Ways to Reduce Energy Consumption in the Summertime—Matthew Carlson (Onslow Extension Energy Intern)

The summer season is one in which the sun stays in the sky longer and outdoor temperatures begin to rise. Typically, summer months use high amounts of energy because of the use of air conditioning to keep cool. However, people can keep their electric bills down by simply trying to be slightly more conservative. By implementing one or more of these techniques, you can help to reduce your energy consumption during the summer months and keep electric bills reasonable.

 Instead of flicking on the lights on a sunny day, open up the blinds and make use of the ambient light. In addition, keeping blinds closed in rooms that are not being occupied is a good way to keep the household cool and reduce stress on the air conditioning system.

 Planting a tree outside the home near an exterior wall or window helps block the sun’s rays from entering your home and reduces the need for the air conditioner. Taller plants that can shade over the roof are excellent ways to keep the home cool as well.

 Repairing any leaks in the windows, doors, or ductwork is an excellent way to conserve energy and reduce cooling costs. Caulking, weather-stripping, and insulating are inexpensive and keep your home from leaking away as much energy in the summer months.

 Ceiling fans are excellent ways to assist the air conditioning system by acting as a disperser of cool air. During the summer, make sure the ceiling fan spins in a counter-clockwise direction for best results.

 Purchasing modern energy efficient technologies is also a good investment. Replacing an old refrigerator, oven, incandescent light bulbs, washer and dryer, or even the central heating and cooling system can help to save loads of money and energy during the summer.

 Heating water is a huge user of electricity; therefore, decreasing shower times by just a few minutes a day could save tons of money and energy. This concept is similar for washing clothes; you should
use only cold water or warm water when doing a load of laundry. Hot water used to wash clothes is often unnecessary and a huge waste of energy.

- Peak hours range from late morning until the mid to late afternoon, and are often the hottest parts of the day. It is good to try and avoid using high energy consuming devices during these peak hours. A good example of this would be using a clothesline to dry clothes rather than an electric dryer. This technique uses no electricity, reduces peak hour energy demands, and on a hot summer day is just as effective as using an electric clothes dryer.

- One of the easiest ways to reduce energy consumption during the summer is to turn off any extra lights or unplug devices not in use. Chargers, appliances, and other electronics tend to draw energy even when they are not being used. These devices are called phantom users and they tend to be big energy hogs.

- Use a microwave oven, toaster, or crock-pot to cook food. These appliances use less energy, can take less time, and reduce the amount of heat produced inside the home that would normally come from using a conventional oven. If the stovetop is necessary for cooking, use a lid on the pot or pan to reduce the amount of heat that escapes into the kitchen.

- Raising the temperature of the thermostat to 78°F during the summer is an effective way to make sure the air conditioner does not overwork itself. Also, raising the thermostat to 85°F when not at home is beneficial. Cleaning and replacing air filters regularly in the cooling system can help increase energy efficiency.

North Atlantic Garbage Patch ...

You may have heard about the Pacific garbage patch that is twice the size of Texas. There is also a garbage patch in the Atlantic. In both patches, much of the material is small confetti-sized pieces of plastic; although larger items, such as bottle caps, are still present. The material accumulates in “gyres,” which are large slow-moving whirlpools formed by ocean currents. Concentrations of plastic range from roughly 4,000 to 250,000+ pieces per square mile. Fish, turtles, birds, and other creatures become confused by the small bits of plastic (background image courtesy of Jennifer O’Keefe) and eat it or feed it to their young, thinking that it is food. Besides being a hazard by either choking or intestinal blockage, the plastic is also a chemical hazard. The flotsam adsorbs PCB, DDT, and other pollutants from the seawater. Once ingested by sea life, these toxins can work their way up the food chain.

Plastic is a very long-lasting material, yet we use much of it for single-use items: packaging, cups, eating utensils, even pens and razors. The next time you are at the beach, think about the various types and amounts of plastic that you see there. If you collect it for proper disposal, email me a photo of your “catch” with date and location, so it can be placed online for others to see.

Coastal Hazards & Storm Information: sea level rise ...

