

Fall
2016



Coneflowers at Singing
Oakes Garden,
Blythewood

WWW.RCGOV.US / RSWCD

Richland Soil and Water
Conservation District



Mini-Grants Provide up to \$500 to Support Classroom Conservation

Faculty and staff members of public, private, and alternative schools in Richland County are eligible to apply for up to \$500 in funding to support campus conservation projects and youth environmental education initiatives through Conservation Education Mini-Grants and Clean Stream Columbia Awards. Two award cycles are available: applications received by **October 7, 2016** will be considered for fall 2016 funding; applications received by **February 3, 2017** will be considered for spring 2017 funding. Project work and the expenditure of funds must be completed by **June 15, 2017**.

Mini-Grants may be used to support conservation-related student projects including, but not limited to, outdoor classrooms, school gardens, nature trails, wildlife habitats, rain barrels, composting initiatives, air quality campaigns, litter clean-ups, rain gardens, erosion control, and stream bank restoration. Awards are competitive and proposals will be evaluated on the project's conservation impact, feasibility, student and community involvement, and educational outcomes.

All schools located in Richland County (including the City of Columbia) are eligible



A spring 2016 mini-grant funded a student-led water quality monitoring program at Dent Middle School. Eleven school projects were funded through the mini-grant program in the 2015-2016 school year.

to compete for Conservation Education Mini-Grants; schools located in the City of Columbia are also eligible to compete for Clean Stream Columbia Awards for certain projects that promote, protect, or improve water quality. Funding for these awards is provided by the Richland Soil and Water Conservation District (SWCD) and the City of Columbia. The application is online at www.rcgov.us/rswcd. For more information, contact (803) 576-2080.

2016 Arbor Day Youth Contest: "Talking to Trees"

If you could speak to a tree, what would you say? Would you sing it a love song, thank it for the goods it produces and the services it performs, or ask it questions about what it's like to be a tree? In this year's Arbor Day Youth Contest, Richland County preK-12 students are invited to explore this prompt through any of three media: Greeting Card, E-mail, or Performance Art. Submission instructions are online at www.rcgov.us/rswcd.

Contest winners will receive \$25 cash prizes. Entries may be

individual, group, or class projects, but only one cash prize will be awarded per winning entry. The contest is open to preK-12 students who live in, or attend school in, Richland County. The submission deadline is **October 21, 2016**. For more information, contact (803) 576-2080.



Equine Pasture Management: Healthy Horse, Healthy Land



Friday, September 16, 2016

9:00am – 2:00pm

*Lunch Sponsored by Pasture Management Systems
and Mixon Seed Company at*

Trinity United Methodist Church

90 Boney Road

Blythewood, SC 29016



Mixon Seed Company, Inc.



Pesticide Applicators

Receive 1.5 CCHs!

This workshop is FREE with lunch provided, but registration is required.

RSVP to Charlie Fisher at fisherc@rcgov.us or (803) 576-2080.

Sessions:

- Impacts of Equine Pasture Management
- Rainfall Simulator Demonstration
- Forage Nutrition and Variety Selection
- Grazing Management and Pasture Weed Management
- Manure Management
- Twenty-five Mile Creek Watershed Funding



Speakers:

- Gordon Mikell, NRCS State Agronomist
- Chris Workman, SC-DNR Program Coordinator
- Cassie Wycoff, Clemson Area Livestock and Forages Agent
- Travis Mitchell, Clemson Area Livestock and Forages Agent
- Scott Hagins, DHEC Nonpoint Source Coordinator
- Bryan Smith, Clemson Area Extension Agent
- Angela Vandelay, AMEC Foster Wheeler Engineer
- Mike Newman, Richland SWCD Conservation Technician



*This workshop is sponsored by the Richland Soil and Water Conservation District with support from the organizations shown below.
Some funding for this event is provided by the US EPA under a Section 319 Grant through the SC Department of Health and
Environmental Control (SC DHEC).*



**Richland Soil and Water
Conservation District**

Grant Funding Available to Help Pay for Septic Repairs in Twenty-five Mile Creek Watershed

The SC Department of Health and Environmental Control (DHEC) has awarded a new \$114,800 Section 319 grant to reduce bacteria levels from failing septic systems in the Twenty-five Mile Creek Watershed. Twenty-five Mile Creek flows from southern Fairfield County, through northeastern Richland County, and into western Kershaw County where it joins the Wateree River. Periodic monitoring conducted by DHEC suggests Twenty-five Mile Creek may experience elevated levels of fecal bacteria and macro-invertebrate community impairments.

