



The Resource

A Publication of the City of North Augusta
Stormwater Management Department

Stormwater Department Continually Working Towards Cleaner Streets, Drains, and Water



Annual Kids Earth Day Event where stormwater team and Miss. Emily Miller helps educate citizens about stormwater

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 (SCDHEC). Our goal is not just to meet these requirements, but to exceed them to better ensure the health and safety of all local citizens and the environment we live in. Our ongoing efforts to better educate the public on what stormwater pollution is and how we can prevent it from getting into our storm drains has resulted in reaching over 47,000 people. Every day city employees work to eliminate pollutants from the city

through education and outreach, storm drain cleaning, picking up litter, annually collecting hazardous wastes for proper elimination, and making sure stormwater ponds are working properly to keep sediment and chemicals out of streams. All of these efforts help keep our local creeks and streams cleaner resulting in cleaner water entering the Savannah River. Below, you can see a brief summary of our activities from the Bi-annual report submitted to SCDHEC.

For the full 2014/2015 Bi-annual report with much more detail on Stormwater Department

activities, please visit the City of North Augusta's website www.northaugusta.net. Click on [Departments/Engineering/Stormwater](#).



Annual Hazardous Waste Collection Event rids city of potentially toxic chemicals

2014-2015 Stormwater Department Summary of Activities

Construction Site Runoff Inspections Completed	603	Inspections
Stormwater Pond Inspections & Cleanings	93	Each annually
Education and Outreach Activities	47,220	People reached
Public Participation in Projects/Events	544	Participants
Storm Drains Cleaned throughout the city	701	Drains/ditches
Litter Pickup on Roadways	20.4	Tons removed
Street Sweeping (Pollutant Removal)	876	Tons removed
Household Hazardous Waste Collection	9.98	Tons collected
Storm Pipe Repairs	1,724	Linear feet

2016-2017 Bi-annual report available April, 2018

Girl Scouts Create NEW Interpretive Plant Trail at Brick Pond Park – *By Teresa Thomas and Katie Beth Cannon*



Teresa Thomas and Katie Beth Cannon showing the new plant markers for Brick Pond Park

Have you recently visited Brick Pond Park? If so, then you might have noticed a new addition as you stroll down the paths. As Girl Scouts from Troop 5775, we have been working throughout 2017 on earning our Silver Award at Brick Pond Park in North Augusta. The Silver Award is a project that a Girl Scout works on in her Cadet years (6th-8th grade). The requirements for the project include logging 50 hours, as well as making sure the project has both a large community and educational value. Along with both the Bronze and Gold Awards, the Silver Award

is one of the three most prestigious awards a Girl Scout can earn.

We worked with Tanya Strickland and Sarah Montero from the City of North Augusta's Stormwater Management Department to plan, design, and complete a trail of plaques in the park. These plaques identify different species of wetland plants, many of which are native to South Carolina. The plants are not only pleasing to look at, but also assist in stormwater treatment by filtering pollutants as water flows through and to the wetlands of the park. The new plaques include the following information about each plant: common and scientific name, the plant's native range, and a number that correlates with a plant trail path we planned out. Finally, it includes a QR code so that visitors can scan the plaque with their phone and that will link it to a website with more information and fun facts about the plant.

We believe this project will positively impact Brick Pond Park's Educational value for many

years to come as it will make your walk more interactive as well as help you learn something new along the way. To get the most out of your experience at Brick Pond Park's new plant trail, please download a free QR code reader app [from the app store on your phone](#) before you go. To test your new app, you can hold your phone up to the picture of the plaque on this page and see if it works. To learn more about how you can get involved in Brick Pond Park, please contact the City's Stormwater Department.

For a map of our new trail please see the North Augusta Stormwater Department Website.



Test your QR Code reader now!

Augusta University Wildlife Research at Brick Pond Park – *By Ashley Holmes*

Brick Pond Park is a lovely place for an afternoon stroll or a wildlife-watching adventure, but did you know that it is also a great place for research? Brick Pond Park offers a unique opportunity to study wetlands wildlife due to its abundance of wildlife and its location between North Augusta and the Savannah River. On any sunny day, you may see students along the shoreline of the ponds or wading out into the waters to collect samples. They are

there to learn about the health of the ecosystem.

