

The Resource

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A Publication of the City of North Augusta
Stormwater Management Department

Stormwater, Trash and Plastics: "A Serious Problem"

The discharge of trash and plastics from storm drains throughout the country is the leading source of water pollution in rivers and oceans. Storms wash down our streets, lawns, playgrounds and business parking lots and anything left lying on them will simply be carried to the nearest drain to be deposited into streams, rivers, lakes and the ocean. During system inspections, we pull up to a storm drain and lift the heavy lid off to determine the integrity of the pipes. We routinely find clogs in the pipe made up of trash, plastic debris and tree limbs. Items like plastic water bottles, wrappers, toys, aluminum cans, toy rifles and even car floor mats (see photo) are sometimes found. Where do you think these items end up? You guessed it, in our local streams and then straight into the Savannah River which carries it all the way to the Atlantic Ocean near Savannah.

According to many experts, plastics make up almost 90% of the pollution found in the ocean in some areas, and over 60-80% world-wide. Scientists estimate that 6 million tons of litter enters the world's oceans per year, and others estimate 8 million tons per day (plasticsdebris.org).

How do we prevent the problem? If each and every one of us individually, as students at schools and as employees at work took the time to properly dispose of (recycle) plastic products and discard other trash, we could make a difference long term. Recycling plastics and aluminum cans will keep them from becoming one more piece of flotsam in our waterways. By going further and taking steps like safely picking up trash we see in parking lots, streets and office buildings before any of it ever reaches a storm drain,



North Augusta Storm Drain Inspection

ditch, or other device that leads to our streams, would help to solve a big part of the problem.

What other things should we consider to prevent the problem? Educating family members about the importance of "everything in its place" is a very important way to prevent this type of pollution. Plastic is used a lot in toys. Since most toys are small and made of plastic, they can float easily. Stormwater quickly carries them to drains. There are days that we discover many types of balls like plastic footballs, basketballs, mini-balls, fire trucks and even three wheelers that were lost long ago in our larger drainage ways. Consider recycling used toys when no longer needed or wanted. If in good working order, they can be donating to a local charity, daycare, church or hospital. It will take each of us doing the best we can to prevent these pollutants from becoming a problem in our streams, rivers and oceans.

Kids Earth Day

2012!

A fun-filled Kids Earth Day event was held on April 21, 2012 at Brick Pond Park. The new location was perfect with its shade trees, spaciousness and wildlife. Based on comments from participants, everyone agrees that Brick Pond Park is the perfect place to hold the annual event. Kids, families and vendors had a wonderful day to celebrate nature. Smiling faces were everywhere as participants gained more understanding about soil, plants, stormwater and wildlife.

The Columbia Marionette Theater presented "Litter Trashes Everyone" and all attendees enjoyed a moment to rest and relax to watch the excellent show. Thanks to everyone that participated and attended the 2012 Kids Earth Day event and we look forward to another great time next year! Future Earth Day events will be held at the park.



Litter Trashes Everyone performance

North Augusta - Severe Drought Status and Its not even Summer Yet!

On April 25, 2012, Aiken County was elevated to "Severe" drought status. The Savannah River Basin has and continues to be one of the hardest hit regions during the ongoing drought according to the South Carolina State Climate (SCSCO) office.

How dry is it really? According to the SCSCO, and based on long kept records, every decade since 1900 there has been three or more years of below normal rainfall. One of the driest decades was the 1930's, then the 1910's and 1950's. The driest year was 1954 with a statewide average annual rainfall of 32.06 inches followed by 2001 with 34.88 inches. Will any records be broken this year? Yes, possibly. We have had one decade after another with lower than average rainfall in South Carolina but the 2000's decade included eight drought years out of 10 including 2010 and 2011. Unfortunately, it appears in the short-term, the problem is not going away. So we must adapt to it and conserve water where we can. Here are some simple things we can all do to limit the droughts impact on our community.

- Repair all leaky faucets.
- Install water-saving devices in the home such as: flow-reducing faucet heads, faucet aerators and sprinkler timers.
- Take short showers and do not overfill bathtubs.
- Turn water off and on as needed when shaving, brushing teeth, or hand washing clothes and dishes.
- Wash only full loads of clothes and dishes.
- Keep cold drinking water in the refrigerator instead of running cold water from the tap.
- Wash cars at a commercial car wash or if at home, on the lawn where water soaks into the grass.
- Use water efficient landscaping and gardening techniques.
- Encourage your friends, family, schools and employers to be conservative with water.
- Water gardens and lawns only when needed from 7:00 to 10:00 a.m. to prevent evaporation. Better yet, set sprinkler systems to water before dawn (after dew has formed on leaves between 2:00 a.m. to 6:00 a.m.)

