# MONTHLY REPORT

June 2026

SOIL & WATER

## MEASURING SOIL HEALTH USING TIGHTY-WHITIES

Landowners and farmers attending the SC Conservation – Protecting Farm Resources received an engaging demonstration presented by the district's Programs Coordinator Olivia Reed. Reed used the district's rainfall simulator to show how bare dirt, dirt covered in straw and soil with plants growing throughout react to runoff.

Participants were able to see how much more the bare dirt eroded and how little rainfall soaked into the dirt, as compared to the plant-enriched soil, which absorbed most of the water and retained its structure.

Healthy soil contains microbes that retain and carry nutrients to plants. To reinforce her message, Reed distributed "Soil Your Undies" challenge kits to participants and showed them a pair of undies that had been buried for two months. The only thing left of the underwear was the elastic band, demonstrating how microbes in healthy soil is able to break down matter to create beneficial nutrients.

### 5 principles of healthy soil

**To improve soil structure, feed underground biology and prevent erosion:**

- **Reduce mechanical tillage, chemical use and overgrazing.**
- **Keep the ground covered with living plants, crop residue or mulch.**
- **Grow a variety of crops and cover crops.**
- **Ensure continuous plant growth to provide carbon and organic sugars that feed the soil.**
- **Incorporate grazing animals to naturally cycle nutrients, balance carbon-to-nitrogen ratios and stimulate plant growth through managed impact.**

## SURVIVING THE SWELTER: SMART MULCHING FOR YOUR GARDEN

conservation corner
SUSTAINABLE TIPS FOR A GREENER TOMORROW

As we welcome July, let us keep in mind how the sweltering heat of summer can scorch plants, deplete soil moisture and bake red clay soils into brick. To keep gardens thriving though the hot summer, consider these practical mulching tips:

**Water deeply before mulching** | Laying mulch over deeply hydrated soil locks in the cool moisture and lowers the root-zone temperature.

**Aim for the sweet spot** | Shoot for a depth of two to three inches. Too shallow and the sun will penetrate and deplete moisture and promote weed growth.

**Avoid piling it into a volcano** | Leave a space of about two to three inches away from the direct base or main stem to allow the plant to breathe.

**Choose the right mulch** | Use clean straw, pine straw or shredded leaves for vegetable beds and well-composted hardwood mulch or pine bark nuggets for perennials, shrubs and trees. Use un-dyed and chemical-free mulch so it doesn't leach toxins into your soil or food.

**Keep it away from foundation** | The Upstate's warm climate is a haven for subterranean termites, so keep mulch six to 12 inches away from the foundation walls if mulching beds adjacent to your home or barn.

## THE INCREDIBLE JOURNEY OF A WATER MOLECULE

Stormwater Programs Coordinator Kendall Juell visited Junior Master Gardener Camp at Roper Mountain Science Center for a second week of water education activities.

Campers engaged in an interactive water cycle activity "The Incredible Journey" from Project WET, traveling among nine different stations to collect beads representative of the places they visited as a water molecule. The movement of water driven by the sun was represented by a UV reactive bead.

# EXPLORING THE IMPACTS OF POLLUTANTS ON LOCAL WATERWAYS

Students learned about how litter and pollutants impact local waterways at two summer camps hosted by Roper Mountain Science Center. The district's education and outreach team taught students attending the Junior Master Gardener and Ecology camps about watersheds and stormwater pollution, using the county's watershed table to illustrate how litter and pollutants can flow into rivers, bodies of water and eventually the ocean. The kids participated in an activity called Sum of the Parts, in which each drew their own riverside house or property and collected "pollutant cards" to show what pollutants might be present on their property as they explored their pathway to the water after a rainfall.

## Do you know the impact of litter during runoff?

Pollutants and litter degrade local waterways by suffocating aquatic life, introducing chemicals into the food chain, clogging storm drains that can cause flooding and contaminating drinking water supplies.

**Wildlife and habitat**

- Animals can become entangled in discarded plastic six-pack rings or discarded fishing lines.
- Birds, turtles and fish may try eating floating debris, mistaking it for food, leading to malnutrition or drowning.
- Accumulated trash blocks sunlight from reaching underwater plants and reduces oxygen levels.

**Water quality**

- Decaying plastics and littered items like cigarette butts leach heavy metals, nicotine and cancer-causing chemicals into the water.
- Runoff containing pesticides and fertilizers or pet waste can trigger algal blooms that create pockets devoid of oxygen for underwater species.
- Rotting litter creates breeding grounds for harmful bacteria while chemical pollutants shift pH balances and harm sensitive species like shellfish.

# SC ADOPT A STREAM HOSTS DAY OF THE DRAGON PROGRAM

Stormwater Programs Coordinator Kendall Juell attended a special SC Adopt a Stream network session on dragonfly and damselfly ecology hosted by Goodale State Park and SC Wildlife Federation. The session focused on the role these critters play in aquatic ecosystems and stormwater. Participants netted and identified species, and sampled the park creek for more insects and a surprise tiny madtom fish!

