews, and other extended family; and the family dog, Lilly Belle. He also leaves behind many cherished friends and acquaintances. He was predeceased by his brother, Gene Greene.

Chairman Green joined the RSWCD in 2005 and was elected to the office of Chairman in 2006. His leadership will be missed by all!

Commissioner Updates

Commissioners Jim Rhodes and Hemphill Pride were re-elected to the RSWCD board in the November election. Rhodes joined the RSWCD as an Associate Commissioner in 2011 and was appointed to fill a Commissioner vacancy in 2013. Pride has served on the RSWCD since his first election in 2003. They join Commissioners Heath Hill and Kenny Mullis and Associate Commissioners Mary Burts and Jeff Laney on the RSWCD's leadership team.

Commissioner Kenny Mullis was named Chairman of the RSWCD in September.

In SC, Conservation Districts are governed by boards of five Commissioners. Three Commissioners are elected in the general election and two are appointed by the Board of the SC Department of Natural Resources. These Commissioners volunteer their time and talents to protect and conserve natural resources.

Join the Carolina Cover Crop Connection!

The Carolina Cover Crop Connection is an online forum for cover croppers to share experiences and information. With 118 members and growing, this Facebook group is an extension of a soil health initiative led by Dr. Buz Kloot (USC) and the Marlboro, Dillon, and Richland SWCDs through Conservation Innovation Grant funding from the USDA-Natural Resources Conservation Service (NRCS).

<https://www.facebook.com/groups/carolinacovercropconnection/>



Soil Health Field Day at Carter Farms



The RSWCD hosted more than 100 farmers and natural resource professionals at a Soil Health Field Day at Carter Farms in Eastover on October 7th. Jason Carter, owner/operator of Carter Farms, is a participant in an RSWCD Conservation Innovation Grant initiative to demonstrate the potential for multi-species cover crops, no-till farming, and biological soil tests to improve soil health and reduce the application of synthetic fertilizers.

Carter, NRCS State Agronomist Gordon Mikell, and USC Research Professor Dr. Buz Kloot led participants in sessions describing the characteristics of healthy soil, biological soil testing, and the “hows” and “whys” of cover cropping.

“The soil health movement has been driven by farmers who have used cover crops as a primary tool to drive the biology in their soils. Estimates are that between 2008 and 2013, the acreage under cover crops has increased by over 500%,” says Kloot, “and we are only beginning to scratch the surface.” While reduced tillage is necessary to preserve soil structure and soil organic matter, no-till alone cannot revitalize working lands or protect soil and water quality. For maximum benefit, it must be coupled with cover crops which feed the soil and, more importantly, the soil organisms.

Carter has been farming strip-till or no-till for nearly two decades, but he planted his first cover crop only two years ago. Pleased with the first year results and encouraged by stories coming from farmers like Ray Styer and Curtis Furr of North Carolina, Carter continued rotating his cash crops of corn and soybeans with multi-species cover crop blends, added chicken litter as an alternative nutrient source, and has consequently seen steady improvements in soil health and fertility. The organic matter in his loamy sand has increased from 0.6% to 1.0% in two years—a substantial increase which scientists once said couldn’t be done—and he now finds as many as six earthworms per square foot in crop fields. Two years ago, there were none.

With these changes, Carter has been able to lower his production costs. He cut his synthetic fertilizer application by 75% and pesticide application by half in the 2014 growing season, cost savings that easily compensated for the expense of planting the cover crops. His corn yields remain unchanged, and his crops are more resilient to drought thanks to the increased moisture retention in cover cropped soils.

This winter, Carter has planted a cover crop blend containing daikon radish, hairy vetch, dwarf Essex rape, crimson clover, berseem clover, jerry oats, and Abruzzi rye. He is working with the RSWCD, USC, NRCS, and others to evaluate the impact these practices have on soil health and crop yields, and he hopes other farmers will benefit from what’s learned.

“I want people to see that cover crops will work in South Carolina, that we can increase our soil organic matter, reduce our use of commercial fertilizers and pesticides, and still maintain the same yields,” Carter says. “It’s exciting to see this much interest in cover crops—people want to learn more about them, and I hope the interest will continue to grow.”

