

Water matters

Cobb County Water System

Winter 2020

Volume 17 Issue 1

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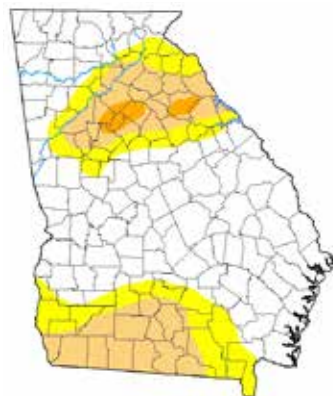
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Are We Still In a Drought If It's Raining Outside?

When visualizing a drought, imaginations typically conjure up a dreary mirage. The unrelenting sun bears down onto dry, parched ground, and browning shrubbery, with a dazed pedestrian walking on Marietta's square. She stops to wipe the sweat off her brow and lifts a water bottle to her lips, only to discover that just a few drops come out. This imagery doesn't seem to match up with the current state of Cobb County, where it has been unseasonably chilly and even rainy this past month. How can it be that most of the state was declared in a Level 1 drought on October 18th?



Part of the answer rests in the meticulous monitoring of statewide data from regulatory agencies such as the Georgia Environmental Protection Division (EPD). EPD monitors indicators such as precipitation, streamflow, groundwater, reservoir levels, water supply conditions, and soil moisture, even accounting for short-term weather predictions for the future. The likelihood that a drought will linger or worsen, for instance, impacts the actions that EPD takes to conserve water now. They also consider the past. Some of these indicators are compared to historical levels to better understand whether we are on trend for this time of year. These indicators are often subtle unlike the glaringly apparent vision of a desert-like atmosphere descending upon the state.

Drought indicators are released publicly by EPD on a regular basis. While a review of current indicators show that conditions are improving state-wide, looking at precipitation within the last three months, rainfall trends remain below average. Stream flow averages statewide, including the Chattahoochee, are also below normal levels. Samples from select wells throughout the state also indicate groundwater levels remain below historical averages. These reports all have implications for our reservoir levels in Georgia. All things considered, despite recent rainfall, our surface water resources have not been sufficiently replenished.

The U.S. Drought Monitor's (USDM) intensity scale includes five levels, from D0 to D4. The first level of the scale, D0, describes areas impacted by short-term dryness that can slow the growth of crops. The most extreme level, D4, describes exceptional drought conditions where crops and pasture damage are severe and widespread, and water shortages create a crisis. Much of Georgia, including Cobb County, is currently still declared level D0, abnormally dry. With our current drought level in Cobb County, outdoor irrigation is permitted 7 days a week before 10 AM and after 4 PM. This step encourages irrigation at times when it is the most likely to remain in the soil rather than evaporate. If we cast off our stereotypical notions of what a drought ought to feel and look like, we can understand the science and data behind droughts and the subsequent policy implications.

Sources: <https://tinyurl.com/szl24fu>
<https://www.drought.gov/drought/states/georgia>
<https://epd.georgia.gov/watershed-protection-branch/drought-management>

Severe Drought Shuts Down Reproduction in Copperhead Snakes, Study Finds

A long-term study of copperhead snakes in a forest near Meriden, Connecticut, revealed that five consecutive years of drought effectively ended the snakes' reproductive output.



Photo Credit: markgranitz
<https://tinyurl.com/szwfdok>

Not one of the dozens of female snakes in the closely monitored population became pregnant the year after the drought ended, researchers found. The year before that, only one female produced offspring. In the years preceding the drought, multiple snakes produced dozens of offspring.

The new findings appear in the journal *Scientific Reports*.

"Before this study, we knew surprisingly little about how drought directly affects reproduction in snakes," said Mark A. Davis, a conservation biologist with the Illinois Natural History Survey at the University of Illinois. Davis co-led the research with Charles (Chuck) F. Smith, of Wofford College.

As the drought wore on, several semipermanent wetlands -- which normally fill with water during the fall and winter and gradually dry out in late summer -- became completely dry, the team found.

