

Given the rising rhetoric and claims that we're running out of freshwater across the country, it behooves folks in all turf segments to delve deeper into alternative sources of water for turfgrass irrigation.

We raise money for turfgrass breeding to discover more drought-tolerant grass varieties, which should continue. Meanwhile, the anti-turfgrass folks continue their assault to reduce the size of new lawns and decry the high-input maintenance practices on golf courses.

Water management authorities around the country impose Draconian watering restrictions with little thought to the economic fallout to the businesses dependent on reliable access to water. Turfgrass has a low ranking on the list of public needs.

Florida has been using reclaimed water from treatment plants for golf course, municipal and even home irrigation for more than two decades, but this practice has been slow to catch on in other states, many of which are just now turning to effluent after being pushed to the brink by recent extended periods of drought.

But in Florida, where an average of 700 new residents arrive daily, effluent alone will not meet the growing need for irrigation water as more freshwater must be diverted for household use. In fact, several water management districts have drawn a line in the sand, saying that they will refuse to pump additional freshwater from aquifers after the year 2013. In essence, it's a growth-limiting factor, and I wonder how far they will cut into existing consumptive-use permits for "non-essential" activities like golf courses.

So far the state and local communities have done a miserable job with growth management and have been slow to develop its own alternative sources of water. In a state surrounded by water, I am reminded of the line from the poem "The Ancient Mariner" — "Water, water everywhere, nor any drop to drink."

There are plenty of examples, especially in the Middle East, where desalination is the source of drinking water. Many of these operations require several purification processes,

Is Reverse Osmosis Worth Its Salt?

BY JOEL JACKSON



WHILE VERY SITE-SPECIFIC, IT MAY BECOME A VIABLE OPTION FOR GOLF COURSES AND OTHER TURF MANAGERS

including reverse osmosis (RO), to create a potable product. And golf courses are finding out that additional purification is required for suitable irrigation water, too.

At least four Florida golf courses have turned to onsite RO plants to generate freshwater to irrigate the golf course and landscape areas. I heard recently that Pebble Beach is also going to RO water. I had reports of one or two courses in Texas and Arizona that were also using the RO process to clean up either brackish water or high-sodium effluent water for irrigation, but it is not a widespread practice.

Setting up an RO plant isn't cheap, and then there is the question of what to do with the resulting high-saline concentrate. Solutions I have heard in Florida, all governed and monitored by the Department of Environmental Protection, include discharge into a percolation pond on the property, deep-well injection back into a high-saline aquifer, and dispersal into an onsite perk trench, which then leaches into a confined surficial zone.

Of course, another route can be to install seashore paspalum turfgrasses, which can be irrigated with highly saline water but still requires periodic flushing with freshwater if rainfall isn't adequate to do the job year-round. It won't eliminate the use for freshwater, but paspalum courses would use less freshwater overall.

Going RO is obviously very site-specific, but for coastal courses and the inevitable water wars in eastern United States, it may become a viable option.

Please pass the salt!

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