



# The Resource

A Publication of the City of North Augusta  
Stormwater Management Department

## Protecting Savannah River North Augusta's Constructed Wetland and Ecological Park Project Chosen to Receive Grant

With the development of the riverfront underway in North Augusta, a new and innovative constructed wetland design has been developed for treating stormwater. The design will retain, enhance, and restore a wetland ecosystem currently located there. Recently, the City was notified that the project has been selected to receive grant funds from the National Fish and Wildlife Foundation (NFWF) as part of its special grant program, the Savannah-Santee-Peedee Resource Protection Fund. Dr. Gene Eidson of the Southeastern Natural Sci-

ences Academy in Augusta worked closely with the City of North Augusta and the Hammonds Ferry Development Corporation (HFDC) to design a project that will incorporate the natural hydrologic processes that exist at the site.

The wetland project has been under development by the city and the HFDC for quite some time. The recent announcement of the award from NFWF will help provide additional funding needed to allow the project to be completed as designed.

To be considered for the award by the NFWF, a pre-review process was conducted that required local stakeholders to review the proposed constructed wetland project. Reviewers included participants from USC-Aiken, the Aiken Land Trust, SCE&G Urquhart, the SC Department of Natural Resources, and the local US Department of Agriculture's Land Resources office. The city extends its appreciation to those reviewers and their comments that assisted the city in being selected to receive the NFWF grant.

*See Wetland Grant on page 2*

## Successful Fourth Annual Household Hazardous Waste Collection Event



*A truck load of hazardous materials being delivered May 20.*

Thank you to all North Augusta residents that participated in the 2006 Household Hazardous Waste Collection Day in May. Staff from the Stormwater Management, Streets & Drains, Engineering, and Sanitation departments assisted in the collection event. The team collected over 17,000 pounds of hazardous materials. In 2005, 100 residents brought hazardous waste to the event, this year the number rose to 170 participants. A list of the most common materials brought and the estimated weight is provided in the following table. Thanks again to all residents that pitched in and helped to permanently

| HAZARDOUS MATERIALS COLLECTED   | AMOUNT        |
|---------------------------------|---------------|
| Waste Paint Products . . . . .  | 14,000 pounds |
| Oil/Kerosene . . . . .          | 1,420 pounds  |
| Herbicides/Pesticides . . . . . | 1,200 pounds  |
| Antifreeze . . . . .            | 264 pounds    |
| Caustic/Corrosives . . . . .    | 800 pounds    |
| Batteries (all types) . . . . . | 100 gallons   |

remove pollution from the city. We will hold our next event in 2007.

# Improved Storm-sewer Cleaning Program Begins

The stormwater management department recently purchased a jetter-vacuum trailer to begin a comprehensive storm-sewer cleaning program across the city. The implementation of the storm sewer cleaning program will provide a needed service to the community. The program will help to alleviate flooding problems during heavy rains and will also remove pollutants by clearing debris and other blockages. In addition to the equipment purchase, a new stormwater management department employee has been added to get the job done. Jerome

Mabry, formerly of the city's Streets and Drains department was selected to fill the new position. Mr. Mabry will be responsible for the daily maintenance of storm drains across the city. Once all storm drains are cleaned and clear of debris and trash, a rotating schedule will be developed to maintain the storm sewers.

The implementation of the storm-sewer cleaning program is part of the city's effort to meet federal and state regulations to reduce pollutant loads to waterways from stormwater outfalls.

The equipment includes a powerful and compact trailer-mounted vacuum system that is combined with a high-pressure water jetting hose. The jetter will be used to force removal of trash, sediment, and other debris from stormwater pipes, cul-

verts, catch-basins, pond outlets, and other devices. At the same time, the debris and waste-water generated during the cleaning process will be vacuumed into a holding tank for proper disposal. All collected material will be documented and then properly disposed of, permanently removing it from our watershed.



*Jetter Vac Equipment Delivered in July*



*Equipment Operator, Mr. Jerome Mabry*

## Wetland Grant

*Continued from page 1*

*The project:* Years ago bricks were made in North Augusta along the Savannah River. To get material for brick making, clay soil was dug out of the ground leaving depressions that filled with water. These isolated wetlands exist on about 20 acres of property at the Hammonds Ferry Development site and currently contain industrial debris, trash, and waste brick. These pockets of wetlands have become home for salamanders, turtles, fish, and frogs. Many species of wading birds and ducks visit the larger ponds. The abandoned clay pit ponds have been providing stormwater filtration within the watershed for decades. Once complete, the project will transform these wetlands so that they will filter stormwater more efficiently and still remain excellent habitat for aquatic and semi-aquatic wildlife.

The city will be incorporating this project into the North Augusta Gree-



*Hammonds Ferry Wetlands – New design is sensitive to animals, reptiles, and plants that live “down by the river”.*

neway Trail as an educational ecological park for all city residents to enjoy. The plan includes walkways throughout with educational information posted about stormwater treatment, wetland processes and the wildlife that exist within the park. Several educational tours of the

constructed wetland are to be scheduled once the project is complete. The finished constructed wetland and ecological park will not only be a great place for wildlife, but also a great place to spend an afternoon.



# Fertilizers Impacting City Streams

Are you applying lawn or garden fertilizers in the safest manner possible to prevent it from polluting our local streams? Recent sampling results from local streams indicate elevated levels of ammonia nitrogen and phosphorus throughout the city. Elevated levels of these nutrients generally are a result of runoff or groundwater impacts from fertilized lawns and gardens. These pollutants can be toxic to fish and other aquatic organisms.

