It’s a brand new year ...

Have you made any New Year’s resolutions? Besides the usual “eat less” and “exercise more”, here are ten things you can do that are low-cost, easy, planet friendly, and can save you some money:

1) **Check your faucets for leaks.** That drip, drip, drip is costing you money and wasting water. If you are on public water and sewer, your pay for that leak as both water and waste water. If you are on a septic system, the extra water can contribute to early system failure from hydraulic overloading (aka too much water to the drainfield).

   How much water does a dripping faucet waste? Well, a single faucet that drips 10 times per minute (or once every six seconds) will waste 350 gallons per year (gpy). If it drips every second, it will waste more than 2,000 gpy.

   Do your own calculation:
   
   _____ drips/minute x 34.7 (conversion factor)= _____ gpy

2) **Check your toilets for leaks.** “Phantom flushing” is a good indicator that the flapper is not seating properly. A simple test is to add food coloring to the toilet tank. Wait 15-30 minutes. If the color appears in the bowl, you have a leak. Block-style bleach cleaners that are placed in the tank are not recommended for use, because the chlorine can degrade the flapper and cause leaks.

   How much water can this add up to? A lot! If a toilet “phantom flushes” seven times per day at 3 gallons per flush, that equals 21 gallons per day or nearly 7,700 gallons per year.

   Do your own calculation:
   
   _____ drips/minute x 34.7 (conversion factor)= _____ gpy

3) **Change your showerhead and faucet aerators to low-flow models.** These are simple changes that can definitely help reduce your water use. Some water utilities offer water conservation kits that include these items.

   How much water are we talking about? Switching from a 6 gallon per minute (gpm) showerhead to one that uses 2 gpm saves 4 gallons per minute. Multiply the difference in gallons by the length of the shower and the number of showers taken per day, week, or year.
For example, a 12-minute shower will use 48 gallons less water after switching from a 6-gpm to a 2-gpm showerhead. If one 12-minute shower is taken daily, that’s a savings of 17,520 gallons of water per year!

How the above calculation was done:

\[(6 \text{ old gpm}) - (2 \text{ new gpm}) = A\]

“A” = 4 gallons saved per minute

\[A \times (12 \text{ minutes per shower}) = B\]

“B” = 48 gallons saved per shower

\[B \times (365 \text{ number of showers per year}) = C\]

“C” = 17,520 gallons saved per year

Do your own savings calculation:

\[(\_ \_ \text{ old gpm}) - (\_ \_ \text{ new gpm}) = A\]

“A” = gallons saved per minute

\[A \times (\_ \_ \text{ minutes per shower}) = B\]

“B” = gallons saved per shower

\[B \times (\_ \_ \text{ number of showers per year}) = C\]

“C” = gallons saved per year

4) **Shorten your shower.** This will save you money, both in water use and electricity (if less hot water is used, less make-up water needs to be heated). To encourage conservation, Jones-Onslow EMC offers a water heater kit (heater blanket, faucet aerators, etc.) for a low fee. Other electricity providers may offer something similar.

5) **For more water saving ideas go to:**


   The remaining “resolution” ideas focus on saving electricity at home. As seen in the Annual Electricity Usage graph, roughly 60% of your annual energy needs go to three tasks:

   - Heating the home (29%),
   - Cooling the home (17%), and

   - Heating water (14%).

**Annual Electricity Usage: where it goes**

| Source: EPA website |

6) **Consider getting a new hot water heater.** Average households spend $400-600 per year on water heating. If yours is more than 10 years old, it may be very cost effective to switch to an Energy Star model. If you can’t make the change quite yet, consider wrapping the water heater in a water heater “blanket” or “jacket” (see resolution #4). Be sure the water heater is set at 120ºF, and follow maintenance recommendations to keep sediment from accumulating around the lower heating element.

7) **Change your air filter regularly.** A clogged filter slows the airflow and makes the heat pump work harder. This makes it cost more to reach or maintain the set temperature.

8) **Install a programmable thermostat.** Once properly installed and set, a programmable thermostat can save you up to $180 per year. This is a lot more than the device costs, so think of it as a gift that keeps on giving.

