The Resource

A Publication of the City of North Augusta
Stormwater Management Department

Our First Community Rain Garden

Earlier this year, on Saturday, May 5th 2018, a group of about thirty individuals gathered together to build a community rain garden in Riverview Park. The project was a team effort lead by Mr. John Black from Interfaith Environmental Working Group and Tanya Strickland from North Augusta's Stormwater Management Department. With a team assembled, the work began.

Volunteers that helped build the first community rain garden.

Rain gardens are becoming extremely popular for a number of reasons. Of course, gardens are a wonderful addition to almost any place, but a rain garden functions to improve the flow of water in a system. As you may have noticed, North Augusta is a quickly growing city. More and more solid surfaces such as roofs, roads, parking lots, and buildings are being built, resulting in less rain water filtering through the soil to recharge the ground water. These solid surfaces are called impervious surfaces because water can no longer flow through them and into the ground. Instead of filtering into the ground, the water quickly runs off of the solid surfaces into storm pipes, streams, and rivers.

Additionally, everything we drop on these impervious surfaces such as garbage, paints, car fuels, or pesticides has the potential to end up in those same streams and rivers. Having large amounts of swiftly moving water can lead to erosion of the streams and even flooding, if the drainage systems become clogged by trash and debris. In order to prevent erosion, flooding, and pollution of our valuable waterways, action needs to be taken by all community members. An act as simple as picking up a used cup and throwing it into a garbage can, helps to clean up the environment.

Rain gardens are another way we can help combat our carbon footprint. A rain garden is designed to hold water that drains off of the solid surfaces around it

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Stormwater Department Continually Working Toward a Cleaner Tomorrow

The City of North Augusta's Stormwater Management Department must meet requirements set by the city's Small Municipal Separate Storm Sewer System (SMS4) permit from South Carolina's Department of Health and Environmental Control (SCSHEC). Rather than simply meet these requirements, our goal is to exceed them in order to better ensure the health and safety of the local citizens and the environment. Listed here is a brief summary of the 2017/2018 Bi-annual Report which can be found in greater detail by visiting our website, www.northaugusta.net.

Stormwater Management and Streets & Drains Jan 2017 to Oct 2018		
Activity	2017	2018
Storm Drains Cleaned	848	569
Detention Ponds Cleaned	82	36
Construction Site Inspections	450	442
Concrete Repairs (cy)	400	248
Asphalt Repairs (tons)	142	122
Storm Pipe Placed (linear ft)	180	168
Banners Installed	24	17
Signal Light Repair	69	71
Public Participation (total participants)	1178	tbd
Education Outreach (total reached)	17132	tbd
Household Hazardous Waste Collected (tons)	6.6	8.5

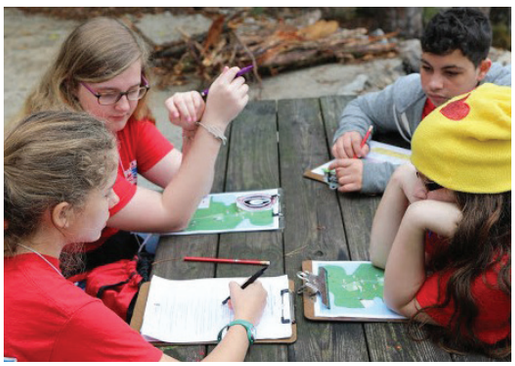
EcoMeet 2018

This year, on November 2nd , the City of North Augusta Stormwater Management Department participated in the CSRA-Environmental Science Education Cooperative (CSRA-ESEC)'s 18th Annual Eco-Meet. Despite the weather, Columbia County hosted a wonderful event at Wildwood Park in Appling, Georgia. A total of ten schools from around the CSRA came to participate in the event with 18 teams participating, including North Augusta's own Paul Knox Middle School. Along with North Augusta's Stormwater Department, the organizations that joined the event included Phinizy Center, The Army Corps, Savannah River Ecology Lab, University of Georgia Extension, and the Silver Bluff Audubon.

Eco-Meet is an opportunity for students to step out of the classroom and show off their skills in an educational competition against other teams in the area. This year the students studied six different subjects in the weeks leading up to the competition: Invasive Species, Wastewater and Drinking Water, Bird Biology, Endangered Species, Sandhills, and Stormwater Management. In a race against the clock, the students took a plethora of tests, one on each topic. Hopping from station to station, teachers and students alike had the privilege of seeing stormwater models in action, endangered species up close, and many other activities that a normal classroom cannot provide. The most exciting participant of the day may have been the Eastern Diamondback Rattlesnake. (Don't worry; he was very well contained.)