"When the drought got really bad, the temporary wetlands were never wet," Davis said. "And the permanent wetlands became temporary wetlands."

Since snakes eat tadpoles, salamanders and other wetland-associated amphibians, among other things, the parched wetlands meant their prey were also drying up. Snake reproductive output depends on their ability to fatten themselves one year to produce young in the next, the researchers said.

Just before the multiyear drought began, another food source became available in great abundance: A massive brood of 17-year cicadas emerged. Copperheads are known to gorge on cicadas when the insects emerge. The following year, 2011, 20 females produced 148 young, the largest number recorded over the 10 years researchers collected data.

But in 2012, the drought began.

The team wanted to know whether copperheads would produce fewer offspring in response to the drought and dwindling food supplies, or if they would produce the same number of young, but of a smaller size, Davis said.

"We saw that every year the drought wore on, there were fewer pregnant females, and the year after the drought ended there were no pregnant females at the site," Davis said. Regardless of the conditions, snakes that gave birth always produced about six offspring, and the newborn snakes were roughly the same size from year to year, the team found. "This means that the snakes are deciding, 'Do I have enough gas in the tank this year to produce offspring?'" Davis said. "And as the drought wore on, the answer was, increasingly, 'No.'"

The researchers were confident they were capturing most or all of the pregnant females in the population over the years. The snakes return each year to the same hibernation and gestation sites, making it relatively easy to find them, Davis said.

In 2018, after a year of normal precipitation, copperhead reproduction rebounded. The researchers counted 100 offspring from 16 pregnant females. This group of pregnant females included individuals that had been captured and given birth in the past. The study revealed that, while copperheads are resilient, their ability to adapt to environmental change has limits, Davis said.

As climate change stresses the entire ecosystem, the snakes may run out of alternate food supplies like the cicadas, which also are disappearing from many landscapes, said study co-author Catherine Dana, a graduate student in entomology who specializes in cicada biology.

"This study shows that reproduction is complex," Davis said. "A changing climate coupled with the loss of biodiversity may be placing even common species at higher risk of declines in the short term and, perhaps, extinctions in the long term. This will only serve to erode those ecosystem services -- the benefits we receive from nature -- that these animals provide."



Photo Credit: Tommy Miles
<https://tinyurl.com/srt2w8o>

Story Source: <https://www.sciencedaily.com/releases/2019/10/191029080742.htm>

SHARP-SHINNED HAWK

When songbirds leave their hiding spots in the thickets to eat at your backyard feeders, another type of feathered winter visitor may arrive on the scene: the Sharp-shinned Hawk. About the size of a dove, this small bird of prey is a common predator at feeders. Its relative, the larger Cooper's Hawk, may also visit feeders for a snack. One of the ways to differentiate sharp-shinned hawks and Cooper's hawks is by the shape of the tail. Sharp-shinned hawks have short squared tails with prominent corners and a tiny notch in the center. Cooper's hawks have longer, rounded tails. To prevent your songbirds from being gobbled up by stalking accipiters, simply stop filling your feeders for about a week. Although the songbirds will need to rely on natural foods during that time, the hungry hawks won't have such easy pickings and will move on.

Photo Source: <https://tinyurl.com/twwmfh3>

OBSERVATIONS



RECOMMENDED RESOURCE

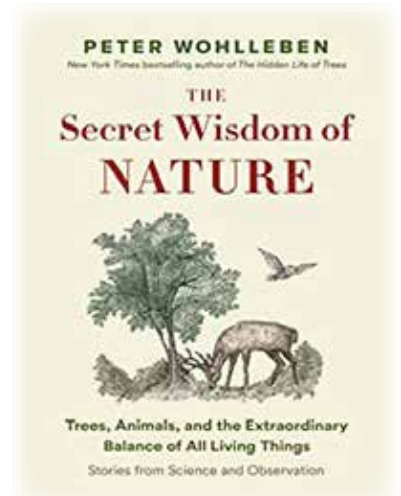
The Secret Wisdom of Nature

by Peter Wohlleben

"Nature is full of surprises: deciduous trees affect the rotation of the Earth, cranes sabotage the production of Iberian ham, and coniferous forests can make it rain. But what are the processes that drive these incredible phenomena? And why do they matter?"