Biological Soil Testing

Traditional fertility recommendations assume that soils do not hold significant stores of plant-available nitrogen (as measured by soil nitrates). While this assumption may be valid in degraded, conventionally-tilled fields with little organic matter, the assumption breaks down in healthy soils which have been cover-cropped and are not tilled. In these latter soils, significant amounts of plant-available nitrogen are organic, which traditional soil tests do not measure. As a consequence, nitrogen is over-applied. To gain a more complete picture of soil fertility in healthy soils, farmers are beginning to use biological soil tests, such as the Haney Soil Health Test, to measure organic nitrogen pools and supplement their standard soil test results.



Some biological soil tests use color-changing paddles to indicate soil respiration, which serves as a proxy for soil nitrogen.

2014 Staff Updates



1. Quinton Epps has been hired as the new Director of the Richland County Conservation Department, which

provides staff support to the RSWCD. Epps is no stranger to Richland County, having served as Flood Coordinator and Stormwater Manager since 2010. He also has experience as an environmental consultant, Department of Health and Environmental Control program manager, research biologist with the World Wildlife Fund, and Peace Corps agricultural extension agent in the Central African Republic. His specialties include

mitigation banking, stream restoration, and wetland and floodplain management.

2. Former RSWCD Organic Richland Intern Katie Eisenhauer married Harrison Dover in Pennsylvania in September. Congratulations, Katie and Harrison! Katie now works as Broiler Service Technician for Columbia Farms in Leesville, SC, where she oversees animal welfare and vaccinations, inventories, and assists with farm management.

3. Erin Eisele, former RSWCD Organic Richland employee and Midlands Local Food Collaborative Program Coordinator, has become Store Manager at Charleston Cooks and married James Alford at a ceremony in North Carolina in June. Congratulations, Erin and James!

4. Administrative Assistant Charlie Fisher and Education Coordinator **Chanda Cooper** returned from SC Conservation District Employee Training with the People's Choice Award for their District-inspired centerpiece. The Centerpiece Competition is an annual event that encourages Districts to share information about their mission and programs in a creative manner.

In March, a Haney Test measured 35 lbs N/acre already present in the soil of Jason Carter's corn fields. Carter grew a 10,000 lb/acre cover crop of vetch and clover with an estimated nitrogen content of 3-4%, generating an estimated 300-400 lbs N/acre. Much of this cover was rapidly consumed by the soil fauna after the cover crop was terminated in April, with the nitrogen being mineralized in the process.

The standard soil test did not account for these organic nitrogen sources and assumed no nitrogen was present. The nitrogen recommendation for corn is 1.0-1.25 lbs N/bu, so given Carter's target yield of 175 bu/acre, the standard recommendation (not accounting for organic nitrogen already present in the soil) was therefore to apply 175-218 lbs N/acre.

Having faith in the Haney Test and in the organic stores of nitrogen provided by his cover crop, Carter applied 2.5 tons of chicken litter per acre (about 80 lbs N/acre) and 50 lbs/acre of commercial nitrogen, for a total of 130 lbs N/acre—far short of the standard recommendation. During the growing season, he was not without some anxiety about this decision (as were Dr. Buz Kloot and Gordon Mikell who provided technical assistance), but in mid-August, Carter harvested 175 bu corn/acre, vindicating the risk he took and the science behind the decision. Clearly more research and data are needed, but Carter and other progressive farmers are blazing a trail for others to follow.

Video: <https://www.youtube.com/watch?v=ACdlsqjbHXg>



Eastern Bluebird Workshop

Families and individuals built 23 Eastern Bluebird nest boxes at a recent workshop sponsored by the RSWCD and the Environmental Education Association of South Carolina at Pontiac Elementary School.

Workshop speakers Michelle Ashley, a teacher at Pine Ridge Middle School, and Jim and Sharon Burke, representatives of the SC Bluebird Society, provided an overview of bluebird biology and guidance for managing bluebird habitat at home and at school. Pontiac educators Lisa Collins and Wendy Myers spoke about their kindergarteners' bluebird unit study. Then, each family built a nest box to take home.

