

September/October 2013



Environmental Update



Diana M.C. Rashash

Diana MC Rashash, PhD
Area Specialized Agent,
Natural Resources
diana_rashash@ncsu.edu

NCCE-Brunswick Co.
25 Referendum Dr.,
Bldg. N
PO Box 109
Bolivia, NC 28422
(910) 253-2610

<http://brunswick.ces.ncsu.edu>

NCCE-Onslow Co.
4024 Richlands Hwy.
Jacksonville, NC 28540
(910) 455-5873
(910) 455-0977 Fax

<http://onslow.ces.ncsu.edu>

And the rest of the
Southeast District:

<http://southeast.ces.ncsu.edu/>

North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, veteran status or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.

The benefit of rain barrels...

The Onslow County office of NC Cooperative Extension has held an annual rain barrel sale since 2009. So far, 348 50-gallon rain barrels have been constructed. People often wonder just how much benefit there is from a 50-gallon rain barrel. In an effort to capture benefit information, campus economists developed a couple of estimates.

The result? Well, it turns out that the benefits really add up! There are two ways of looking at it: gallons of water utilized and nitrogen (N) removal.

Let's look at the gallons of water utilized. Currently, there are 348 rain barrels out there. The calculation uses the assumption that only 25 percent of the volume is utilized each week. That would be equivalent to 12.5 gallons per barrel per week. Depending on the time of year, rainfall, and water uses, actual rain barrel water usage may vary greatly.

Rain water captured and used for non-potable uses:

$348 \text{ barrels} \times 50 \text{ gal/barrel} \times 0.25/\text{wk} \times 52 \text{ wks/yr} = 226,200 \text{ gallons/yr}$

Annual water savings:

$226,200 \text{ gallons/yr} \times \$0.004/\text{gal} = \$904.80/\text{yr}$ (not including wastewater fee savings!)

The cost savings for the water doesn't seem like much, but over the 30-year life of the barrels, it adds up to \$27,144. The wastewater fee savings would be roughly twice that amount.

The calculation for the value of nitrogen (N) capture and removal from storm water uses the NC Environmental Enhancement Program (EEP) offset payment of \$20.59/lb N (2011 amount) for projects they fund:

$226,200 \text{ gallons/yr} \times 0.002 \text{ lb N/gal} \times \$20.59/\text{lb N} = \$9,315/\text{yr}$

Over a 30-yr period, the N reduction adds up to \$279,450 in environmental benefit. That's not too shabby for a bunch of 50-gallon rain barrels! As more barrels are put into use each year, the benefit will increase. Last but not least, the rain barrel water is much better for your plants than tap water. Do you see a rain barrel in your future?

Climate change & eastern NC ...

The New River Roundtable is pleased to announce the guest presentations for their September workshop:

When: Sept. 17 from 1:30 - 3:00 pm

Where: Jacksonville City Hall Council Chambers

Who: Dr. Alex Glass (Duke U.) and Dr. Ryan Boyles (NC State Climatologist)

What: Climate Change & Coastal NC

Why: To give residents of eastern NC an idea of what the next century may bring, current status of climate science, and other important issues. The public is invited to this event. The presentations will be broadcast live on G10 TV and also taped for later airing.

This workshop is brought to you by the New River Roundtable, City of Jacksonville, Marine Corps Base - Camp Lejeune, and NC Cooperative Extension. For more information, contact Dr. Diana Rashash at (910) 455-5873 or by email at diana_rashash@ncsu.edu.

Speaking of climate ...

Have you visited the NC State Climate Office website (<http://www.nc-climate.ncsu.edu/>)? They have a wealth of useful information: climate overview, normal values for temperature and rainfall, climate outlook, weather extremes, and even a page on climate change (http://www.nc-climate.ncsu.edu/climate/climate_change). They also have a weather blog that updates you on what is happening around the state. To subscribe, go to <http://nc-climate.ncsu.edu/climateblog>.

NASA and weather ...

NASA has some great information and fun activities on its weather website (<http://scijinks.jpl.nasa.gov/weather-menu>). Learn about tides, atmosphere, satellites, and even solar temper tantrums. They have added a new online activity, *Weather Tricktionary*, at <http://scijinks.jpl.nasa.gov//weather-tricktionary>.

Spiders ...big spiders ...oh my!

Eastern NC is home to two quite large spiders: the black and yellow garden spider (*Argiope aurantia*) and the golden silk spider (*Nephila clavipes*). The range of the golden silk spider has moved northward recently. According to David Stephan, retired Entomologist, NCSU, there have been more reports of this spider in the past five years than in all prior years combined. So far, the golden silk spider has been sticking to the coast (up to Carteret County), with one inland county report (Bladen County).

Both spiders - and their webs - can be rather startling when you come upon them suddenly. The female of both types is a large colorful spider that, including legs, can be 5" in diameter. Sometimes, you can see a much smaller, brownish spider on the web with her; that is the male.



Figure 1: Female golden silk spider, Onslow County

The golden silk spider has venom similar to the black widow, but much more dilute. It is a very

mild mannered spider that won't bite unless pinched. People bitten report localized swelling and mild pain. The spider in Figure 1 has been politely living two feet away from a porch door. Other than having to duck under the web, there have been no issues with her presence.