In *The Secret Wisdom of Nature*, master storyteller and international sensation Peter Wohlleben takes readers on a thought-provoking exploration of the vast natural systems that make life on Earth possible. In this tour of an almost unfathomable world, Wohlleben describes the fascinating interplay between animals and plants and answers such questions as: How do they influence each other? Do lifeforms communicate across species boundaries? And what happens when this finely tuned system gets out of sync? By introducing us to the latest scientific discoveries and recounting his own insights from decades of observing nature, one of the world's most famous foresters shows us how to recapture our sense of awe so we can see the world around us with completely new eyes."

Source: <https://tinyurl.com/ra3rue7>



CONSERVATION TIP

Across most of metro Atlanta, our water supply comes from a surface water source. When it doesn't rain to replenish this surface water source, supplies may experience stress. What steps can you do to conserve water indoors and outdoors whenever possible?

- Only water plants when necessary. More plants die from over-watering than from under-watering.
- Check for and repair leaks inside and outside your home.
- Fix leaking toilets. This can save you hundreds of gallons a day.
- Turn off the faucet when brushing your teeth or shaving. This could save a total of 12 gallons a day.
- Shorten your shower by 2 minutes and save 5 gallons of water per shower.
- Fully load dishwashers and washing machines. Remove laundry right away to prevent souring and to avoid having to double wash.
- Properly winterize your irrigation system so that your lines do not freeze and burst over the cold winter months.
- Replace older toilets and shower heads with high efficiency models. If your home was built before 1993, you may qualify for a [toilet rebate](#).
- Choose efficient appliances. Look for EPA WaterSense and ENERGY STAR labeled products when shopping for new appliances and fixtures.



Take the water conservation pledge to find out how much water you use and how you can use less at mydropcounts.org.

Winterize Your Pipes To Prevent Damage

Winter seems to have arrived in full force, with temperatures already dropping below freezing at night. With the holidays approaching, many people plan trips and vacations away from home. While travelers may be enjoying family time, warmer temperatures, or even just a day out, their home may be left in danger from frigid temperatures. Water expands when it freezes, so pipes can crack from the pressure of expanding water. Once temperatures warm up and the water thaws, homeowners could find leaks leading to serious structural damage, mold, and a variety of other problems. A single 1/8-inch crack in a pipe can result in up to 250 gallons of water leakage per day! Pipes that tend to freeze most frequently include those exposed to severe cold, such as outdoor faucets, swimming pool lines, and irrigation systems. With forethought and preparation before temperatures drastically drop, you can avoid expensive repairs caused by frozen pipes.

Irrigation System:

Regardless of the climate you live in, there are a few steps you should take each winter to prepare your irrigation system for freezing temperatures. Without proper preparation for winter, your irrigation system could be damaged from freezing water left in the system. Your first step will be to shut off the water supply to your irrigation system at the main shut off valve. The shut off valve, any pipes above ground, and the backflow preventer will need to be prepared for winter. If they are not located in a heated room or below the frost line, they should be wrapped with insulation to keep from freezing. You can do this with self-sticking foam insulating tape or foam insulating tubes, both typically sold at home improvement stores. If you have an automatic system, over winter you should completely shut off the controller. Even in "rain mode" the controller continues to keep time and programming information, all that changes are the valves do not open. With the controller completely shut off instead of in rain mode, not only will you save electricity, but will eliminate the risk of damage to your system by the controller accidentally starting. When temperatures begin to warm up and it's time to use your irrigation system again, you will need to replace the battery and reprogram your controller to ensure efficient use.



