COLONIAL SWCD NEWSLETTER

Spring | 2024

Meet Our New Staff Members

Samantha Pereira

Hi! I'm Samantha but prefer to go by Sam. I am a Pennsylvania native who moved to Williamsburg, Virginia in September 2019. I joined the district full-time in January 2024. I previously worked as their part-time Farm Manager for Williamsburg Community Growers and prior to that I was in the healthcare industry. I am passionate about the environment and sustainability and look forward to working with this community. I'm working on The Alliance to Advance Climate-Smart Agriculture grant which is focused on providing financial assistance to producers who typically do not qualify for state cost-share programs. I am very excited to be a part of this community! I am very excited to be a part of this community! In my spare time I enjoy reading in addition to spending as much time outside as I can whether it be kayaking, gardening, or hiking.

Robert Waring

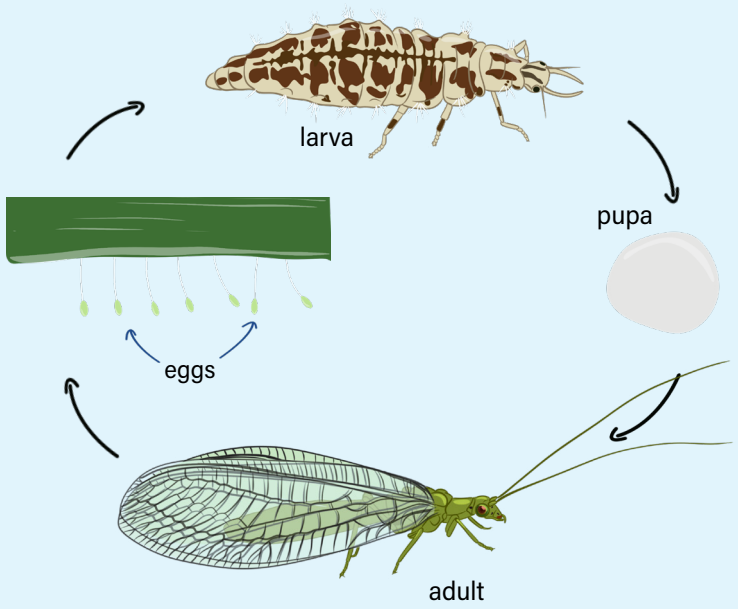
I was born and raised in Essex County, Virginia and graduated from Randolph-Macon College in 1992. Presently I am an elected member of the executive board for the Southern Cover Crops Council, member of the Ag and Forestry Advisory Board appointed by the Essex County Board of Supervisors, as well as past Chair of Virginia's Cover Crop and Nutrient Management Technical Advisory Subcommittee. Recently, I was invited to participate in the Precision Sustainable Agriculture Farmer Think Tank with the University of Florida that focuses on enhancing the sustainability of US agricultural systems through soil health and cover crops. In addition to working for Colonial Soil and Water Conservation District, I work for Brandon Farms, a third generation family farm, where we integrate cover cropping systems as a means of increasing soil health. Brandon Farms was selected as a case study with the American Farmland Trust, a national organization that highlights farms across the US that practice the highest levels of conservation and sustainability. Brandon Farms has also been involved with Virginia Tech as a farm cooperator on phosphorous and sulfur experimentation, participant in the Virginia Tech Precision Sustainable Agriculture cover crop project, as well as on-farm research with NRCS, Virginia Tech Extension and local Soil and Water Conservation Districts.

BENEFICIAL BUGS : Green Lacewings

Amanda Whispell

This is the first article in a series I will be doing on beneficial bugs. Although there are a few well-known beneficial insects, there are so many more of which you may be unaware (and may even be trying to kill.) First up: the green lacewings.

Green lacewings are amazingly beneficial insects in both their larval and their adult stages, as they eat many pest insects and one individual can consume an huge number in their lifetime. There are ~85 species in the United States and more abroad. Females lay their eggs in small groups and at the end of very long, thin stalks attached to the underside of leaves. They do this because the larvae are prone to cannibalism, but



Go Green Market

8:00 am – 12:00 noon
Riverwalk Landing
331 Water Street
Yorktown, VA 23690

Click here for more

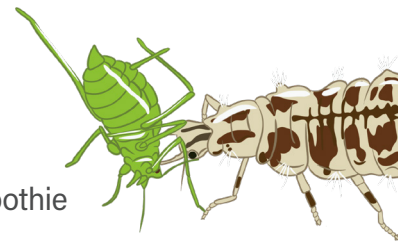
Colonial Community Critters Virtual BioBlitz

Celebrate Earth Day by celebrating the Earth's Biodiversity at our BioBlitz.