This new 319 Grant will focus on septic sources in the watershed by providing financial incentives for homeowners and businesses to repair or replace failing septic systems to reduce pollutants entering Twenty-five Mile Creek and its tributaries. In addition, the grant will

provide public education about proper septic tank maintenance and the proper disposal of fats, oils and grease, which should never be poured down a drain. The project will provide 60% cost share assistance to homeowners and businesses to repair/replace failing septic systems. Because septic sources contribute to both bacteria and nutrient loads, addressing septic systems will improve the bacteria impairment in the watershed and may reduce stressors on the macroinvertebrate community.

Participation in the grant program is voluntary, and interested homeowners or business-owners with septic problems located in the Twenty-five Mile Creek Watershed are encouraged to contact Russ VanPatten at russ.vanpatten@kershaw.sc.gov or (803) 425-7230 for more information.

Twenty-five Mile Creek Watershed Education at Camp Discovery

Earlier this year, Conservation Education Intern Cheryl Barnes partnered with Camp Discovery to teach third grade students about water quality in the Twenty-five Mile Creek Watershed. Barnes, with a background in marine science and environmental studies, used the Enviroscape watershed model to help students understand how stormwater carries pollutants from parking lots, pastures, and even our own backyards into local waterways. She then spoke with students about the specific issues facing Twenty-five Mile Creek, whose watershed encompasses parts of Blythewood, Pontiac, Elgin, and Lugoff.

Periodic water quality monitoring in Twenty-five Mile Creek has identified sometimes-elevated levels of fecal bacteria and an impaired macroinvertebrate community within the Creek. While many factors affect water quality, stormwater runoff carrying livestock manure, sediment, pet waste, human waste from failing septic systems, and other pollutants is a major source of concern.

Efforts have been mounted to educate watershed residents about these issues and to address some of the pollution sources with cost-share assistance. Under a current program, livestock owners within the watershed may receive funding to cover up to 70% of the cost of implementing a variety of conservation practices that protect and improve water quality. These practices, which include fencing livestock out of ponds and streams, installing alternate water sources with wells and water troughs, protecting heavy-use areas in pastures and



paddocks from erosion, and installing cross fencing for grazing management, also tend to improve forage production and livestock health.

For more information about efforts to improve water quality in Twenty-five Mile Creek or to schedule a presentation or program for your school or community group, contact Chanda Cooper at cooperc@rcgov.us or (803) 576-2084. If you are a livestock owner in the watershed and would like more information about cost-share funding and conservation plans, contact Mike Newman at (803) 602-2585. Information is also available online at www.rcgov.us/twentyfivemile.

Providing Habitat for Native Bees

North America is home to approximately 4,000 species of native bees which arguably form our most important group of pollinators. Like other pollinators, native bees have been threatened by habitat loss, pesticides, and land use changes. While approximately 70% of native bees nest in the ground, the remaining 30% of native species lay their eggs in old beetle tunnels in dead trees. You can help conserve these tunnel-nesting native bees by providing artificial nesting sites with wooden nest blocks and stem/tube bundles.

To make a nest block, drill holes between 3/32" and 3/8" in diameter at 3/4" centers into the side of a block of untreated lumber. The holes should be closed at one end. Holes less than 1/4" diameter should be 3-4" deep; holes 1/4" diameter or larger should be 5-6" deep. Stem/tube bundles can be made from 6-8" lengths of bamboo, cut so that one end is open and one end is closed. Stem bundles can be

placed in steel cans or wooden frames for added protection. For more detailed instructions, visit www.xerces.org.

These nest boxes were displayed at a Pollinator Workshop co-hosted by Carolina Clear, Richland Countywide Stormwater Consortium, and Richland SWCD in May.



Native bees are great pollinators! Provide nest boxes and stem/tube bundles for native bees in your yard.

Keenan and Spring Hill High Schools Represent Richland County at SC Envirothon



Student teams from Keenan and Spring Hill High Schools represented Richland County in the 20th Annual SC Envirothon at the Clemson Sandhill Research and Education Center in Columbia last May. The SC Envirothon is an annual environmental competition that provides college scholarships to high school students. During the competition, student teams complete college-level exams in several environmental topics including aquatics, forestry,

soils, wildlife, and invasive species.