Photo Source: <https://tinyurl.com/vc457vs>



Photo Source: <https://tinyurl.com/qrexhld>

After your system is turned off and protected from the outside, you will need to protect it from the inside by draining the water from the pipes. Freezing water in pipes can cause costly damage to the backflow assembly and rupture pipes. To ensure all water is removed from your irrigation system, there are three ways to remove water: manual drain, auto drain, or blow out. For manual drains you will open valves installed at the lowest points of the system to drain water. Automatic drains open by themselves each time the pressure drops in the pipes and should drain at the end of each irrigation cycle. Even if you remove water with a manual or auto drain, or if you are unsure of your system type, it is a good idea to perform a blow out. A blow out requires using an air compressor to literally blow all the remaining water from the irrigation system and backflow device. Each zone of your irrigation system will need to be blown out to ensure no water is left in the system. If you are not experienced in this method, or unsure of the type of system you have, this is a job best left to professionals.

Exterior Faucets:

When temperatures drop below freezing, water left in outside faucets and pipes can do damage inside your home as well. In colder regions, where freezing winter temperatures are common, pipes and outside faucets are typically insulated when building the home. However, homes built in warmer regions, that might only occasionally experience cold snaps, are often the victim of frozen pipes after a sudden temperature drop. Regardless of where you live, winterizing your exterior faucets should be part of your fall routine and is a process the average homeowner can easily complete.

Your first step to protecting your pipes is to remove all attached hoses. You will also want to drain the water from the hoses to prevent this from freezing and splitting. If your home has an internal shut off valve for the exterior faucet, shut off the interior valve, open your drain cap and drain the water into a bucket, then turn the exterior faucet on until it runs dry. Once no more water is coming out, turn off your exterior faucet and close the drain cap. If your home does not have an internal shut off valve, you will need to make sure that your exterior faucet is not dripping water. Even a slow drip can waste 1000's of gallons of water each year and in the winter this drip can freeze, block, and crack the faucet. Water left inside the pipes can be protected from freezing by covering and insulating the exterior faucet. Exposed pipes should be wrapped with insulation tubes



Photo Source: Lisa Baird
<https://tinyurl.com/tph2jn3>

found at home improvement stores. Faucets can be fitted with an insulated slip-on cover, ensure the cover is designed to stay on securely during the winter and annually inspect it for tears or damage.

Inside Your Home:

Without proper preparation, the plumbing inside your home also runs the risk of freezing during severe cold snaps. Pipes running through a crawl space run the risk of freezing from cold air blowing in. Close crawl space vents and place insulation over the openings, make sure holes and cracks are filled in and not letting cold air in. For under sink pipes that run along an exterior wall, keep the vanity door open to allow heat inside. If outside temperatures drop low enough, you can even place a small space heater in the bathroom to allow extra heat on the pipes. Finally, if you are leaving your home for an extended time during the winter, do not turn your heat completely off. Instead adjust the temperature to at least 55 degrees, this will save energy, but still allow enough heat to keep pipes from freezing in the event of an unexpected temperature drop. Winterizing your pipes before an emergency situation hits, can save you time, money, and stress!



Opening cabinets under sinks can help prevent frozen pipes.
Photo Source: <https://tinyurl.com/w2bukpu>

Sources: <https://tinyurl.com/uzt94df>
<https://www.youtube.com/watch?v=s3YRbJYmvgA>, <https://www.bobvila.com/articles/winterizing-pipes/>
<https://porch.com/advice/how-to-winterize-your-exterior-faucets>, <https://www.rainbird.com/homeowners/how-do-i-winterize-my-irrigation-system>

COBB'S CLIMATE UPDATE

Declared Water Restrictions Status: Level 1 Drought

Outdoor water use: irrigation permitted daily before 10 AM and after 4 PM.

No restrictions on other outdoor water uses. Cobb Water encourages our customers to conserve water.