Click here for more.

they are less likely to reach siblings when laid in the manner.

Once lacewing larvae hatch they are voracious predators. They prefer soft-bodied prey like aphids, mites, thrips, mealybugs, and the eggs and larvae of other insects. Once they find their prey they will stab their hollow mouthparts (maxillae) into its body and inject a digestive secretion that rapidly dissolves the prey's organs. Then they eat their prey by sucking their liquefied internal organs through their mouthparts like a smoothie through a straw.



There are some larvae known as *debris-carrying* lacewing larvae, which attach the empty integuments (after having their organs turned into smoothies) of their prey along with random debris to their backs as a means of camouflaging themselves from predators.

Lacewing larvae spin their cocoons for pupation and will pupate for one to three weeks on average, before emerging as adults. At the end of the summer season the last larvae will overwinter as prepupa and then proceed with pupation in the spring.

Adult lacewings are nocturnal, so they are less-commonly encountered. They are attracted to light, so you may find them outside your house if you leave lights on at night. The adults feed primarily on nectar, pollen, and honeydew but they do supplement this diet with aphids, mites, other small insects, and other arthropods.

You can attract these amazing helpers to your

garden by planting companion plants that provide nectar and pollen for adults. They prefer cilantro, dill, sunflowers, buckwheat, oregano, cosmos, coreopsis, asters, sweet alyssum, verbena, daisies and many more. If you have good pollinator habitat, you will be taking steps to attract green lacewings, as they like many of the same native species that we would recommend for a pollinator garden.

So, if you see these dainty green insects flying at night, crawling around on your tomatoes, or if you see a small lump of debris that appears to be crawling across a leaf all by itself, you will know what it is!

Colonial World Nature Conservation Day BioBlitz

Amanda Whispell

On July 20, 2024 we will be holding a BioBlitz at New Quarter Park in Williamsburg between 8:00 am and noon. This will be the first annual Colonial World Nature Conservation Day BioBlitz and we're really excited about how many organizations will be participating and helping educate the public about the importance of biodiversity. Please visit the EventBrite page for the event to reserve (FREE!) tickets and sign up for the iNaturalist project.

Farm Day

10:00 am - 2:00 pm
Williamsburg Community Growers
Stadium Road,
Williamsburg, VA 23188

Click here for more

Colonial World Nature Conservation Day BioBlitz

10:00 am - 12:00 noon
1000 Lakeshead Drive,
Williamsburg, VA 23185
(see below)

Click here for more

Registration Required
https://bit.ly/CWNCD_BioBlitz_2024
&
Join the iNaturalist Project
https://bit.ly/CWNCD_BioBlitz_iNat

Staff Contact Information

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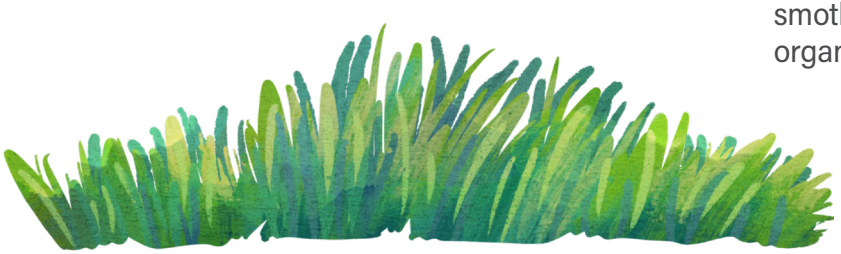
Should I fertilize my grass this spring?

Jim Wallace

Many people fertilize their lawns in the spring. Is that a good idea?

