

# The Conserver

ORGANIZATIONAL DEVELOPMENT, WAKE COUNTY PUBLIC SCHOOL SYSTEM

## Fox Road and Washington Elementary EnergySavers Make Television!

Both **Fox Road** and **Washington Elementary EnergySavers Students** were featured in February's "*The New School Connection*". "*The New School Connection*" is a WCPSS monthly television program which focuses on interesting programs, activities, and people throughout the school system. As part of this month's feature our very own **EnergySavers Students** were interviewed and filmed showing others how they help save the school system money on utilities as well as helping to protect and preserve our environment and natural resources.

The students were shown patrolling their schools and performing energy audits, collecting their schools recycled paper from all the classrooms and offices, and performing experiments they prepared to help educate other students and staff at their school on the importance of natural resource conservation.

To view February's broadcast or for local listings please visit:

<http://www.wcpss.net/schooltv/>

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### Fun Water Facts

- ⇒ It takes approximately 1 gallon of water to cook a hamburger
- ⇒ Each person uses approximately 50 gallons of water per day
- ⇒ 80% of a pineapple is water
- ⇒ An average person can live 1 month without food an approximately 1 week without water
- ⇒ It takes approximately 2 gallons of water to brush your teeth and approximately 2-7 gallons of water for each time you flush the toilet

"The Conserver" is a quarterly publication of the Environmental Health and Safety Office, of the Wake County Public School System. It's purpose is to promote conservation of natural resources and environmental stewardship. Our goal is to enhance the comfort, safety, and operating efficiency of our facilities through our energy conservation education program, **EnergySavers**; through our school system recycling program, **Feed the Bin**, and through our indoor environmental quality program, **Tools for Schools**. Story ideas from WCPSS schools are welcomed. The newsletter will be emailed to subscribers free of charge. If you are interested in subscribing, please contact **Mindy Nicoll** (mnicoll) at 856-8078.



# Stormwater 101: The Basics

Ever wonder what happens to the rain after the storm is over? This water is called stormwater runoff. Stormwater runoff is water that comes from rain or irrigation that hits a hard surface and runs off. Any surface that does not allow water to soak in is called an impervious surface. When water hits these surfaces it runs off, taking any pollutants and trash with it where it enters storm drains and ditches and eventually ends up in our local waterways. Some examples of impervious surfaces are houses, streets, sidewalks, parking lots, and buildings. The more construction and development you have, the more impervious surfaces and the more stormwater runoff.

Most people have seen storm drains in the streets or ditches along the roads, these are part of the stormwater drainage system. When the stormwater runoff enters these storm drains, ditches, or retention ponds it brings all the pollutants from streets and residential or commercial property with it. Pollutants can include; pet waste, fertilizer, oil from cars and trucks, trash, and sediment from construction sites. These pollutants in the stormwater are **NOT TREATED** before they enter our local waterways where we get our drinking water from and where we like to swim, boat or fish. Unlike the sanitary sewer system that takes waste water from our homes and businesses from toilets, showers, or sinks, to the waste water treatment plant where it is treated and then discharged, stormwater gets no treatment and is discharged directly into our local waterways.

Pollutants and trash know no boundaries and can end up in areas where they did not originate from. All the stormwater runoff from an entire watershed area will end up in the same local waterways. A watershed is an area of land that drains to a specific body of water such as a creek, lake or river, so it is important that everyone located in the same watershed do their part to help keep pollutants out of our waterways. Here are some helpful hints to keep harmful pollutants out of our waterways:

1. **Always pick up after your pets**
2. **Don't litter!**
3. **Do not over fertilize your lawn or fertilize before it is going to rain**
4. **Keep your cars and trucks properly maintained to keep fluids from leaking**
5. **Keep yard waste out of the streets and storm drains**

*Stay tuned to "The Conserver" for more information on Stormwater and how you can help protect our local waterways from stormwater pollution!*



**Above is a map of all the watersheds in North Carolina**

Map found at <http://www.water.ncsu.edu/>

# WHAT IS IN STORM WATER?

You've learned about the three ways storm water can move (soak in, run off, flow into). Let's learn more about its journey. It's possible for storm water to pick up many different pollutants as it flows over the land. This produces a cumulative effect and can greatly decrease water quality. The pollutants in storm water can make it unsafe for humans, plants, and animals. The pollution in storm water is considered **nonpoint source pollution**.

So where does all this storm water pollution come from? Lots of places. Travel through the maze to see some examples. You'll see why storm water management is important and it's up to all of us to do our part to keep it clean. On page 12 you'll learn ways to prevent pollution, called **Best Management Practices**, or **BMPs**. Fill one in under each type of pollutant.



Now try to unscramble the names of the pollutants you traveled through in the maze to learn how they enter storm water and why they are harmful.