U.S. Drought Monitor: Abnormally Dry

Rainfall Level: Below Normal

- 2019 Total: 42.45 inches
- Jan-November Historical Average: 45.81 inches

Rainfall September - November 2019:

- September: 1.20 inches
- October: 5.55 inches
- November: 2.61 inches

Allatoona's current level:
840.25 feet, below normal

Chattahoochee River
and tributaries:
At or below normal ranges

Lake Lanier:
Below normal

ANNOUNCEMENTS

Home School Series

Home school families are invited to join Cobb County Water System's Watershed Stewardship team for a new monthly home school series. Programs will be held on select **Tuesdays, 10:30am-12:00pm**, and will explore water, natural history, and other science related topics. Students will discover Amazing Macroinvertebrates, Bog Gardens & Carnivorous Plants, Georgia's Natural Regions, and much more! Families will enjoy a lively 30-45 minute presentation on the month's topic, followed by participation in a hands-on activity. Each session will list appropriate grade ranges, but all are welcome! After the presentation, stick around and enjoy a picnic lunch in the class space, outside in the Wildlife & Rain Garden, or at the shaded gazebo onsite.

- Our home school programs are FREE of charge!
- Advanced registration is required for planning purposes.
- Lunch is NOT provided. Please BYO Lunch (a microwave is available for use).
- At least one adult is required to remain with students during the program.
- Programs will be held, rain or shine. Offsite/outdoor programs may be weather dependent.

To register,
visit our online calendar at
www.cobbstreams.org,
and click on the event.

January 28 • Regions & Wildlife of Georgia with LIVE Animal Presentation • Water Quality Lab, 662 S. Cobb Drive, Marietta

Explore the unique geology of Georgia and how its diverse and impressive landscape allow Georgia to be one of the most biologically rich states in the United States. We'll discuss some of the interesting wildlife found in each region and then meet one who calls Cobb County its home.

February 25 • Birding for Beginners • Hyde Farm Park, 726 Hyde Road, Marietta

Bring your binoculars and join us as we explore the ins and outs of birding. We'll discuss how to get started, tools to acquire, bird identification, and how to enjoy birding from wherever you are. We'll also discuss some cool apps to help with bird identification that also aid in science and research!

March 24 • Ecosystems Exploration • Hyde Farm Park, 726 Hyde Road, Kennesaw

Join us on an interpretive hike as we explore the plants, animals, and interconnected workings of the pond and forest of Hyde Farm Park. We'll identify and learn about several arboreal, terrestrial, and aquatic species, and their very important contribution to maintaining the delicate balance of this beautiful ecosystem.



Welcome to Laurelle Panchoo

We are delighted to announce Laurelle Panchoo has joined the Communications & Education team as the part-time Program Leader. Laurelle will be coordinating and presenting the Brooke and Branch Puppet Show, a third grade assembly program we facilitate across the county every school year. Laurelle earned her BFA in Illustration and Design from the Art Institute of Atlanta. She specializes in teaching art and social skills to children and individuals with special needs. Laurelle has also spent time teaching STEM lessons to elementary students. Her love of children and art has brought her to the Cobb County Water System and the Brook and Branch Puppet Show.

Welcome to Brandi Wright

We would like to welcome Brandi Wright as the new part-time Program Assistant working with the third grade Brooke and Branch puppet show. Brandi holds an Associate Degree in Fine Art and a Bachelor's in History with a minor in Anthropology, but her passion is education and conservation. She is a member of the Georgia Native Plant Society and has completed volunteer Chemical Monitoring for Adopt-a-Stream. She used her knowledge to transform her previous Cobb County property into a certified animal habitat and an outdoor laboratory used in teaching homeschoolers about nature and conservation for over a decade. She is now in the process of gaining certification with the National Audubon Society and has already had her new property at the base of Kennesaw Mountain pledged as a Certified Animal Habitat through National Wildlife Federation.



Thank You to our Fall Intern!

The Watershed Stewardship Program would like to thank **Lucy Damon**, our intern for the fall 2019 semester. During her three months with us, Lucy became certified in GA Adopt-A-Stream Chemical and Bacterial Monitoring and adopted a site on Sope Creek near her high school. On her first day monitoring, Lucy found evidence of a sewer spill and the data she collected helped locate the source. She shadowed the Lab Tech in the Water Quality Laboratory, rode along on field audits with the Storm Water Management crew, worked in the Wildlife & Rain Garden, assisted with a middle school teacher training, and helped out around the office. We enjoyed having you with us, best of luck, and thanks for everything!