Generally, lawn fertilizers contain some ratio of nitrogen, phosphorus, and/or potassium. Each element promotes plant growth in its own way. Most lawn fertilizers contain a significant amount of nitrogen. Using the hypothetical example of a 50 pound bag of 29N-0P-3K blended fertilizer, the bag contains 14.5 pounds of nitrogen, 0 pounds of phosphorus, and 1.5 pounds of potassium. Nitrogen serves as the building block of plant proteins and cell development and is essential for photosynthesis. In the absence of nitrogen, or in cases where nitrogen is not available to the plant, the plant suffers. Intuitively, adding nitrogen to a lawn in the spring seems like it would be beneficial, but don't pull out that fertilizer just yet.

The top layer of the soil contains a combination of living and dead flora and fauna collectively known as organic matter. Organic matter plays an important role in soil water retention and nutrient cycling. By weight, organic matter is about 1%-4% nitrogen and in the stable, "organic" form, meaning organic nitrogen is not plant-available. In the spring, as the soil temperature warms, microorganisms convert the stable and unusable nitrogen into a plant-available form through a process called mineralization. The mineralized nitrogen is taken up by the plant and . . . viola! A natural spring green up has occurred.



Jim Wallace
District Manager

> "... nature provides its own nitrogen to the plant community in the spring, but is it enough nitrogen? Do we need to help mother nature with supplemental nitrogen on our lawns? "

The natural process by which nitrogen becomes available to plants in spring can be influenced by our turf management actions. Techniques such as returning (or not removing) grass clippings provides a nutrient rich mulch that over time decomposes and increases soil organic matter. Adding other amendments including composted leaf and garden waste can raise organic matter levels, too, however there's a fine line regarding the volume of material applied. Great care should be taken not to smother the crop you're trying to nurture with organic matter additions.

We've established that nature provides its own nitrogen to the plant community in the spring, but is it enough nitrogen? Do we need to help mother nature with supplemental nitrogen on our lawns? To

answer that question, you need to consider your lawn type. Do you have warm season grasses (i.e., bermudagrass, zoysia grass, etc.) or do you have cool season grass (i.e., fescue, bluegrass, etc.)? For warm season grasses, which grow vigorously in the warm season, the first nitrogen application of the year should not be made until after the grass has broken dormancy and turned green, typically for South Eastern Virginia, that's mid to late April. For cool season grasses, which grow vigorously in the cool seasons (spring and fall), spring nitrogen applications, especially when over-applied, can lead to excessive growth as the hot and humid summer months approach. The stresses on the lawn caused by high rates of nitrogen in the spring can lead to many diseases including brown patch, gray leaf spot, and pythium blight. To be fair a lack of nitrogen can also lead to disease stresses in the form of dollar spot and rust.

It is not recommended, but if you choose to apply nitrogen fertilizer to your lawn in the spring, do so sparingly. For cool season grasses, apply no more than 0.5 lbs. of water-soluble nitrogen (WIN) per 1,000 ft^2 of lawn area between March 15th and April 15th, then make additional nutrient applications in the fall. For warm season grasses, apply no more than 0.5 lbs. of water-soluble nitrogen (WIN) per 1,000 ft^2 of lawn area after April 15th, then develop and follow a fertilization program for the remainder of the growing season.

For more detailed and site-specific information, please consider participating in the Turf Love program offered through the Colonial Soil and Water Conservation District.

National Conservation Foundation International Competition

Sheila Jaruseski

The Colonial District was proud to see our Envirothon team advance to the NCF International Competition held in New Brunswick, Canada, in July 2023.

Forty-nine teams from across the United States, Canada, China, and Singapore travelled to this year's competition, where students were tested on 2023 topic: Renewable Energy for a Sustainable Future.

Front: Charlie Dubay, coach, Carolina Bakker, Eleanor Rossi, Landon Kennon. **Back**: (L to R) Sebastion Cordero-Muniz, Diego Cordero-Muniz, and coaches Rebecca Elton and Amanda Mullane.

We are proud of these students' hard work and dedication to conservation and education.

The team placed 13th in this international competition that had over 245 students participating.

The Jamestown team is currently busy getting ready for the Area III Envirothon competition, which will take place on April 16, 2024 at Germanna Community College in Fredricksburg, Virginia.