The pride we take in our surroundings and the beautiful yards throughout North Augusta demonstrate the positive effects of using fertilizer. The fact that most of our neighborhoods are crowded can also intensify the negative effects of over-fertilization. With storm-drains located throughout these neighborhoods the potential for them to carry contaminants directly to streams is high. There are several things that residents can do that will allow our landscapes to be beautiful and

at the same time will prevent contaminating our streams.

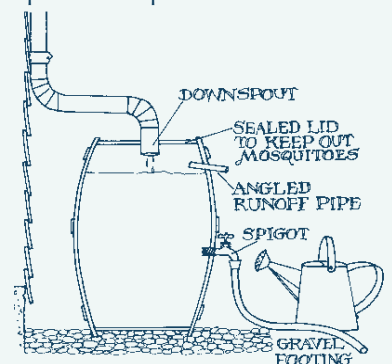
First, have your soil tested to determine what type of nutrients and fertilizer your landscape requires for a healthy lawn. Clemson Extension Service offers this service and you can contact the Aiken district office at 803-649-6297. They will send you all of the information and materials needed to conduct a soil test. A drop off location for soil tests is located at Country Boy Farm and Garden on Ascauga Lake Road in Belvedere. Understanding which type of fertilizer is best suited for your landscape is the key to preventing impacts to our streams. Second, it is best to learn about the different types of fertilizer and what best suits your situation. Learn more about types of fertilizer (organic, inorganic, or chemical) and the proper application of each type at the Clemson Extension Home and Garden website located at <http://hgic.clemson.edu>.



*Grass clippings washed into a local stream from a nearby storm drain.*

## Ways You Can Help Prevent Runoff Pollution and Protect Your Watershed

- Follow labels and precautions on all products used in your landscape.
- Get a soil test to determine exactly what your lawn or garden needs and follow the recommendations given.
- Apply fertilizers at the right time of year and at the correct application rates.
- Do not over-water or allow malfunctioning sprinkler systems to create runoff from your yard.
- Direct downspouts toward low areas or swales in the landscape to collect rainfall and allow it to filter through the soil. Or install a rain-barrel to catch rain and direct it where you need it most.
- Shape the site to prohibit water flowing from your site into storm drains.
- Naturalized areas or berms can be used to create natural collectors where excess water can percolate into the soil.
- Use porous materials for walkways and drives to allow rainfall to penetrate and not run-off. Reduce the amount of nonporous material in your landscape.
- Build a rain-garden (go to: <http://www.raingardennetwork.com> for more information)
- Be conscious of where storm-drains are located in your neighborhood and ways you can prevent impacts to them.



*Rain-Barrel*

# Species Profile

## The River Otter

Commonly known as clowns of the wilderness, river otters (*Lutra canadensis*) appear to have a great sense of fun and adventure. Both young and adults spend much of their time playing. They frolic and wrestle, toy with stones, or find places to slide down the embankment into the river. River otters belong to the family *Mustelidae*, which includes weasels, minks, and skunks. In South Carolina, they are common and inhabit rivers, streams, lakes, ponds, estuaries, salt and fresh water marshes, and inland waterways.

River otters are travelers and can have a home range of anywhere from 5 miles to 47 miles. River otters live in dens that are made of grass, moss, and leaves. They are semi-aquatic mammals that grow large (35 to 50 inches and weigh up to 30 pounds) with a short, blunt snout and conspicuous whiskers used to locate food in turbid water. They have small eyes and ears, thick necks, legs that are short and stout with webbed toes. Flaps of tissue close over the otter's ears and its nose to protect it when swimming under water for up to eight



PHOTO: John Hyde, wildthingsphotography.com

River Otter

minutes. Unlike a beaver that has a wide flat paddle-like tail, the river otter has a tail that is long and thick and tapers at the tip. They spend most of their time on land.

River otters are most active at night but daytime activity is not uncommon. Their diet consists mainly of fish, but otters will also dine on crayfish, snakes, frogs and salamanders. River otters live about 15 years. The female otter usually gives birth to two to four pups (baby otters) in a den located in a hollow tree or some other type of shelter near the water. Pups are helpless and blind at birth but are fully furred and can start

playing in the water in about 8 weeks. The pups leave the parents after about eight months.

Current populations of river otters are threatened by habitat loss, pollution (including pesticide poisoning) from stormwater runoff, and illegal hunting. The river otter is not an endangered species in South Carolina, but it is listed as such in other states. If you would like to see river otters spend some time along the river. You may see them there or for a more likely spotting, visit the SC Aquarium in Charleston this summer and look for the "You Otter Know" exhibit!

### Loose grass clippings and yard debris must be bagged if left on the street.

There are several city ordinances that require that no one shall place or sweep yard waste or trash in the street unless it is bagged. Un-bagged yard waste blocks the flow of stormwater, clogs the storm drainage system, or can become a traffic hazard. Loose debris and yard waste can only be stored for pick-up over the curb away from the storm drains



and trees. Residents that continue to store unbagged yard debris on the street will be notified and if the problem persists citations will be issued. To assist residents, the Sanitation Department recently began a program distributing roll-carts specifically for yard-waste. There is an additional monthly utility fee of \$3.75 for this service. If you are interested contact: Christine James at 441- 4219



For additional information contact:  
David Caddell, Stormwater Manager  
City of North Augusta  
Stormwater Management Department  
P.O. Box 6400 • North Augusta, SC 29861-6400  
(803) 441-4295  
dcaddell@northaugusta.net