Are you curious about sea level rise? What is it? Current predictions? The NC Division of Coastal Management (DCM) Sea Level Rise website has a wealth of information for you:

http://dcm2.enr.state.nc.us/Hazards/slr.html

At this site, you can see where our coastline has been in the past, and where it may be headed in the not-so-distant future. The draft Coastal Resources Commission sea level rise policy statement is available for download from this site, along with a link for providing comments.

Although the exact amount of sea level rise by a specific date cannot be determined, it is well documented and accepted that sea level rise is occurring and that the rate appears to be increasing. As it occurs, potential impacts include:

- Saltwater intrusion and salinity changes
- Accelerated coastal erosion
- Higher storm surge and increased property damage
- Drainage problems and more frequent flooding
- Changes in salt marsh (locations and losses)
The above image shows the five main causes of sea level change. Interestingly enough, sea level rise isn’t always caused by the water rising; sometimes, it occurs because the land has sunk. Item “A” includes pumping of groundwater from aquifers. This can lead to subsidence, which has been well documented in eastern NC in the region of the Black Creek and Upper Cape Fear aquifers.

Item “B” includes land movement and tectonic displacement. This recently happened in Japan. Parts of the coast there sank between 2-4 feet due to the earthquake, which has resulted in continued tidal flooding of several coastal towns. Changes in ocean circulation patterns (“C”) have been noted in the Gulf Stream off the NC coast. The changes coincide with both increased tidal levels and increased dune erosion.

**Senate Bill 427 ...**

This past March, Senators Clodfelter, Hartsell, and Jones introduced Senate Bill 427 (NC Water Security Act), which states the following:

“It is the policy of the State to use its water resources efficiently and productively and to manage the water resources of the State in a manner that fosters the efficient and productive use of the water supply for the purpose of being able to satisfy economic, environmental, and other social goals, whether public or private, while extending water availability and utility in a way that prevents water from becoming a limiting factor in the general improvement of economic growth and social welfare.”

As originally written, the bill would have required residential and commercial water users to reduce their daily water use to 100 gallons per person per day (gpppd) by 2016, 75 gpppd by 2025, and 45 gpppd by 2035. This requirement was removed. For reference, people currently on septic systems shouldn’t use more than 50 gpppd, and their system is designed based on 60 gpppd.
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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

SSDRIP has been extended! …

Funding for the Onslow Septic System, Database, Repair, and Information Program (SSDRIP) has been extended through December 2012. Onslow County receives funding from North Carolina’s Clean Water Management Trust Fund for this program. One program component is a $50 rebate to residential septic system owners for maintaining their septic system by having the septic tank pumped.

After the tank is pumped, the resident and pumper complete the rebate form. The resident then mails the form to Onslow County Health Department Administration. Updated rebate forms and a brochure about SSDRIP will soon be available from NC Cooperative Extension, Onslow County Health Department, Onslow County Planning Department, and various septic tank pumpers. So far, more than 3,731 homeowners have participated in the rebate program, for a savings of $186,550 to county residents.

Another component of SSDRIP provides either grants or low-interest loans to qualifying residents in need of septic system repairs. These funds cannot be used to expand the size of a system (for example, going from 3 bedrooms to 4 bedrooms).

Septic systems do require maintenance. One of the simplest practices is to not add anything to the system that may harm it. This includes harsh chemicals, large amounts of disinfectants, grease, and solids (bones, eggshells, cigarette filters, etc.). The tank should be pumped periodically to remove accumulated solids and grease. This can be done roughly every 3-5 years, depending upon homeowner practices. The use of “additives” is NOT an alternative to having the tank pumped.

It is recommended that you limit your water use. One common cause of failure is hydraulic overloading… using too much water. Systems are designed for 60 gallons per person per day (assuming two people per bedroom). So a 3-bedroom home would be sized for 360 gallons per day. That is not an “every day” number; instead, think of it as the “red line” on an engine. You can go above it occasionally without damage. For an “every day” water use number, it is recommended to only use 80% of the design flow. That would be roughly 50 gallons per person per day.

The NC Cooperative Extension Service has several publications to help homeowners learn about their system: Septic Systems & Their Maintenance, Septic System Owners Guide, and Why Do Septic Systems Fail? Homeowners should also obtain a copy of their septic system permit from the county health department. The permit can tell homeowners a lot about their system; such as system location, designated repair area location, and if the system has been repaired in the past.