9) **Check for leaks!** Leaks in ductwork, around windows and doors, attic hatches, and even around fixtures and outlets can allow outside air to enter your home. Weather-stripping, caulk, foam outlet gaskets, and insulation can go a long way to making your home more comfortable at a lower monthly cost.
Leaks in the ductwork can be significant. According to EPA, a typical house loses roughly 20% of the air in the ducts through gaps, holes, and poor connections. The two figures shown below are from EPA’s Duct Sealing brochure:

A: Leaky, torn, and disconnected ducts
B: Poorly sealed registers and grills
C: Leaks at furnace and filter slot
D: Kinks in flexible ductwork restricting airflow

E: Properly sealed ducts
F: Gaps around registers and grills tightly sealed

G: Sealed furnace and filter slot
H: Well-insulated ducts in unfinished areas
I: Straightened flexible ducts

For more information and ideas, visit EPA’s website:
http://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_sealing

10) Last but not least, compare your home’s energy use to similar homes. To use the Energy Star website calculator, you will need your utility bills for a 12-month period:
https://www.energystar.gov/index.cfm?fuseaction=home_energy_yardstick.showGetStarted

The scale goes from 0-10, with 5 being “average” for your area. The higher your score, the more efficiently your home uses energy; the lower your score, the more your home (and your utility bill) will benefit from some of these suggestions. Implementing several of these “resolutions” took a 40 year old, 1700 ft² home in Jacksonville NC from a score of “0” in 2000 to a score of “8.5” by 2009. With the changes, the average monthly electric bill was reduced by nearly $70. Were the changes cost effective? YES!

The website also shows the greenhouse gas emissions for your home, and the equivalent number of cars. The changes in the home described above took it from three cars to equaling just 1 car.

What is the environmental value of a tree? ...

If you have ever wondered if there is any kind of measureable beneficial value for trees, wonder no longer! Two websites will let you calculate exactly that:

i-Tree
http://www.itreetools.org/

National Tree Benefit Calculator
http://www.treebenefits.com/calculator/index.cfm

The National Tree Benefit Calculator is very easy to use. Just enter your zip code, and then enter
the information about your tree. For example, an Eastern Redbud with a 6-inch trunk has an annual value of $15. A 20-inch diameter Norway Maple is worth $165 per year: $56 in storm water, $14 in electricity savings, $74 in increased property value, and $5 in greenhouse gas uptake. What are your trees worth?

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

Onslow County Master Gardener Volunteer Program

The Master Gardener Volunteer Program is a joint endeavor of the NC Cooperative Extension Service and volunteers who wish to learn how to be better gardeners and help other gardeners by sharing their knowledge. The program is designed to recruit and train volunteers to help meet the educational needs of the citizens of Onslow County.

The term ‘gardening’ is used in a broad sense. It includes vegetables, fruits, lawn grasses, shrubs, flowers and trees. The training focuses on developing diagnostic skills for insects and diseases of plants. Classes are also given on landscaping for water quality, soils, composting, propagation, wildlife control and much, much more!

As a Master Gardener, you will receive 40 hours of intensive horticultural training. After graduation, you will be expected to provide an equivalent amount of volunteer work in the community. Examples of the types of activities that you can choose to perform are: answering homeowner inquiries at the Extension Office; mailing out information bulletins to homeowners, conducting plant clinics, working with elementary school children on special horticultural projects, talking to Garden Clubs, advising on community beautification projects and writing newsletter articles.

The volunteer work is fun and interesting, and you will not be required to do anything with which you are not comfortable. Master Gardeners make ‘friends for life’ and enjoy working and learning together.

The 2011 Master Gardener course will begin February 15th and end April 5th. Classes normally will be taught Tuesday, and Thursday mornings from 9:00 - Noon. Cost for the course is $100.00, which includes a comprehensive Master Gardener Manual that is yours to keep.

If you would be interested in receiving an application for the 2011 course, please call the North Carolina Cooperative Extension - Onslow County Center at (910) 455-5873, and leave your name, address and phone number. Enrollment will be limited, so inquire early.