A current ongoing research study by Augusta University involves a survey of the presence of Bisphenol A (BPA), commonly found in degraded plastics. It is a synthetic chemical known to mimic estrogen and disrupt hormone levels in animals. It can also have negative neurological impacts on them resulting in health problems and fewer offspring. For the study,

several species of healthy turtles are carefully collected from turtle traps during the warmer months of spring and summer. A sample of blood is taken and the turtles are safely released back into the ponds they were collected from. From these small blood samples, often 0.4 mL or smaller in size, plasma can be separated from the blood and then tested for presence of BPA. This winter, students will

(continued on page 3)



Ashley Holmes takes a tiny sample of blood to test for BPA before releasing this turtle back to Brick Pond Park

be running tests to determine the levels of BPA in the samples collected from turtles in various areas of Brick Pond Park.

Turtles are an indicator species, which means the health and presence of turtles are tell tale signs of the overall health of an ecosystem. They are important to the maintenance and function of the ecosystem they inhabit. Though our wetlands are considered a buffer to help prevent pollutants from entering the Savannah River, which is a drinking water source for many, it is still important to monitor pollutant levels to ensure that the beautiful wildlife habitat remains healthy and we can continue to enjoy the wildlife at Brick Pond Park.

Since the wetland waters of Brick Pond Park are direct runoff waters from roads, parking and residential areas, the best way to prevent excess pollutants from entering the wetlands is to take steps to contain trash and educate citizens to prevent pollution in our yards, businesses and roadways. Make sure litter makes it into waste bins and waste bins are covered from exposure to rainwater. Using reusable containers, such as canvas grocery bags and reusable drink containers, and taking steps to recycle plastics are all helpful means to avoid excess plastic pollutants in our waterways.

See North Augusta Stormwater Department Brick Pond Park Website for an extended version of article.

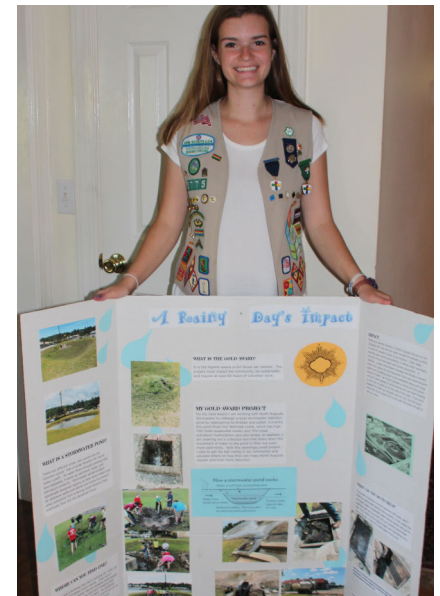
Stormwater Pond Retrofit to Help Clean North Augusta's Waters – *By Emily Miller*

This summer I received the honor of completing my Girl Scout Gold Award. This project requires leadership skills and 80 hours of community service that leave a sustainable impact on a community. While this initially seemed daunting, thanks to 13 years in Girl Scout Troop 5775 and incredible mentors from the North Augusta Stormwater Department, I was equipped with the skills and passion to impact North Augusta's stormwater system.

As a high school senior and an aspiring environmental engineer, I chose to address educating more people concerning the stormwater infrastructure in North Augusta and its impacts, while emphasizing the maintenance and upgrading of these systems to amplify North Augusta's health and beauty. While the connection between digging dirt and moving rocks and our city's health and

beauty may not initially be clear, I was able to learn and share with others how we can improve the city that we love. By updating and redesigning a forebay (the part of the pond that filters water usually with rocks or plants) in a local stormwater detention pond, I not only reduced waste in a nearby stream, but I also educated others on how they can replicate my project and have a positive impact on our nation's waters.