**Dragonflies and damselflies:**

- Are macroinvertebrates, non-microscopic organisms without a backbone.
- Survive their first few years as larvae underwater.
- Can be found in our local streams.
- Are moderately tolerant of pollution.

## INTERACTIVE BOARD GAME TEACHES REFORESTATION

Stormwater Programs Coordinator Kendall Juell and District Programs Coordinator Olivia Reed visited Brutontown Center summer camp to lead a couple of interactive games. Campers learned the importance of trees to prevent stormwater pollution while playing a board game called The Lorax.

They also learned about watersheds represented by a parachute, in which a variety of "pollutants" in the form of ping pong balls and squishy poo emojis were dropped onto the land. While one team of students moved the parachute to simulate a rainstorm, another team of polluters caught items to toss back into the watershed. A third team of students captured items and placed them in a trash bin as the Cleanup Crew. This activity demonstrated the difficult task of mitigating stormwater pollution in a human world.

## TEAM COVERS SOIL HEALTH, COMPOSTING AND COMPANION PLANTING

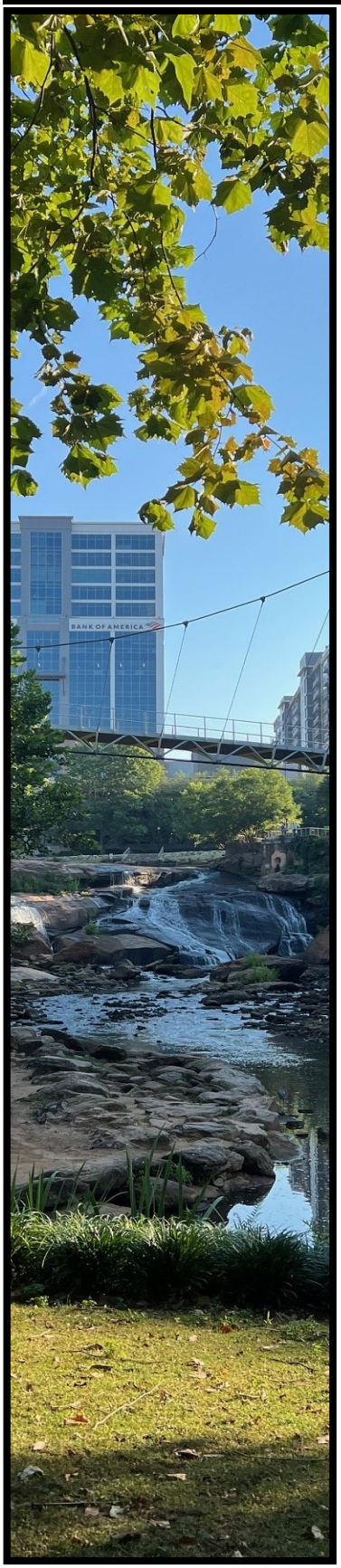
Just because school's out doesn't mean learning ends thanks to the district's outreach/education team, who made their rounds to summer workshops and camps to raise awareness about soil health, composting and companion planting.

The team spent time at Conestee Nature Preserve during conservation camp, teaching on the five soil layers, erosion and how pollutants impact the watershed. They also facilitated composting workshops at a couple of the county's branch libraries and partnered with the library to present a companion planting program, during which participants received a planting guide and learned the history of companion planting, best plants to put together, and how to troubleshoot difficult gardens.

### What is companion planting?

It's the practice of growing different plants close together so they can benefit each other. An example:

**The 3 Sisters**: Corn, beans and squash. **Corn** grows tall, providing a structure for the beans; **beans** climb corn and pull nitrogen from the air down to the soil to feed all three plants; and squash grows low to act as living mulch that shades out weeds and locks in moisture.



# >>> SOCIAL MEDIA

| Stormwater | Total posts | Followers | Follower growth | Impressions |
|---|---|---|---|---|
| Facebook | 6 | 2,175 | +2 | 1734 |
| Instagram | 6 | 1,472 | -5 | 1221 |
| RRWQG | | | | |
| Facebook | 2 | 596 | +5 | 806 |
| Instagram | 2 | 204 | +5 | 179 |
| GCSWCD Websites | Total views | | | |
| | 1000 | | | |
| RRWQG Website | Total views | | | |
| | 364 | | | |

# >>> STORMWATER

- **Responded to 10 citizen questions** about stormwater, erosion and flooding issues
- GCSWCD websites had **1,000 page views** this month.
- Soil and Water staff continues to support the Reedy River Water Quality Group by serving on the Public Outreach Committee. **RRWQG websites CleanReedy.org and ReedyReportCard.org, are maintained by Soil and Water staff**.

# >>> AGRICULTURE / FOOD SECURITY

- Continued **Seed Library** partnership with the Greenville Library, providing free vegetable seeds to Greenville residents as a vector to give information about insecticides, herbicides and fertilizers
- Made **no-till drill, a roller crimper and soil penetrometer available** to county farmers

# >>> INTERDEPARTMENTAL SUPPORT

- **Litter Ends Here** - Supporting social media engagement, participation on the board
- **Keep Greenville County Beautiful** - Participate on the board and work closely with leadership