Congratulations to the 2020 waterSmart waterArt Calendar Winners!

Cobb County middle school students were invited to use their talent and create a 2-D work of art that answered the question, "How is water important to me?" We received 173 submissions from 9 middle schools, with 12 selected to be included in the 2020 waterSmart waterArt calendar. Additionally, 13 were awarded Honorable Mentions. All artwork was displayed at The Art Station-Big Shanty, culminating with a reception for the winners and unveiling of the 2020 calendar. We would like to thank J.J. Daniell Middle School, Floyd Middle School, Hightower Trail Middle School, Lindley 6th Grade Academy, Lost Mountain Middle School, Lovinggood Middle School, McCleskey Middle School, Pine Mountain Middle School, and Simpson Middle School for their entries! To view the Winners and Honorable Mentions artwork, visit <http://tinycc/clghz>.



Stewardship Stars

Excellence in Data Collection

The following volunteers have submitted data each month during the September, October, and November quarter:

- Bishop Lakes** - Chemical Monitoring in the Willeo Watershed
- Boss Environmental** - Chemical Monitoring in the Mud Watershed
- Bushart** - Chemical Monitoring in the Sewell Mill Watershed
- Cobb Progressives** - Chemical & Bacterial Monitoring in the Noonday Watershed
- Cobb Progressives** - Chemical & Bacterial Monitoring on Proctor Creek
- Cobb Progressives** - Chemical & Bacterial Monitoring in the Lake Acworth Watershed
- Connie Ghosh** - Chemical & Bacterial Monitoring on Rubes Creek
- ERM Atlanta** - Chemical & Visual Monitoring in the Chattahoochee Watershed
- Garden School of Marietta** - Chemical Monitoring in the Noonday Watershed
- Georgia Lake Monitoring** - Chemical Monitoring in the Lake Allatoona Watershed
- John Keiler** - Chemical Monitoring in the Lake Allatoona Watershed
- Keep Smyrna Beautiful** - Chemical Monitoring in the Nickajack Watershed
- Lakewood Colony** - Chemical & Bacterial Monitoring in the Rubes Watershed
- Pic** - Chemical Monitoring in the Noses Watershed
- Pope High School** - Chemical Monitoring in the Sewell Mill Watershed
- Richard's Creek** - Chemical Monitoring in the Allatoona Watershed
- Sierra Club Centennial Group** - Chemical, Bacterial, & Macro Monitoring in the Rottenwood Watershed
- Simon Locke** - Chemical, Habitat, & Bacterial Monitoring on Butler Creek
- Team Salty** - Chemical Monitoring on Sope Creek
- Tritt River Kids** - Chemical Monitoring in the Noses Watershed
- Village North Highlands Subdivision** - Chemical & Bacterial Monitoring in the Willeo Watershed

Thank you for your hard work and dedication!

w e l c o m e

Lucy Damon

Chemical & Bacterial Monitoring on Sope Creek

Mr. Locke

Chemical & Bacterial Monitoring on Butler Creek

Garrison Mill Target

Chemical Monitoring in Willeo Watershed



2019 River of Words National Finalist

"Baby Sea Turtles"

Naomi Cray

Grade 2

Casa Montessori School, Marietta

Teacher: Theresa Dean

SEASONAL HAPPENINGS

Privet Pull

January 11, 2020 • 10:00am - 12:00pm • Sweat Mountain Park, 4346 Steinhauer Road, Marietta

February 27, 2020 • 4:00pm - 6:00pm • East Cobb Park, 3322 Roswell Road, Marietta

Privet is a non-native, invasive plant that out-competes native species. We'll be removing privet from the landscape. Join us to help restore habitat and native plant species. We will provide clippers and tools that pull the Chinese privet right out of the ground by its roots.

Stream Cleanup

February 22, 2020 • 11:00am - 1:00pm • Butler Creek Watershed

We will provide you with trash bags, grabbers (litter sticks), orange safety vests, blue latex gloves, and data cards to record the debris we collect.