My project included lots of dirty work and public speaking (not every high-schooler's definition of fun), but I loved every second of it. To improve the function of a local stormwater pond, we cleaned out a water collection box that was completely full and not functional, which helped reduce flooding problems in the parking lot and prevented dirt from being carried into local streams. The bigger part of the project was to upgrade



Emily Miller with her poster about the pond retrofitting

the existing detention pond with features that clean water as it flows through the pond. We cleaned a clogged inlet and then

(continued on page 4)

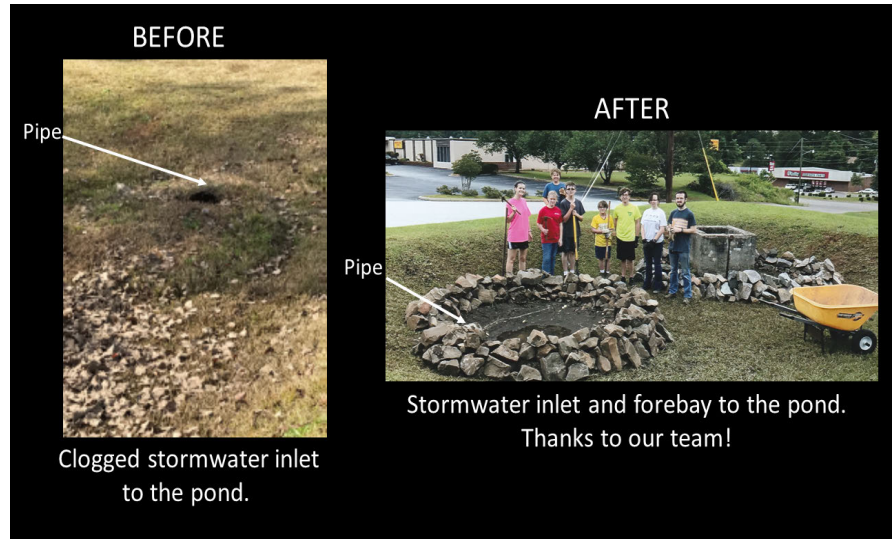
placed rocks around the inlet and outlet pipes in the pond to act as filters for larger trash, dirt and other debris.

To learn more about the impacts of excess nutrients and metals in streams, I assisted with water sampling in Pretty Run Creek, an impaired creek the Stormwater Department has been monitoring. I also educated the public about my project through outreach and helping at the City's Kid's Earth Day event at Brick Pond Park. Additionally, I shared a PowerPoint presentation about the project to local business owners, one of which is even using it as a tool to spread water quality awareness in Guatemala later this year.

While I planned the entire project, I could not have completed it without the help of Tanya Strickland, Bill Fokes and

Rafael Guerra who helped me learn about the governmental side of environmental awareness and infrastructure maintenance. Sarah Montero and Miran Tyrell as they helped me to understand the science and the engineering aspects of the project, and Cheryl Collier, a member of Dr. David Carter's team at Carter

Orthodontics (the location of the pond), helped me to brainstorm logistics and the time line. I am incredibly thankful for this opportunity and I hope others follow my lead to do a better job to clean North Augusta's stormwater, even if it is just one detention pond at a time.



Don't Be Alarmed at the New Brick Pond Park Water Level

The water level in Brick Pond Park has gone down substantially, but there is no reason to be alarmed as this is a planned change for the benefit of the ponds. When the park was built, an overflow was designed to keep the water at a certain level to grow the plants correctly but never installed. In the past months, the city installed this needed feature with the infrastructure being built at the Riverfront Village. The overflow is necessary so excess water can flow out to the Savannah River. As many of you know, Brick Pond Park's wetlands are a stormwater

treatment system for the runoff from Georgia Avenue, West Avenue, Center Street, and the Municipal Center's parking lot. Stormwater previously entered the system for successful treatment without any means of exiting, resulting in some of our beautiful plants and trees dying due to the flooded conditions. Now that the water is finally drawn down to the level it was designed to be and will stay at, the ponds will have healthier plants. An additional treatment system at the end of the overflow will result in clean water.

Ultimately, the Savannah River will receive much cleaner water and the park will thrive.



Brick Pond Park overflow installed near Railroad Avenue



For additional information contact:
Tanya Strickland, Stormwater Manager
City of North Augusta
Stormwater Management Department
P.O. Box 6400 • North Augusta, SC 29861-6400
(803) 441-4246 • stormwater@northaugusta.net