Preserving Water and Preventing Pollution through Water Conscious Gardening & Lawn Care



RAISED BED GARDENS:

Growing your own food is both rewarding and nutritious. With rainfall being a short commodity lately, designing and installing a raised bed garden (also known as square foot gardening) will help to conserve water, preserve space and give high yields of fresh vegetables or flowers. These compact gardens also dramatically cut the amount of time it takes to tend a garden. One of the best features of using a raised bed system, based on how wide and high you set them, is that it is much easier for gardeners that suffer from back pain or bad knees to continue to enjoy gardening.

Creating a raised bed garden is simple and there are many types to choose from including kits you can buy at local home

improvement stores. There are also unlimited "how to" articles in gardening magazines and on websites. With the compactness of the beds, costs are compact too. You can choose to water your garden manually or install drip irrigation on timers inexpensively. Choose a design that best fits your budget, time and skill level.

The key to success is picking the right location and managing your raised bed efficiently. Select locations based on the types of crops you want to grow and their sun needs (full, partial, or shade). For instance, tomatoes need full sun so for that raised bed, select vegetables and flowers that also require full sun. For keeping it simple, try to locate the raised bed near a water source so you don't

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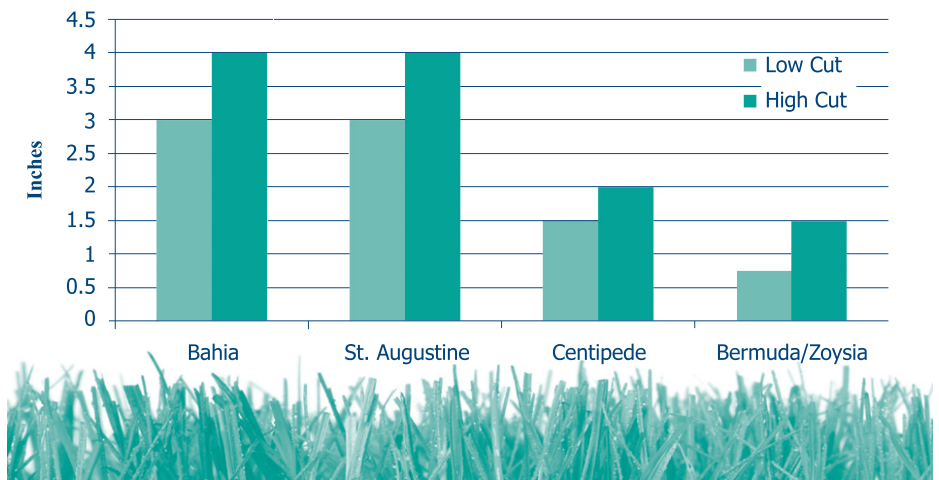
have to drag hoses back and forth to water. Consider locating the garden close to your back door so it is easy to access.

Raised beds retain soil moisture more efficiently and require less water than ground level gardens. Having the ability to select the soil and amendments (peat moss, organic composts, mulch, etc.) in exactly the right combination for the plants, creates better gardens and can extend your gardening season. Also, with less compact soil, weeds are easily removed. So what is not to love? Remember that raised beds, depending on how you set them up (with or without a liner), require proper watering, fertilization and sun exposure. Nutrients and other essential minerals can leach out of the soil over one season in a raised bed, so it is a good idea to replace or replenish the soil every year!

LAWN MAINTENANCE FOR WATER CONSERVATION:

Throughout the city there are many types of lawns. You may or may not know what grass you have in your yard. By doing a little research or contacting local experts to learn what grass you have will help you to keep it green, healthy and use only the water needed since each type of grass has different water, cutting and fertilization requirements. The table below shows the types of grass that are

Mowing the Grass Correctly Creates a Healthier Lawn & Conserves Water!



most common in North Augusta. As you can see, some require less maintenance and watering than others. For instance, if you have a Zoysia or St. Augustine grass, you would never want to use a weed killer that contains 2, 4-D in it. The entire lawn can be killed by that one chemical. Bahia grass needs less watering and fertilization, unlike Bermuda grass that needs lots of water and routine fertilization to keep it green. Overwatering grass can create real problems like fungus and root injury or death, all of which encourage unwanted insects.

When it comes to mowing the grass, what height should you mow? Using the tactic that “the shorter I cut it the less I have to mow” is a big mistake with some of these grasses. Cutting your lawn at the wrong height stresses it. Using dull blades also causes injury and stress.

A stressed lawn is more prone to turf diseases.

The grass above chart provides the mowing height ranges for typical grasses in our area. The low-high ranges are the recommended cuts at different times. Depending on the sun exposure, shade and the root system, some grasses require less water and are healthier at a taller height, others the opposite. For instance, cutting Bahia and St. Augustine grasses too short exposes too much of the plant to the hot sun causing injury. Other grasses such as Bermuda and Zoysia need to be trimmed low to the ground to keep them lush and to prevent thatch problems (decaying grass blades on the ground after mowing). Excessive thatch on Zoysia, can harbor fungus, leading to diseases and insect invasion. Knowing your lawn and what it really needs to be healthy saves time, water and money.