"We've had numerous bluebirds visit our [box] already," said Angela Vandelay two weeks after the workshop, which she attended with her two children.

Bluebird nest box plans are available online at www.nabluebirdsociety.org. Nest boxes should be well-ventilated, water tight, and have drainage holes. Ideally, they are installed 50-200' from heavily wooded areas and face toward a tree or shrub which provides a landing point for fledglings.

>> This multi-generational project brought families together for a fun, conservation-related activity!



Future of Midlands Farms and Food Summit Participants Envision Change



The Future of Midlands Farms and Food Summit was held at the State Farmers Market on August 4, 2014. More than 100 people participated in the event, which included special presentations by Jack Shuler (Palmetto Agribusiness Council), Scott Park (Greenville County), Sara Clow (GrowFood Carolina), Kevin

O'Connell (The Produce Box), Tony Kleese (EarthWise), Rochelle Sparko (Carolina Farm Stewardship Association), and others.

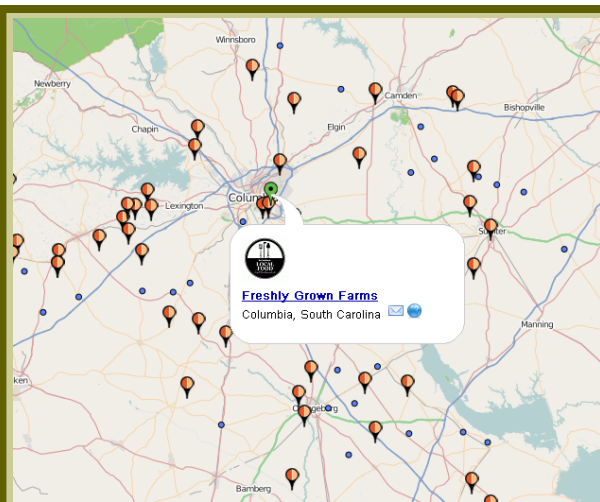
Priority areas for future Midlands food systems efforts were identified: increasing agriculture education, improving land access, expanding the Farm to School and Farm to Institution programs, and solving labor access issues.

The Midlands Local Food Collaborative, a working group of organizations including the RSWCD and NRCS, continues to organize and catalyze local food system developments and is working with a new grassroots organization, the Midlands Food Alliance, to effect food system change. For more information about these efforts, visit www.midlandslocalfood.com or contact RSWCD Education Coordinator Chanda Cooper at cooperc@rcgov.us.

Mapping the Midlands Food System

Do you have a farm or local food-related business in the SC Midlands? If so, the Midlands Local Food Collaborative website hosts a FREE Local Food Finder powered by MarketMaker. Farm or business registration is fast and simple, and registered farms and businesses are displayed on a user-friendly map which will be included in future local food publications. Also check out the website for upcoming events, hot topics, resources, and feature stories about the Midlands food system.

www.midlandslocalfood.com



Five Schools Receive Conservation Mini-Grants

The RSWCD has awarded Conservation Education Mini-Grants to five Richland County schools this fall. These Mini-Grants will provide up to \$250.00 to support schoolyard conservation projects and provide environmental education opportunities for local students. This year's recipients are:

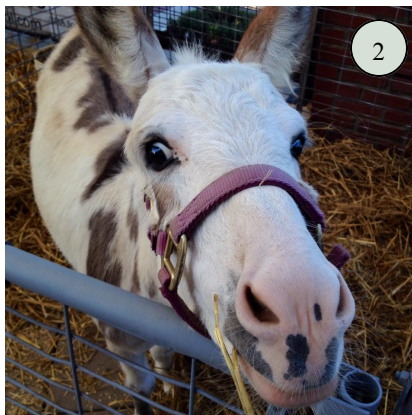
- A.C. Moore Elementary School (Nancy Frick)
Outdoor Classroom
- Catawba Trail Elementary School (Vikki Pasco)
Greenhouse and Blueberry Orchard
- L.W. Conder Elementary School (Karen Brown)
Wildlife Habitat
- Longleaf Middle School (Kristin Ziegler)
Indoor Air Quality Initiative
- Montessori School of Columbia (Sue Cate)
Wildlife Habitat

"Many of our students do not have the opportunity to observe wildlife in its natural habitat," says grant recipient Karen Brown. Installing a wildlife habitat on the school playground "will encourage wildlife to visit" and "give our students the chance to enjoy and observe insects, birds, small mammals, and reptiles."