Noonday Creek Restoration Site Work Day

February 8, 2020 • 10:00am - 12:00pm • Noonday Creek Trailhead, 3015 Bells Ferry Road NE, Marietta

March 3, 2020 • 4:00pm - 6:00pm • Noonday Creek Trailhead, 3015 Bells Ferry Road NE, Marietta

Join us at Noonday Creek to remove invasive plants from our ongoing streambank stabilization site. This is a great opportunity to see and participate in an active stabilization project.



Amphibian Monitoring

March 7, 2020 • 11:00am - 1:00pm • Water Laboratory, 662 South Cobb Drive, Marietta

Cobb County residents can be trained as Citizen Herpetologists and learn to identify frogs, toads, and salamanders by their habitat, morphology, and vocalizations. Certified monitors will be allowed to collect data on local amphibian populations and contribute to both regional and global studies of amphibian diversity.

Storm Drain Marking

March 12, 2020 • 4:30pm - 6:30pm • Nickajack Watershed

Each pair of volunteers will have a bucket full of supplies: maps, pens, storm drain markers, adhesive, educational material packets, and trash bags. Teams will mark the storm drains, pick up litter and distribute packets to each home to educate them on the newly marked storm drains.

To register for a space in these upcoming service projects, visit our website, www.cobbstreams.org, under Calendar.



Cobb County Water System
662 South Cobb Drive
Marietta, Georgia 30060



This is an official publication of the Cobb County Water System, an agency of the Cobb County Board of Commissioners.

Calendar of Events

January

- 9 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 11 Privet Pull • 10:00am-12:00pm • Sweat Mountain Park • 4346 Steinhauer Road, Marietta
- 16 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 23 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 25 Adopt-A-Stream Macroinvertebrate Monitoring Workshop • 10:30am - 2:00pm • Cobb County Water Quality Laboratory
- 28 Homeschool Science Series: GA Regions & Wildlife • 10:30am - 12:00pm • Cobb County Water Quality Laboratory
- 30 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory

February

- 6 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 7-8 Georgia Organics Conference & Expo • Athens, GA • <http://conference.georgiaorganics.org>
- 8 Noonday Creek Restoration Site Workday • 10:00am - 12:00pm • Noonday Creek Trailhead • 3015 Bells Ferry Road NE, Marietta
- 13 Adopt-A-Stream Chemical Monitoring Workshop • 6:30pm - 9:00pm • Cobb County Water Quality Laboratory
- 22 Stream Clean-up • 11:00am-1:00pm • Butler Creek Watershed
- 25 Homeschool Science Series: Birding for Beginners • 10:30am - 12:00pm • Hyde Farm Park • 726 Hyde Road, Marietta
- 27 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 27 Privet Pull Mob • 4:00pm-6:00pm • East Cobb Park • 3322 Roswell Road, Marietta

March

- 3 Noonday Creek Restoration Site Workday • 4:00pm - 6:00pm • Noonday Creek Trailhead • 3015 Bells Ferry Road NE, Marietta
- 5 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 6-8 EEA Conference • Jekyll Island, GA • <https://www.eealliance.org/>
- 6-21 Atlanta Science Festival • Atlanta, GA • <https://atlantasciencefestival.org>
- 7 Amphibian Monitoring Workshop • 11:00am - 1:00pm • Cobb County Water Quality Laboratory
- 12 Wildlife & Rain Garden Workday • 9:00am - 11:00am • Cobb County Water Quality Laboratory
- 12 Storm Drain Marking • 4:30pm - 6:30pm • Nickajack Watershed
- 19 Adopt-A-Stream Bacterial Monitoring Workshop • 6:30pm - 9:00pm • Cobb County Water Quality Laboratory
- 24 Homeschool Science Series: Ecosystems Exploration • 10:30am - 12:00pm • Hyde Farm Park • 726 Hyde Road, Marietta
- 27-29 Adopt-A-Stream Confluence • Unicoi State Park • Helen, GA • <https://adoptastream.georgia.gov>

Events in BLACK are Cobb County Watershed Stewardship events.
More information can be found on our Calendar at www.cobbstreams.org.