HOME AND GARDEN COLUMN

WATER QUALITY

Recent rain in some areas of Central Florida has not satisfied the thirsty earth. Water levels in ponds are going down and landscape plants show signs of wilt. As we continue through the dry season until June, drought conditions are likely, according to weather experts.

Water was the focus of a recent conference sponsored by the University of Florida which brought together more than 450 scientists, biologists, educators, regulators, consultants, students, public officials and citizens to talk about a variety of key issues. The conference allowed participants to network and learn about the latest research on water topics. Posters and many concurrent sessions helped to share creative solutions to water issues.

It is encouraging to know that so many are concerned about water. There was great discussion about planning for development and balancing the need for water for humans, agriculture and industry. Where will it come from and where does it go after we use it?

No one was worried about a water shortage. Even though demand and water withdrawal has increased, sources for water are available. However, there was agreement that the easy access to good quality water is going to be in short supply. That means the cheap water tapped from our groundwater sources already.

Florida is a peninsula surrounded by water, but it is salty. Some sessions focused on how to process the water for drinking. The downside is how to dispose of the concentrated salt without harming living things.

We followed the flow in the water cycle and discussed how we could capture water in different parts of the cycle. There is water vapor in the atmosphere but how do we efficiently condense it so we can use it. Air conditioners are condensers. One suggestion was to capture the condensate and use it in landscapes. A local HVAC contractor told me a typical house size air conditioner could produce 24 gallons of water a day as it takes moisture out of the air in our homes. Using that water for irrigation instead of creating a troublesome wet spot in the landscape where the pipe drips outside the house would help.

Also discussed were alternative water supplies. Since our drinking water comes from groundwater, from wells that pull water out of the soil, alternative water supplies include other sources. One alternative many communities are investigating is surface water. We see a lot of surface water in lakes, rivers and creeks. However, that water is critical for many plants and animals. There needs to be studies to identify minimum flows and levels ensuring minimal impact to wetlands and adjacent upland ecosystems.

When it rains a lot in the summer, to avoid flooding, a lot of water drains out of our lakes to other connecting lakes and the Kissimmee River. In recent summers, with heavy rainfall, a lot of fresh water has flowed downstream to the east and west coast of Florida in Lee and St. Lucie Counties and caused problems with the brackish water estuaries. Creatures that live in these special places where fresh and salt water meet are adapted to specific conditions of salinity, the degree of saltiness. Too much fresh water during floods or not enough during times of drought
threatens the fragile balance of many organisms. Where should the water go when we don’t want it and our neighbors to the south don’t either? One topic of discussion is to store it in surface water reservoirs and to rehydrate wetlands along our rivers and shores. Many are trying to understand and plan for this tricky balance.

Re-using our water more than once was a common theme. Locally, some communities use treated wastewater for irrigation. You have likely seen the lavender pipes used for reuse water. The water has an additional life, by using it for watering common areas in developments, golf courses and home landscapes. Addressing concerns about health and safety through current research can help the public understand the possible risks from this water source.

There was discussion of pollutants such as lead and mercury as well as pesticides and fertilizers that dissolve into our water. New research is investigating the effects of endocrine interrupters from pharmaceutical products. What will be the long-term impacts on fish, wildlife and humans that drink the water?

Another theme was the need to match the source quality to the use. Why take the best quality water to flush toilets? Several prisons have been retrofit or re-piped to use lower quality reuse water for that dirty job. I have also seen a project that was to be used at a big box store that would capture rainwater off the roof into a cistern to use for flushing toilets. There was also talk of the need for cisterns to capture rooftop rainwater for landscape irrigation.

A common theme related to the pricing of water. Almost everyone present agreed that good quality water is heavily subsidized and sold at a rate much cheaper than the actual costs. Be prepared. Improving water quality from these alternative sources uses more energy and as oil prices increase, water will surely go up as well. Conservation now will help us reduce the sticker shock when prices rise.

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