Sue Cate, a teacher at the Montessori School of Columbia, adds that the projects supported by Mini-Grant funds "directly support [her school's] long-standing mission to teach students how to be good stewards of our earth and natural resources."

Faculty and staff members of Richland County schools are eligible to apply for Conservation Education Mini-Grants to support campus conservation projects. The next application deadline is February 13, 2015. Details and the application are available online at www.rcgov.us/rswcd.

Recent Events



1. Education Coordinator Chanda Cooper staffed a wildlife and conservation booth at the Summer Celebration of Water, a free festival hosted by Richland and Lexington Counties at Riverfront Park in August.
2. The RSWCD coordinated agricultural education activities at FarmVille, an annual children's event hosted by EdVenture Children's Museum. Participants were able to meet common farmyard animals, learn to throw a lasso, shell and grind corn, plant seeds, and explore a hay bale maze.
3. In November, the RSWCD joined Dr. Buz Kloot (left) for fall Conservation Innovation Grant (CIG) fieldwork. The research team collected soil and biomass samples from cover cropped fields, including those belonging to Dillon County CIG participant Carl Coleman (right). The CIG is a cooperative effort between the Richland, Dillon, and Marlboro SWCDs; USC, and NRCS.
4. Annual SC Conservation District Employee training was held at Saluda Shoals Park in Lexington, SC this year. Many thanks to the Lexington SWCD team for a great event!
5. An invasive species removal workday at Granby Park was organized by Richland County Sustainability Manager Anna Lange in October. The RSWCD participated in the event, whose main goal was to remove invasive Chinese and Japanese privet. Privet is an invasive shrub or small tree capable of forming dense thickets which outcompete desirable native vegetation.



2014 Arbor Day

Thirty-six student entries have earned recognition and cash prizes in the 2014 Richland County Arbor Day Youth Contests sponsored by the RSWCD. This year's contest theme was "If Trees Could Talk," and students were challenged to develop messages from trees' perspectives using a variety of media. Responses ranged from colorful posters urging readers to "Cut Me Down and Plant More" (Amariyé Jordan, 5th Grade, Burnside Elementary School) to a vocal performance called "Let Me Grow" (John Hicks, 5th Grade, Center for Knowledge), a parody of the popular hit song "Let it Go" from Disney's *Frozen*. The contests were open to all Richland County students in grades K-12.

In recognition of their exceptional efforts to engage students in Arbor Day activities, three participating schools have been selected to receive this year's School Spirit Awards: Arden Elementary, Annie Burnside Elementary, and the Center for Knowledge. Teachers George Sims, Kari Ochoa, and Ashley Saunders were tireless advocates for Arbor Day education at these schools. A

complete list of winners is available online at www.rcgov.us/rswcd.

The RSWCD celebrated Arbor Day with performances and tree plantings at two local schools on Friday, December 5th. Cast members from EdVenture Children's Museum presented a tree-themed play for preK-2nd graders at Webber Elementary School, and educational entertainer Tim Womick performed for 3rd and 5th grade students at Horrell Hill Elementary School. After the presentations, students and faculty members planted trees on each school campus. Richland County Councilman Kelvin Washington and Council Chairman Norman Jackson presented Arbor Day proclamations to each school.

Arbor Day is a holiday set aside to plant, care for, and celebrate trees. The first Arbor Day was celebrated in Nebraska in 1872. While several states observe Arbor Day in spring, South Carolina celebrates Arbor Day on the first Friday in December because winter is the best time for planting trees in our climate.



MaryKathryn Davidson
1st Place, 9th Grade Poster
Homeschool



Left: Councilman Kelvin Washington and a cast member from EdVenture Children's Museum plant a pecan tree at Webber Elementary School following a performance of the play *Ellie and Evie Branch Out*, based on the book *A Busy Year* by Leo Lionni.