1. lols/kit

Can enter storm water from construction sites or cleared land. Can block sunlight in streams and fill in waterways. BMP? \_\_\_\_\_

2. ador sita

Used in icy conditions; it stays on the road until a storm washes it down a storm drain. Can change the **salinity**, making it hard for many plants and animals to live. BMP? \_\_\_\_\_

3. elrftl

Enters storm water through careless actions by humans. It's an eyesore and it can harm animals, clog pipes, and degrade water quality. BMP? \_\_\_\_\_

4. tep ewsat

Enters storm water when owners don't clean up after their animals. It can cause algae growth, which hurts lakes and can make people sick. BMP? \_\_\_\_\_

5. ferrezill

Many people use too much of this on their lawns, and it can run off after a storm. It can cause breathing difficulties in people, and algae growth in water, which can lower the amount of oxygen in the water. BMP? \_\_\_\_\_

6. llo/sga

Drips from cars and stays on roadways until a storm washes it down a storm drain. It can make people and animals sick. BMP? \_\_\_\_\_

7. speesdtd

Used on agricultural crops, but also used in residential areas to control pests. It gets washed off of crops or lawns and can enter storm water. It can make people and animals sick. BMP? \_\_\_\_\_



One gallon of used oil can ruin 1,000,000 gallons of fresh water, enough to supply 50 people with water for 0 year.

**Storm Water Dictionary:**  
 algae: simple plants without roots that grow in water and can worsen the water quality  
 cumulative: increasing with each addition  
 nonpoint source pollution: pollution that comes from many different sources, making it difficult to pinpoint one specific source  
 salinity: saltiness of water



What could happen if the holes in a storm drain were tiny?

# Rain Barrels available Locally for Purchase



With Spring among us and the current drought conditions not improving, the City of Raleigh is selling rain barrels to citizens in order to help us conserve water while still being able to enjoy our spring gardens and vegetables. By collecting the rain water in these barrels we can use it for things such as watering our plants or washing our cars.



The rain barrels come in two sizes -- 60 gallons and 80 gallons -- and can be purchased at Solid Waste Services' Administrative Office, located at 400 W. Peace St., Monday through Friday from 7 a.m. to 4 p.m. The 60-gallon rain barrels cost \$80.06 and the 80-gallon barrels are \$90.74. Payment can be made by either check or money order made payable to the City of Raleigh. Kits for people who want to make their own rain barrels are available for \$15.96. Citizens do not need to buy both a rain barrel and a kit, because the barrels come with all needed hardware.

The rain barrels being sold by the City were made in Waxhaw, N.C., with 20 percent recycled plastic.

The rain barrels should be placed under rain gutter spouts to collect rain water. One inch of rainfall from a 1,000-square-foot roof can produce 625 gallons of water. Rain water can be used to irrigate outdoor and indoor plants, including vegetables and fruit trees, and for such things as refilling birdbaths. Rain water should not be used for human consumption.

For more information about rain barrels, contact the City of Raleigh Solid Waste Services Department at 831-6890. The City's website has information about the advantages of using rain barrels and answers to frequently asked questions regarding rain barrels.

**Prepared by:**  
John Boyette, Public Affairs Specialist, Public Affairs Department



## Drought Resistant Plants for your Home and Garden

As you prepare your landscape for the spring and summer months you might want to consider native drought resistant trees, shrubs, and plants. They provide just as much color and beauty as other plants, however they are found easily in North Carolina and once they are established do not require nearly as much water as non native plants. Some examples of these types of trees and plants are:

- |                    |                |             |           |
|--------------------|----------------|-------------|-----------|
| Butterfly Weed     | Bradford Pear  | River Birch | Red Maple |
| Purple Cone Flower | Leyland Cyprus | Live Oak    | Iris      |
| Gerbera Daisy      | Crape Myrtle   | Magnolia    | Daylily   |

Besides using plants and trees like the ones listed above there are other ways to help save water while tending to your landscape. First you can group plants together depending on their water needs. By grouping them together you will be able to water all those who have higher water needs at the same time without watering those who can withstand drier conditions. Secondly, plant the plants who need more water in areas of the landscape where the soil tends to stay more moist and those who can stand drier conditions in another area. And lastly use water from a rain barrel or put a bucket in your sink or shower to water plants. Rain barrels come equipped with a spout to attach a hose so you can reach further areas and they run on gravity so you will have enough pressure to water the plants which need it. For more information on these types of plants or for more water savings tips for your garden please visit the North Carolina Cooperative Extension Service website at:

[http://www.bae.ncsu.edu/programs/extension/publicat/wqwm/ag508\\_3/](http://www.bae.ncsu.edu/programs/extension/publicat/wqwm/ag508_3/)

# Important Dates

2008



***First Day of Spring March 20th***

***Healthy Schools Day April 28th***

***School Building Day May 2nd***

## Links to Related Websites

**EPA Tools for Schools Website**

<http://www.epa.gov/iaq/schools/>

**Energy Star Tips and Products**

<http://www.energystar.gov/>



**Wake County Feed the Bin Program**

<http://www.wakegov.com/recycling/schoolrecycling/default.htm>

**North Carolina Environmental Education Certification**

<http://www.eenorthcarolina.org/certification.htm>

**National Energy Education Development (NEED)**

<http://www.need.org>