The Richland SWCD was a sponsor for the event, and two SWCD commissioners and three staff members served as judges, station managers, and assistants during the competition. Teams from Spartanburg won this year's top honors. For more information about the SC Envirothon, visit <http://www.dnr.sc.gov/education/Envirothon/>.

2015-2016 Conservation Education Awards



Kristin Ziegler, Lead Teacher of the School of Zoological and Botanical Studies at Longleaf Middle School, was named Richland County's 2015-2016 Conservation Teacher of the Year by the Richland SWCD. The award is presented annually to a teacher who has exhibited an outstanding commitment to conservation education.

environmental clubs and special projects to educate students *and* faculty about the environment.

Principal Denise Barth of Catawba Trail Elementary School was named Richland County's Conservation Principal of the Year for the 2015-2016 school year. Principal Barth was nominated for this award by her school faculty because of her dedicated support for environmental education and stewardship in the Catawba Trail school community. It is the second time Principal Barth has received this award.



Ziegler "provides a wonderful example of how an educator can blend academics and environmental stewardship through real-world learning to engage the next generation of young leaders," says Joanna Weitzel, Executive Director of Camp Discovery, a ZooBot partner organization. According to Weitzel, not only does Zeigler "challenge and motivate students academically, but she leads them towards becoming responsible and caring... environmental stewards in our communities."

"To receive this award *once* is an honor," says Richland SWCD Vice Chairman Jeff Laney, "but to receive it *twice* really emphasizes Principal Barth's dedication and commitment to educating our youth about conservation. For some, conservation is just something they think they need to do as a part of their job. But for Principal Barth, it's a part of who she is, and for that, we are grateful."



In addition to Ziegler, two teachers received Honorable Mention Awards: **Dr. Rachel Tustin**, a 7th Grade Science Teacher at Dent Middle School who has guided the development of a sophisticated, student-led environmental monitoring program in the Gills Creek Watershed; and **Susan Woodley**, a Preschool Teacher at Lake Carolina Elementary School's Lower Campus who coordinates a variety of student

All honorees were recognized at the Richland SWCD's Awards Banquet in May. Nominations for 2016-2017 Conservation Education Awards will be accepted in spring, 2017. Visit www.rcgov.us/rswcd for details.

CONGRATS!



*Richland County Conservation Education Awards were presented to **Kristin Ziegler** (top center, with student award winners Kimeri Boyles and Madeline Finley); **Dr. Rachel Tustin** (second from top, center, with Dent Middle School Principal Tamala Ashford and Richland County School District Two Superintendent Debbie Hamm); **Susan Woodley** (second from bottom, center, with Richland SWCD Associate Commissioner Mary Burts and Commissioner Jeff Laney); and **Denise Barth** (bottom, left, with Associate Commissioner Mary Burts) at the Richland SWCD's Awards Banquet.*

Conservation Intern Updates



Spring 2016 Conservation Intern Cheryl Barnes graduated from the University of South Carolina Honors College with a B.S. in Marine Science in May. She now serves as the Recycling Outreach Specialist for Arlington County, Virginia. Congratulations, Cheryl!



Spring 2016 Conservation Intern Lindsey Shealy graduated from the University of South Carolina with a M.Ed. in Higher Education and Student Affairs in May. She now serves as the Manager of Volunteer Experience and e-Learning for the Girl Scouts of South Carolina. Congratulations, Lindsey!



University of South Carolina Honors College senior Alexandra “Alex” Golden will join the Richland SWCD as a Conservation Education Intern—Arbor Day Program Coordinator this fall. Alex has spent the summer working at the Wells Reserve at Laudholm, a National Estuarine Research Reserve in Wells, Maine, on a NOAA Hollings Scholarship. Welcome to the team, Alex!



Congratulations...

- ...to the Richland SWCD, which was named SC’s 2015 Outstanding Conservation District of the Year by the SC Association of Conservation Districts (SCACD) in February.
- ...to Richland SWCD Commissioner Heath Hill, who was recognized for 20 years of service, and Administrative Assistant Charlie Fisher, who was recognized for 10 years of service, during the SCACD Awards Banquet.
- ...to Richland SWCD Education Coordinator Chanda Cooper, who has been selected as the 2016 Project Learning Tree Jerry L. Shrum Outstanding Educator of the Year.
- ...to SC farmers Jason Carter of Eastover, SC, and Carl Coleman of Dillon, SC, who have been named National Soil Health Champions by the National Association of Conservation Districts. Carter and Coleman are advocating for the improvement and preservation of the state’s soil and natural resources through local leadership and outreach.