Center: Educational Entertainer Tim Womick from Asheboro, NC, leads students at Horrell Hill Elementary through an interactive exploration of the many things trees provide. One lesser-known tree product is cellulose, a food additive used to improve texture, replace fat, and increase fiber content in products from ice cream to shredded cheese.

Right: RSWCD Associate Commissioner Jeff Laney, Horrell Hill Elementary Assistant Principal David Thorpe and Principal Parthenia Satterwhite, RSWCD Education Coordinator Chanda Cooper, and Educational Entertainer Tim Womick plant a sycamore tree at Horrell Hill in celebration of Arbor Day.

Organic Richland Initiative Bears Fruit at Foxberry Farm and Vineyard

In 2011, the RSWCD initiated Organic Richland, a cooperative program with the USDA-Natural Resources Conservation Service (NRCS), to promote and support local, sustainable, and organic agriculture. One of the first outreach events associated with the program was an Agricultural Cost-Share Information Session. District Conservationist Ajoa Harris spoke about NRCS conservation programs, including the Environmental Quality Incentives Program (EQIP), which provides financial cost-share incentives for farmers to implement conservation practices.

Ann Pringle Washington and her husband, Richard, credit this event with catalyzing conservation efforts on their own Foxberry Farm and Vineyard in Eastover, SC. Foxberry Farm and Vineyard is a beautiful 17-acre haven located off Old Eastover Road and bordering natural wetlands. With NRCS assistance, the Washingtons have developed a farm management plan and received cost-share incentives for a seasonal high tunnel, micro-irrigation, mulch, and the deactivation of an old well. They are now growing a wide variety of fruits and vegetables and have installed a muscadine vineyard, berry patches, and a pecan orchard.

The Washingtons are committed to sustainable and organic practices. "We believe in a naturalistic approach to farming, no chemicals," says Ann. She is also a strong advocate for community involvement and education and plans to develop Foxberry into "a kid-friendly experimentation farm." This November, she organized the first annual Richland County Farm Expo to share farming, gardening, health, and nutrition information with the Lower Richland community. This event, co-sponsored by NRCS, the RSWCD, and several other partners, helped spread the message of conservation to new audiences.

Upper Right: Ann Pringle Washington shares ginger she and husband, Richard, grew in low tunnels at Foxberry Farm and Vineyard. **Lower Right:** Amaranth is a traditional crop whose gluten-free seeds are rich in protein.



International Year of Soils: 2015



Photo by NRCS

The United Nations launched the 2015 International Year of Soils (IYS) in New York City on World Soil Day, December 5th, 2014. SC-NRCS representative Amy Overstreet, pictured at left with NRCS Deputy Chief Dave Smith, participated in the event and is coordinating US efforts to celebrate the IYS.

"It was amazing to witness world leaders coming together to focus attention on soil—the natural resource which is integral to NRCS's mission! I was beaming with pride as I thought about the invaluable contributions NRCS has made to soil health and soil science over the nearly 80 years since our agency began working with farmers to protect and improve soil resources," says Overstreet.

IYS was designated to raise awareness about the importance of soils for food security and ecosystem services. For more information about IYS, visit the NRCS IYS page at <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/fl/home/?cid=STELPRDB1264830>.

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Thank you for your support!



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Affiliate Members are a vital part of our conservation team. The financial support given by Affiliates helps us carry out many of our conservation and stewardship programs within the County. Please support our efforts by becoming an Affiliate Member today! Affiliate Memberships are good for **one year** from the date of application. Contributions are tax deductible.

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*Titanium Affiliates' logos can be featured in the RSWCD's quarterly newsletter. If you would like your logo included, e-mail the file to cooperc@rcgov.us.

Membership Information

Name: _____

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****Conservation Education Mini-Grants** are awarded to local schools to support conservation projects each fall and spring. Mini-Grants sponsored by individuals or organizations will be awarded through the standard RSWCD award process and donors will be recognized in publicity materials.

Please return this form and a check made payable to Richland Soil and Water Conservation District to the address below:

Richland Soil and Water Conservation District
2020 Hampton Street, Rm. 3063A
Columbia, SC 29204

Thank you for your support!