How to get involved

To learn more visit www.colonialswcd.org/envirothon,or contact Sheila Jaruseski at Sheila.jaruseski@colonialswcd.org or (757) 645-4895.

Teams of high-school aged students (currently in 9-12th grade) can be created through school clubs, classes, home school groups, 4-H groups, scout troops, local nature centers, etc. The only requirement is that the team have a minimum of five students and one adult advisor/chaperone.

April Showers Bring Stormwater Practices

Emma Rich

As sunny days grow nearer, so do spring's rainstorms, so it's a good time to start thinking about how to best manage stormwater on your property. In seasons past, you may have noticed standing water in your yard or erosion caused by heavy flowing water leaving the downspouts. That's where we come in! Colonial Soil & Water Conservation District is an implementer of the Virginia Conservation Assistance Program (VCAP), a reimbursement based cost-share program that offers landowners a suite of best management practices to help mitigate the effects of stormwater runoff. Best management practices must address a resource concern such as erosion, poorly vegetated cover, or poor drainage.

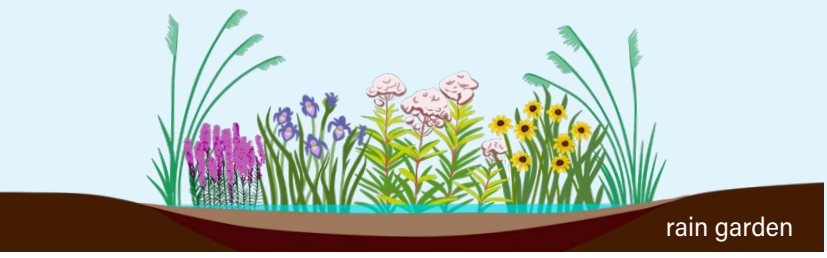
Two landscaping practices that are implemented to help combat excess runoff and minimize the amount of bare soil are rain gardens and conservation landscaping. Rain gardens are shallow, landscaped depressions that allow stormwater to pond and eventually infiltrate into the soil below (Figure below). The infiltration process shouldn't take more than 48 hours. Rain gardens can be tied into your existing drainage system — keeping roof runoff from other areas of the property. Conservation Landscaping also helps to minimize nutrient and water runoff by decreasing the amount of denuded or eroded soil. Both practices are required to be planted with native plants as specified in the Flora of Virginia Atlas. If you'd like some native plant resources or recommendations, feel free to reach out to district staff!

Another infiltration-based practice that isn't as heavily landscaped, and a little less noticeable, is a dry well. Dry wells are underground structures, an excavated gravel pit or structural chamber, that take in excess water allowing it to dissipate into the local groundwater system over time. An infiltration trench acts similarly but at a slightly larger and longer scale.

Alternatively, you might be interested in a catchment system that stores runoff for late use like rainwater water harvesting cisterns. Like rain gardens, a rainwater harvesting system can be tied directly into your gutters and houses large amounts of water that can eventually be used to irrigate your garden, water the lawn or even wash your cars.

These are just a few of the twelve practices offered by VCAP and we would love to tell you about the rest. For more information on a particular practice or on the program as a whole, give us a call at (757) 645-4895 or visit the office at 205 Bulifants Boulevard, Suite C in Williamsburg.

Emma Rich
Conservation Specialist



rain garden

"Two landscaping practices that are implemented to help combat excess runoff and minimize the amount of bare soil are rain gardens and conservation landscaping."

The Alliance to Advance Climate-Smart Agriculture

Samantha Pereira

A The Alliance to Advance Climate-Smart Agriculture is a new three-year pilot program that is funded by an $80 million grant from Virginia Tech. To date, this is the largest grant awarded in Virginia Tech history!

What is Climate-Smart Agriculture?

Climate-Smart Agriculture (CSA) incorporates many different goals and ideas, but the United Nations Food and Agriculture Association defines CSA as "an approach to help the people who manage agricultural systems respond effectively to climate change. The CSA approach pursues the triple objectives of sustainably increasing productivity and incomes, adapting to climate change, and reducing greenhouse gas emissions where possible."