Project Learning Tree at Benedict College

During a Project Learning Tree environmental education curriculum workshop at Benedict College earlier this year, students who are training to be teachers at Benedict College and the University of South Carolina partnered with current teachers and informal educators to practice hands-on, nature-based instructional methods. During one activity, participants took a board-game-style journey through the water cycle, then created and performed songs based on their experiences. For more information about Project Learning Tree or to schedule a workshop for a university course or teacher training program, visit <http://www.scforestry.org/project-learning-tree>.

Seed Balls for the Garden

Seed balls are hand-rolled balls containing clay, compost, and seeds. They are used to plant seeds in areas where soil preparation is difficult and have been used worldwide to establish and restore habitats without disturbing the soil. Making seed balls at home or school is a fun family or class project! Here's how:

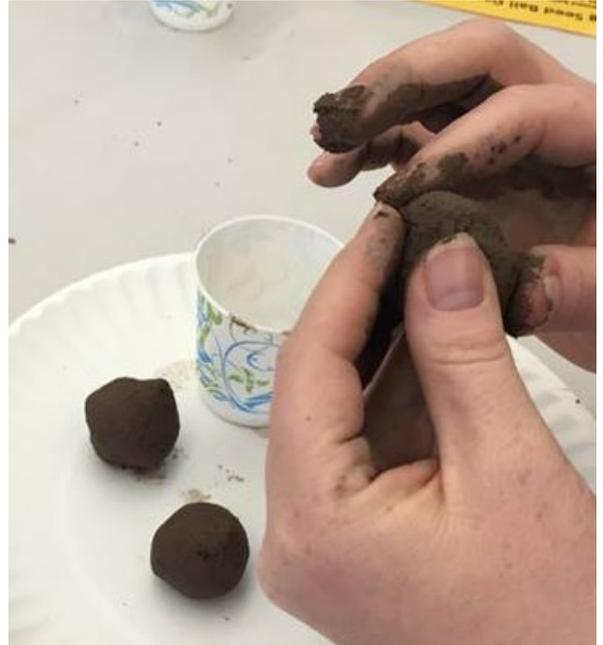
- 1 part seed*
- 3 parts compost or humus
- 5 parts powdered red terra cotta clay or unscented kitty litter
- 2 parts water (enough to make a cookie dough texture)

Pinch off pieces of the mixture and roll into 1" diameter balls. Dry the balls completely before storing (full sun for 24-48 hours). To "plant" the balls, toss them onto the soil surface at a density of ~10 per square meter and wait for a soaking rain. Planting time will depend on the types of seeds used.

*Alternatively, seeds can be added after clay/compost balls have been rolled. Using your finger, poke a small hole into the ball, drop a pinch of seed into the hole, then pinch the dough together to seal.

*Recipe Adapted from Dr. Arlene Marturano
SC Garden Learning ▪ www.scgardenlearning.com*

Photos: The Richland SWCD partnered with the Environmental Education Association of SC (www.eeasc.org) and Dr. Arlene Marturano (www.scgardenlearning.com) to host a Seed Balls for Butterflies Workshop at A.C. Moore Elementary School last April.



Recent Events



Students dissected *Alstroemeria* flowers and created a flower anatomy display during a Plants and Pollinator Conservation session at Satchel Ford Elementary School's Science Day. Richland SWCD staff reached more than 2,300 students through 89 youth presentations and programs during the 2015-2016 school year.



Richland SWCD partnered with the Carolina Farm Stewardship Association and the Clemson University Sustainable Agriculture Program to present a soil health and cover cropping workshop at City Roots Farm in June. City Roots staff use cover crops to control weeds, reduce soil temperatures, retain soil moisture, increase soil fertility, and improve soil structure through the addition of soil organic matter.



Seventeen students and three schools received awards in the "We All Need Trees" 2016 Poster Contest. Several winners, including Alexis DeJesus (entry pictured above), will advance to the state competition.

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Thank you!

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Support the District: Become an Affiliate

Membership Information

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.

- \$25—Affiliate Member
- \$50—Silver Affiliate Member
- \$100—Gold Affiliate Member
- \$250—Platinum Affiliate Member
- \$500+—Titanium Affiliate Member*
- Mini-Grant Sponsor****: \$250 each

*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.

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

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

Thank you for your support!

Name: _____

Address: _____

Phone #: _____

E-mail address: _____

****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.