Both spiders have one generation per year. Around September, the female will form an egg sac roughly 5/8" to 1" in diameter. The male dies fairly soon after mating (and is often eaten); the first hard frost will usually kill the adult female. The young in the sac will overwinter and hatch out the following spring. If you see a sac in an inconvenient location, you can try moving it. The spiders are very good at capturing insects that may be harmful to your trees and plants.

Peak season soil testing fee ...

Mailed copies of this newsletter include a memo from the NC Department of Agriculture & Consumer Services (NCDA&CS) regarding the newly implemented \$4 per sample peak season soil sample fee. Peak season is December 1 through March 31. Payments will not be accepted with the samples. Instead, an online payment system will be established by late fall, 2013. Samples received by NCDA&CS April through November will still be free. For additional information and updates, go to <http://onslow.ces.ncsu.edu/2013/07/peak-season-soil-testing-fee/>.

Coastal NC landscape plant dos and don'ts ...

As with any area, proper plant selection along our beaches and barrier islands is very important. A new booklet, *Native Plants for Coastal North Carolina Landscapes*

(http://www.cals.ncsu.edu/plantbiology/ncsc/Coastal_Planting_Guide.pdf) has just been published. This informative booklet contains photos and descriptions of several plants well-suited to our coastal areas. Four plants **not** recommended are also discussed: Beach vitex (*Vitex rotundifolia*), Pampas grass (*Cortaderia selloana*), Thorny-olive (*Elaeagnus pungens*), and Saltcedar (*Tamarix spp.*). Each of these plants is considered highly invasive.

Further information about Beach vitex is available from the [Beach Vitex Task Force](#), along with identification, control, and reporting procedures. It is a noxious weed in NC and illegal to sell, distribute, or move this species from one property to another.

Speaking of plants and soil ...

The fall months are a great time of year to get out in your yard and take a look around. Are there problem areas? Erosion? Too much sun? Other issues? Your local NC Cooperative Extension Horticulture agent and Master Gardener volunteers can provide a wealth of information: what to plant, where to plant it, how to care for it. This can beautify your property, provide shade, increase year-round visual interest, improve soil characteristics, reduce both erosion and runoff, and much more.

Do you have wet problem areas? They can be due to poor drainage, no outlet, topography (seep at bottom of slope), soil compaction, or other issues. Rather than lawn, consider a rain garden. This utilizes plants (mainly shrubs and perennials) that can tolerate periodic wet conditions. The *Native Plants for Coastal NC Wetlands and Retention Ponds* list (compiled by Charlotte Glenn, Pender County) is very useful for these soggy locations: [http://pender.ces.ncsu.edu/files/library/71/Plants for Backyard Wetlands.pdf](http://pender.ces.ncsu.edu/files/library/71/Plants%20for%20Backyard%20Wetlands.pdf)

Sinkholes ...

Several calls have come in this summer regarding possible sinkholes in yards. Three main types of sinkholes can be found in eastern NC: karst geology (holes in limestone), buried debris (including decayed tree trunks), and leaking infrastructure (typically broken culverts or other pipes).

One important fact not generally known is that homeowner insurance policies do not cover damages from sinkholes. Some insurance companies provide a separate policy for karst geology sinkholes, but those from buried debris and leaking infrastructure are still not covered.

Holes from decayed tree trunks tend to be smaller in diameter, fairly round, straight sided, and can

be deep. The soil will also be dark from organic material. Holes from broken culverts can be either a gradual elongated sinking of the soil surface or an abrupt drop. They can also be large and irregular in shape. They occur in the vicinity of buried pipes that have deteriorated or broken.

For more information:

Eastern North Carolina Sinkholes

<http://www.ces.ncsu.edu/wp-content/uploads/2013/08/SinkholeGeneralBrochure.pdf>

Sinkholes on Commercial, Industrial, & Residential Property

<http://www.ces.ncsu.edu/wp-content/uploads/2013/08/Sinkholecommercialbrochure.pdf>



The Onslow County Fair is coming to town

The Onslow County Fair will be here Monday, September 30th through Saturday, October 5th, 2013. Crafts, sewing items, baked goods, and home-canned goods are all needed for judged competition. Young and old can enter. Entries can be submitted on September 30th, from 8:30 am until 4:30 pm. Some flower entries may be submitted the next morning.



Fair books are available at all branches of the Onslow County public library or at the Onslow County Cooperative Extension Office. All entries to be judged must have been completed within the last year by residents of Onslow County. A complete listing of the rules can be found in the fair book. There's a category for everyone - from agricultural exhibits to arts and crafts, to canning and baked goods. Please join in the fun by entering an item or items into the fair. The monetary awards are not large, but the ribbons are special.

Tuesday, October 1st, a talent show will be held with youth from all parts of the county. Talent goes on parade at 7:00 pm. We need everyone to get involved with the fair to show those that attend all the talent we have in our county.

This year, the price to enter the fairgrounds will be \$5.00. Children under the age of three and seniors age 65 and older get in free. Ride tickets will be sold separately in the midway. The fair opens on Monday, September 30th, at 6:00 pm; Tuesday, October 1st, through Friday, October 4th, at 4:00 pm; and Saturday, October 5th, at noon. If you have any questions regarding competition entries to the fair or a fair booth, please call us at 455-5873.

Don't forget ...

Help save paper, postage, and your tax dollars! This newsletter and the annual reader survey are available online at:

<http://onslow.ces.ncsu.edu/content/Envedarchive>

North Carolina Cooperative Extension Service
North Carolina State University
Onslow County Center
4024 Richlands Hwy.
Jacksonville, NC 28540