This project is being piloted in four states: Virginia, North Dakota, Minnesota, and Arkansas. The goal is to provide funding opportunities to invest in America's climate-smart farmers, ranchers, and forest owners to strengthen rural and agriculture communities throughout the United States. The program aims to implement individual practices, each for a span of one-year, during which producers will be paid out $100 per acre or animal unit. The qualifying practices are based on the Natural Resource Conservation Service Conservation Practice Services and have been selected based on their ability to sequester carbon, they include: conservation crop rotation, nutrient management plans, cover crops, filter strip, pasture and hay planting, feed management, and many others.

Justice40 is an initiative that dictates some of the goals in this program as part of the current administration's initiatives. Justice40 aims to enroll 40% of producers who are considered underserved or minority farmers. Typically, these programs do not work well for underserved producers, and it is extremely important to everyone involved in this program that we make a significant effort to reach this goal.

Alliance to Advance Climate-Smart Agriculture

We are currently in the first year of the pilot program in Virginia and only two Soil and Water Conservation Districts (SWCDs) are accepting applications - Colonial SWCD and Thomas Jefferson SWCD; applications are accepted by each district from within their respective service areas.

Colonial SWCD Service Area:

Colonial District:
the City of Williamsburg; James City, York, New Kent, and Charles City Counties

Colonial SWCD will be working in an expanded boundary that also includes:
The City of Suffolk; Caroline, Chesterfield, Essex, Gloucester, Hanover, Henrico, Isle of Wight, King & Queen, Mathews, Middlesex, Prince George, and Surry Counties.

Thomas Jefferson Service Area:
The City of Charlottesville; Louisa, Fluvanna, Nelson, and Albermarle Counties.

Interested in learning more? Please visit www.allianceforcsa.org OR feel free to call our office at 757-645-4895 or email alliance@colonialswcd.org.

Samantha Pereira
Conservation Technician

New Partnerships Allow Expanded Access to Stormwater Funding

Robyn Woolsey

Over the past several years, we have developed three new partnerships with neighbouring localities and soil and water conservation districts (SWCDs) to expand access to the Virginia Conservation Assistance Program (VCAP). VCAP provides financial assistance to non-agricultural landowners who install one of a suite of eligible best management practices (BMPs) to correct a stormwater issue on their property. The most commonly installed BMPs in our service area have been rain gardens, permeable pavement, conservation landscaping, and living shorelines. The cost-share rates for these practices vary as shown in the table below.

PY2024 VCAP Cost-Share Rates

Practice	Lifespan	Reimbursement Rate	Max per Application
Conservation Landscaping (CL) ▪ Meadow ▪ Filter Strip ▪ Tree Planting ▪ Riparian Buffer ▪ Mulched Bed	10 years	80% of actual costs	$ 7,000.00
Rain Garden (RG)	10 years	80% of actual costs	$ 7,000.00
Dry Well (DW)	10 years	80% of actual costs	$ 7,000.00
Rainwater Harvesting (RWH)	10 years	$4.00 per gallon of treated volume*	$ 20,000.00
Impervious Surface Removal (ISR)	10 years	$5.00 per sq. ft.	$ 20,000.00
Permeable Pavement (PP)	10 years	$14.00 per sq. ft.**	$ 20,000.00
Vegetated Stormwater Conveyance (VSC) ▪ Dry Swale ▪ Step Pool ▪ Wet Swale Conveyance System	10 years	80% of actual costs	$ 20,000.00
Constructed Wetland (CW)	10 years	80% of actual costs	$ 20,000.00
Bioretention (BR)	10 years	80% of actual costs	$ 30,000.00
Infiltration (IF)	10 years	80% of actual costs	$ 30,000.00
Green Roof (GR)	10 years	$20.00 per sq. ft.	$ 30,000.00
Living Shorelines (LS)	10 years	80% of actual costs	$ 30,000.00

*Cost -share rate is applied to the 1-inch volume of runoff collected rounded up to the nearest gallon.
**All costs associated with Impervious Surface Removal (ISR) are considered a component cost of Permeable Pavement (PP).
***All applicants will be limited to $50,000.00 in total cost-share assistance per calendar year, based on date of application approval.

It is important to note that each of these practices includes a 10 year lifespan, which means that the applicant must agree to maintain the practice for at least 10 years. Procedures exist to transfer this maintenance responsibility should the original applicant move or sell the property.

