

Tim Keim: A water revolution in Chatham
Dec 20, 2008

I doubt that the name Maude Barlow rings a bell with many of you. It didn't with me until a recent conversation with Dr. Hal House, president of Chatham County-based Integrated Water Strategies.

Barlow, in her book, "The Blue Covenant: The Global Water Crisis and the Coming Battle for the Right to Water," asserts that water will be the "oil of the 21st century." Square that with the United Nation's declaration that access to clean water is a basic human right.

They are the irresistible force and the immovable object, and clash they soon will. Reconciliation of such a dilemma will mean a complete reevaluation of our relationship to water.

Water, in the U.S. anyway, is as cheap as dirt yet more valuable than gold. Our bodies are 70 percent water, but if you asked someone whether they'd like to have 70 percent of their weight in gold or water, they'd choose gold most likely. This is the perfect demonstration of inverted values. We have turned nature on its head and have based our entire economy on a false value whose expiration date draws near.

But here in Chatham County someone is beginning to work out the solution: the aforementioned Dr. Hal House. I want to recognize Dr. House and IWS as one of the gems of Chatham County.

As a graduate student, Hal House helped pioneer the science and construction of miniature wetlands, using plants and their resident bacterial populations to filter wastewater and make it reusable.

In the first major demonstration of his innate skill to solve thorny environmental problems, Hal designed the wastewater filtration system housed at his current office site in 1996. In a beautifully landscaped patio and adjacent green house, 1,200 gallons of wastewater per day is cleansed by the system without noise, odor or any evidence that such a miracle is taking place. Since then, IWS has refined the process and has installed several systems here in Chatham.

The implications of Dr. House's process for our world-wide dilemma are profound.

Let's start at the pocketbook. This low-energy biological system will save enormous amounts of money. If a developer can incorporate wastewater treatment and recycling for non-potable uses into the landscaping of a new tract, he doesn't have to pipe the water to a sewage treatment plant. Major savings!

The residents realize substantial savings as well by using about 60 percent less water. The aesthetics of the community are enhanced by the cleansing gardens to boot.

Stormwater and rainwater can also be directed into the system which relieves creeks, rivers and reservoirs from the pollution carried by that input. Pollution, instead of being diffused into our life support system would be localized and sanitized at its source. Rivers like the Rocky, Haw and Deep could be restored to their original, pristine conditions.

These mini-wetlands also serve as both sinks and delivery systems for excess fertilizers like nitrogen and phosphorous that damage local watersheds. These elements remain in a closed system and continue to feed the plants and bacteria that clean the water.

Municipalities could reduce the size of sewage treatment plants or perhaps forego them altogether and save on unnecessary infrastructure investment. Previously worthless land that won't "perc" and thus not accommodate septic systems would regain value and usefulness.

Can you imagine what a beautiful place Chatham could be? Healthier streams and rivers would again teem with species that had all but disappeared. It would be like turning the environmental clock back a hundred years or more. Property values would soar and the concomitant benefits would be incalculable. Such success would surely spread to surrounding counties and states.

We are on the cusp of a revolution, and we have a county commission that is right in step. Two Chatham schools, J.S. Waters and Chatham Central, are already using systems built by IWS. The new Chatham library will also host its own IWS wastewater treatment system.

But perhaps the most valuable component to this water recycling strategy is the design and building of a county-wide reprocessed water distribution system. As water savings accumulate, the surplus would be fed into circulation for non-potable use elsewhere with credits assigned to the originator.

This is the conjunction of cost, value and each citizen's right to clean water. Without such conservation the future challenges of population growth and global climate change may defeat belated efforts to deal with them. Remember, in the long geological time table of this epochal ball game nature bats last.

Now is the time not only for Chatham County to vigorously pursue this revolutionary course, but for Gov.-elect Perdue to support this technology and protect North Carolina's water resources. The wisdom inherent in mimicking processes that are billions of years old is a no-brainer.

As I recall my conversation with Dr. House, perhaps the most encouraging words he spoke were, as he referred to his work, "We've only just scratched the surface." When you think of it like that, the future is exciting indeed.

Tim Keim, a Pittsboro resident, is a writer and the recipient of many awards for his radio news and documentary work. Readers can contact him at chh@heraldsun.com or c/o The Chapel Hill Herald, 106 Mallette St., Chapel Hill, NC 27516.

© 2009 by The Durham Herald Company. All rights reserved.