HORTICULTURE COLUMN

DROUGHT

Water officials across the state are meeting to evaluate shortage situations and determine additional water restrictions. It is often hard for residents to comprehend the full extent of the problem. How can we have a water shortage? So what if it hasn’t rained? Just turn on the sprinklers. Our state is surrounded on three sides by water and our county is dotted with lakes. Why should we care?

There is a complex cycle of how water is recycled in nature called the hydrologic cycle. When we hear the news about water restrictions, humans begin the "hydro-illogic" cycle, one that makes no sense! Residents who never had to water or used very little often panic and begin watering daily or on each day allowed by water authorities, soaking the ground for hours to make up for water shortages. They waste water getting caught in the hype without realizing what is best.

In the hydrologic cycle, water falls from the sky as precipitation; we call it rain. If water freezes in the sky it forms hail, sleet or snow before hitting the ground. It then either soaks into the ground (infiltration), or moves across the land as runoff. Our lakes and streams locally are filled by runoff when it rains.

The water that soaks into the ground may not be able to move very deeply because of natural underground restrictive layers in the soil. Our water table, the depth that you can find water if you dig a hole, is within a few feet of the surface in many parts of the county. Rainwater keeps that filled up above the restrictive layer like filling a sink with a stopper in it.

Some parts of the ground do not have the restrictive soil layer close to the surface so that allows water to soak deeper into the ground. These areas are known as recharge areas. Recharge areas are a direct connection with deep ground water where wells are used to extract the water for drinking and irrigation of our crops.

It is critical that we protect the recharge areas and prevent pollutants from washing into the ground since it will become our drinking water sooner or later. Soil acts as a filter and can remove some impurities, but not all.

Our water in Osceola County comes from wells in the ground. Some communities pump water from rivers or lakes and purify it with a water treatment system. Rural residents may have their own wells and water treatment systems. City water supplies are from deep wells.

Once we use water at home, it goes through pipes to a treatment center. It could be a septic tank in rural areas or a central sewer or waste water treatment facility. The water, called effluent, is treated and recycled back to the ground. It is not drinking water quality and it does not go back into the soil layer where we get our drinking water.

Treated effluent is suitable quality and safe for watering plants. Osceola County is fortunate to have two progressive cities that provide reuse water for irrigation. Reuse water is used to irrigate lawns and landscapes in our parks, cemeteries and golf courses. In Orange County, many acres of citrus are watered with reclaimed water. Reuse water is run in lavender plastic pipe. If you have access to reuse water at home, please advise your family and friends that it should not be used for drinking or bathing.

Think again of the cycle. Water is in the air, in the ground and in our oceans, lakes and streams. It doesn’t go away, it just moves. All water is not suitable for drinking.

We are at the beginning of a dry season that usually runs until June and our annual rainfall the last year and a half is well below average. The more people we have moving into the area, the more water must be pumped from the ground. If we do not have adequate rainfall to refill the underground soil reservoirs
called aquifers, we do not have enough good quality water to provide for our need and we are faced with water shortages. The water is not gone; it is just not where we need it or in a pure enough form.

It is expensive to condense water out of the atmosphere. It is also costly to purify water from shallow water wells, streams or lakes or to remove salt from ocean water to make it suitable to drink.

Therefore it is essential that we conserve the water that is of suitable quality so we can have good affordable water. Once it is down the drain, it's expensive to convert it back into a quality for drinking. It is extremely important that each of us do whatever we can to save water, even a drop or a drip at a time, since it all adds up.

Water managers have already set in place restrictions against watering between the hours of 10 a.m. and 4 p.m. Research has shown that water applied during the day is more likely to evaporate and be lost to the atmosphere rather than providing needed sustenance to plant roots.

Additional water conservation tips and suggestions for coping with drought in the landscape are available by contacting the University of Florida’s Osceola County Extension Office at (321) 697-3000 or check out our website at http://osceola.ifas.ufl.edu. Bill Graf of the South Florida Water Management District also provided us with a variety of publications and online information is available at http://www.sfwmd.gov/site/index.php?id=37.

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Date: December 7th, 2000