Traditionally, only localities that are included in an SWCD service area have had access to VCAP funding. This left many localities, including several throughout the Hampton Roads region who are not served by an SWCD, without access to funding that could have a significant impact on their residents' conservation efforts. To begin to address this issue, we worked closely with staff from the City of Hampton to determine how we could utilize a Memorandum of Understanding (MOU) to create a partnership to allow us to offer VCAP to Hampton residents. After several years of discussions, which were put on hiatus during the COVID-19 pandemic, we reached an agreement that would allow us to offer VCAP assistance specifically for living shorelines, which were identified as a priority by Hampton staff. Aside from administering the program, we also support outreach and advertising efforts throughout the city to ensure that landowners know that this opportunity is available.

After establishing the Hampton MOU, we began conversations with two other nearby SWCDs who wanted to offer the program but didn't have the staff capacity to do so. During these conversations, our Conservation Specialist Emma Rich, who was initially hired to work on the agricultural cost-share program, transferred roles to work with the urban programs. This transfer in roles increased our staff capacity to work on VCAP, which made it feasible for us to develop two more MOUs with the Tidewater SWCD and the Three Rivers SWCD to allow Colonial staff to offer VCAP in their service areas. Combined, these new service areas include Gloucester, Mathews, Middlesex, Essex, King William, and King and Queen Counties. The Tidewater MOU, which includes Gloucester, Mathews, and Middlesex Counties, allows us to offer living shoreline assistance only. The MOU with Three Rivers, which includes Essex, King William, and King and Queen Counties, allows us to offer the full suite of BMPs. Both of these MOUs were enacted in the fall of 2023, and we're grateful to both Tidewater and Three Rivers SWCDs for their partnership and support of the program.

> "VCAP provides financial assistance to non-agricultural landowners who install one of a suite of eligible best management practices to correct a stormwater issue on their property."

While there will undoubtedly be learning curves associated with all of these new partnerships, we're excited by the opportunities they present to help more landowners increase and expand their conservation efforts. If you know of any landowners in these localities who may be interested in learning more about VCAP, they can learn more on our website, www.colonialswcd.org, or they can contact Robyn Woolsey at (757) 778-1216.

Robyn Woolsey
Urban Conservationist

Virginia Conservation Assistance Program

Solving your erosion problems

Logan Ellis

Erosion is not a new issue for farmers and landowners. Colonial Soil and Water Conservation District (CSWCD) staff help dozens of landowners/producers with erosion issues every year by providing both cost-share funding and technical assistance. In the past few years, Soil and Water Conservation Districts (SWCDs) have received historic funding allocations that have allowed us to help combat many of the erosion issues we were previously unable to address. Before now, the WP-1 Erosion and Sediment Control Structures practice was infrequently used by CSWCD, however, these large funding allocations have made it a feasible practice for us and the landowner.

Last year we completed three erosion control structures through our Virginia Agricultural Cost-Share (VACS) program. This increase in funding has allowed us to actively seek out erosion issues and to address them before they get out of hand. Erosion, like the example shown in the image below, can be caused by a variety of factors including: soil structure, soil texture, vegetation, root systems, and even karst topography in some cases, but the most important factor that contributes to erosion in our area is precipitation. We have observed an increasing number of these sites over the past few years, which can be attributed (at least in part) to irregular rainfall patterns and heavier and more frequent precipitation.

Erosion sites like the one below can be addressed in a variety of ways that follow roughly the same principle: provide a designated channel that allows water to move in a certain flow path that is reinforced to withstand the flow rate. In this specific example, the most reasonable course of action for both the producer and the taxpayer is to grade the soil out to provide a gradual funnel that leads into a channel reinforced by geotextile fabric and stone to move the stormwater further downstream. The funnel will be planted in permanent perennial vegetation, which will provide a year round root system that will help keep the sediment in place.

If you are an agricultural producer or an agricultural landowner, please reach out to us if you see examples of erosion happening on your property. We have a dedicated team that will be happy to visit the site and provide you with a list of solutions for how best to address the issue.

If you or someone you know is an agricultural landowner and is experiencing erosion issues, feel free to call our office at (757) 645-4895.

Logan Ellis
Conservation Specialist