Grass Type (all warm season unless noted)	Watering	Resistant to Drought	Resistant to Disease, Weeds or Insect Attacks	Survives in Sandy, Clay and other Infertile dry soils	Tolerance to weed killers	Mowing Required	Shade Tolerant	Tolerance to frequent foot traffic	Spreading	Requires Fertilization
Bahia Grass	Dry to Wet OK	YES	YES	YES	LOW	Frequent	Moderate	Moderate	Not Aggressive	Minimal to none
Bermuda Grass	Weekly (to keep it green)	YES	FAIR	YES with fertilization	High	Frequent	NO	YES	Very Aggressive	YES regular
Centipede	Weekly	FAIR	Fair to Good	YES	NO (2,4-D kills this grass)	~3 weeks	Fair to Good	NO	Somewhat Aggressive	Minimal to none
St. Augustine	Weekly	FAIR	YES	NO	NO (2,4-D kills this grass)	Weekly	YES	NO	Somewhat Aggressive	YES regular
Zoysia	Weekly	YES	YES	NO	NO	Weekly	YES (8 hours full sun per day)	YES (not concentrated traffic)	Aggressive (invasive)	YES regular

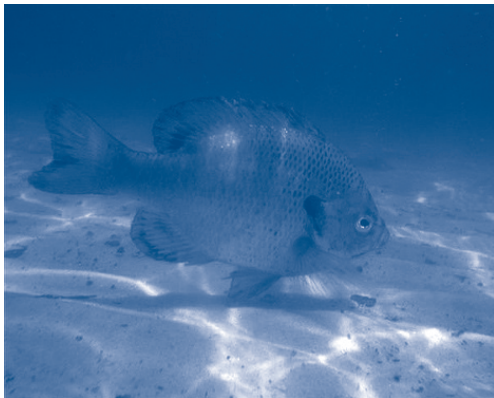
Species Profile

Sunfish / Bream

(Lepomis species)

The Sunfishes (*Lepomis*) or Bream to locals, are the small fish you see swimming in the shallow edges of ponds, lakes and slow rivers. They are flat bodied fish with a small mouth and a large pectoral fin (on top of the fish along its spine). There are at least twelve species of bream in waters around the country and many of them are native to South Carolina. Their names usually indicate something unique about the color of the fish. Local species include Bluegill, Redear, Pumpkinseed, Orange spotted, Red breasted, Warmouth, Green, Longear, Spotted and Red spotted.

The size of these fish differs among species. Generally though, they are anywhere from four to ten inches long and weigh around eight to 13 ounces. The South Carolina Department of Natural Resources (SCDNR) lists the record Bluegill in South Carolina as three pounds four ounces (3lbs. 4oz) in



Bluegill by Tom Tetzner, USFWS



Readear sunfish by Timothy Knepp for USFWS

1973, and a record Pumpkinseed as two pounds four ounces (2lbs. 4oz) in 1997. These small fish eat aquatic insects, mussels, snails, crayfish, worms and smaller fishes. Bluegills are opportunistic carnivores that enjoy eating prey from the surface that will fit in their small mouths. They will investigate just about anything that hits the water. Other Sunfish like Redear, also called Shellcrackers (they have small teeth to crack snail shells), feed from the bottom mostly on mussels, snails and insect larvae.

Many Sunfish species will nest in the same area (colonial nesters). From May to August, they will work together to construct nests in shallow sandy areas once the water gets above 75°F. If you see an area with many 8" to 10" wide sand pits located together just under the surface of the water, it is more than likely a bream

spawning bed. The females will lay thousands of eggs (45,000 to 80,000) in the nests (several) built by the males. The male will then guard and fan the nests until the baby fish (fry) hatch in about 5 days and then swim away in about 1 to 2 days. The small fry will eat zooplankton (microscopic animals) until they get bigger and will begin reproduction at one to two years of age. Many Sunfish species will live from 8 to 11 years.

Bluegills are notoriously easy to catch since they will nip at just about anything that hits the water. Bream fishing is a great way to teach children to fish since they have such a high likelihood of catching one and it is a lot of fun too. Since many animals, birds, fish and even humans eat this creature, protecting them from pollution is very important.

Upcoming Events in North Augusta!

Saturday May 19, 2012	Household Hazardous Waste Collection Event at Kroger on Knox Avenue
June 4 - June 29th 2012	Adventure Camp
July 9 - July 13th 2012	Contact Riverview Park Activities Center at 803-441-4302 for more info.

For additional information contact:

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