This year's CSRA-ESEC's event coordinator, Trish Hobbs, treated the contestants and volunteers to a warm picnic lunch and the fun continued all day long. After the tests were finished, pencils put down, and results were tallied, there was a reward ceremony. The team with the highest scores from each station received participation metals and the three highest teams overall received placement metals. The winners of the Stormwater Management Station were from Riverside Middle in Evans, GA and they were exceptional well-versed in stormwater practices. The overall winners came from Davidson Fine Arts in Augusta GA and they received a well-deserved blue-ribbon metal for all their hard work.

Even though it was raining and chilly, the students had a great time learning about the environment around them. As intelligent as these students were, we certainly have some talented up and coming conservationists and engineers in our midst.



(top left) Paul Knox students working as a team to answer test questions.

(bottom left) Andrew, Brain, Benjamin, and Ethan from Davidson Fine Arts, First Place EcoMeet 2018 Winners.

(top right) Samantha, Alyssa, Andrew, and Graham from Riverside Middle, Stormwater Management Station Winners.

Photos by: Ken Young

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and then slowly release the water over a period of time. This is an important part of replenishing groundwater as the water can flow into the ground through the garden as if it would naturally. Slowing down the flow of rain water also lessens the risk of erosion in our existing waterways. Even though the water slows down, is it clean enough to go into our rivers? Allowing the rain water to seep into the ground reduces the pollution in our streams and rivers by filtering out paints, gasoline and other trash that can come off the solid surfaces.

By building rain gardens, we are helping to maintain a cleaner and more natural environment, even in the midst of a developing city. If you would like to learn more about how to build your own rain garden visit our website for handouts and other information provided at our workshop or contact us and we would be happy to send you more information.

City of North Augusta Website:
www.northaugusta.net/departments/engineering-public-works/stormwater-management

Taking Care of Your Home Septic Tank

Septic tanks are not systems to be forgotten, they must be maintained to work properly. Most homes in North Augusta discharge wastewater to the city sanitary sewer system, but about 2,000 homes discharge to a septic tank. These homes are generally in areas of town where city sewer was unavailable or only became available after a septic was in place. A septic tank is a private system on your own land and it is one of the most important systems you own. You must be sure to maintain it. If you are unsure what system you have, you can easily find out. One way to tell is to look at the enclosed city utility bill. If you do not see a charge for "sewer services" on your utility bill, then you are not being billed for city sewer and you probably have a septic tank.

When a septic tank goes bad, you realize it very quickly when you smell foul odors both outside and inside your home, or begin to see foul smelling wet spots in your yard. Possibly the most dramatic way you become aware of the problem is when sewage begins to back-up into your sinks and tubs. There are usually initial clues we may ignore or just not realize. If the grass color is darker green in strips near the drain field area of your system, then drain lines may be malfunctioning or clogged. The water should disperse more uniformly underground. Another clue is that you unexpectedly hear new sounds like gurgling or bubbling in the pipes when emptying the tub, sinks or other drains. That may be an indication of a brewing drainage problem no matter what type of system you have. It is usually a great time to call a plumber for an inspection. Otherwise, a total failure may be the result, and those always tend to happen when you have a house full of guests using bathrooms more than usual or at 11 p.m. on a Saturday night when no plumbers are available until Monday. Emergency calls to plumbers are generally more expensive.

A failing septic system can release untreated sewage water into your yard that is carried away to the streams during rain events. This is suspected to be a leading cause of human sources of bacteria entering streams. If your tank is located near a stream, it can direct discharge to the stream all year round. That is

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- Have your septic system inspected every one to two years and cleaned (pumped out) every three to five years or more frequently, depending on the tank size and number of people using the system. More people, more often cleaning needed.
- Never flush cat litter, coffee grounds, diapers, towelettes, cigarette butts, tampons, condoms, grease, dental floss, baby wipes, paints, thinners, pesticides, oils, medicines, or excessive household chemicals.
- Protect the drain field. No parking on it, no running water into it and no digging or building on it.
- Do not use a garbage disposal if you have a septic tank. It adds up to 50 percent more solids to your septic tank, and your tank will require more frequent pump-outs.
- Do not use septic tank additives, commercial septic tank cleansers, yeast, sugar, etc. These products are not necessary and some may be harmful to your system.
- Know your system's location. When you have the tank pumped, draw a diagram or map showing its location in relation to fixed points - corners of the house, steps, or fence posts. Ask the pumper to help you locate the drain field. Note its location on your diagram, along with the location of your drinking water well if you have one. Keep this sketch with your septic tank records.
- Mark the location of the lid, place an easily movable item - a birdbath or decorative rock to make it easy to find.
- Conserve water. Reduce the amount of wastewater that must be treated and disposed of by your system:
- Wash no more than one or two loads of clothes daily. Up to 53 gallons of water flood your septic system with each load, so it's best to spread laundry out over the week.
- Fix leaky faucets and toilets; over time, they can send hundreds of extra gallons of water through your septic system.
- Use low-flow fixtures and appliances whenever possible. Low-flush toilets use between 1 and 1.6 gallons of water per flush and may reduce your water bill by up to one-third. Low-flow faucet aerators on sink faucets. low-flow showerheads and low-flow washing machines will also save water.

- Do not use caustic drain openers for clogged drains. Use boiling water or a drain snake instead.
- Make sure your water softener system (if you have this) is not plumbed to wash back into the septic tank.
- Use commercial bathroom cleaners and laundry detergents in moderation. Try cleaning with a mild detergent or baking soda so you do not harm the underground bacteria that work so hard to keep the system running smoothly between cleanings
- Keep good records, including a copy of your septic tank permit from SCDHEC.

Learn more by visiting the EPA Website:
www.epa.gov/septicsmart

If you have a septic system...

Septic systems can provide long-term, effective treatment of household wastewater if properly designed, constructed, and maintained.

Things to keep in mind:

- ✓ Inspect your system (every 1 to 3 years) and pump your tank (as necessary, generally every 5 years).
- ✓ Use water efficiently.
- ✓ Don't dispose of household hazardous wastes in sinks and toilets.
- ✓ Plant only grass over and near your septic system. Roots from nearby trees or shrubs might clog and damage the drainfield.
- ✓ Don't drive or park vehicles on any part of your septic system. Doing so can compact the soil in your drainfield or damage pipes, tank, or other septic system components.

For more information, contact:
North Augusta Stormwater Management
803 441-4246 stormwater@northaugusta.net

U.S. Environmental Protection Agency,
www.epa.gov/owm/onsite

why it is so important to know how to maintain your system.

According to the South Carolina Department of Health and Environmental Control (SCDHEC)'s website these are the most important things you need to know about owning or living in a home with a septic tank.

Red-Cockaded Woodpeckers

Species Profile:
Red-cockaded Woodpecker (Dryobates borealis)

Red-cockaded woodpeckers (Dryobates borealis) are an endangered species of bird that are being reintroduced to areas near North Augusta. This robin-sized bird is black and white and looks very similar to a Downy Woodpecker. The key to identifying a red-cockaded woodpecker is the solid white band between two black bands of feathers on their face that make a single Oreo-like pattern. According to The Cornell Lab of Ornithology, red-cockaded woodpeckers live in open woodlands that are filled with pine trees. They use pine trees to build their homes by carving out a nest in the very heart of the tree. Like people, they live in family groups that all work together to build a tree cavity. The building process can take years to complete. The cavity is their shelter from the weather and predators, so it is very important to the survival of the family. Historically, red-cockaded woodpeckers lived just a town or two over in Hitchcock Woods of Aiken, SC in the early 1970's. Over time, pine trees in the area were largely cut down because pine is extremely popular and can be sold to make a profit. Because the environment changed and the habitat became unsuitable, the birds disappeared.

For a long time, people were looking for a way to bring the birds back to the area, and they have finally done it. Scientists and conservationists have created a method to build replicas of red-cockaded woodpecker cavities and install them into the trees. The idea is that if the birds have a home, maybe they will decide to stay in the area. With these bird boxes, a small group of ten red-cockaded woodpeckers were moved from Francis Marion National Forest in 2016 into Hitchcock Woods. As of November 2018 that comes to a total of about 30 birds that have been relocated to Hitchcock Woods according to Hitchcock Woods Superintendent Bennett Tucker.

Under the watch of foresters and conservationists, the birds are being monitored closely to make sure they are adjusting to their new home. As an endangered species, teams of people around the southeast, including private landowners, are trying to reestablish red-cockaded woodpeckers back into their original locations. As the number of populations of red-cockaded woodpeckers goes up they are at a lower risk of being endangered. With the support of scientists, city workers, and citizens to protect our forests and wooded areas, it is promising that the number of red-cockaded woodpeckers will increase in the areas neighboring North Augusta and throughout the southeast! The birds may even one day call the City of North Augusta their home. Together we can help these birds recover and provide them with the best habitat possible!

Red-cockaded woodpecker perched in a tree.
Photo by: Greg Perry

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North Augusta
South Carolina's Riverfront