

**W**e're learning quickly that alternative water sources developed for irrigation purposes to spare the freshwater reserves for public consumption also have finite limits.

Two years ago, I wrote about four courses on the southeast coast of Florida that had installed reverse osmosis plants to convert the salty brackish water in the coastal aquifers to usable irrigation water. That number has expanded to eight courses.

This process, whose permitting and oversight is regulated by the water-management district and the state's Department of Environmental Protection, remains a very site-specific and expensive alternative. Initial investment costs are high, but the payback is real compared to paying \$3.15 per thousand gallons for potable water versus \$1.05 per thousand for reverse osmosis water.

One superintendent told me he has made improvements to his system in the past 12 years to increase its daily production from 200,000 to 600,000 gallons. The reverse osmosis water is pumped into the irrigation pond, which also is the collection point for an extensive drainage system installed to capture runoff to mix with the water and improve its quality. The course also spent money to upgrade to stainless-steel pumps and heads designed for salt water.

But even using this unique water reclamation process to produce usable irrigation water is facing limits. The regional Water Management District (WMD) plans on capping withdrawal amounts from the coastal Florida aquifer in the next three to five years amid fears of increased saltwater intrusion in previously unaffected areas, according to a permit holder.

Meanwhile, it is the turfgrass industry, often portrayed as nonessential by activists, who leads the research and development of drought-tolerant grasses and ways to conserve water through the use of moisture sensors, sound cultural practices, soil amendments, surfactants, computers and weather stations, and irrigation system repairs and upgrades.

That brings us back to those alternative sources of irrigation water that we've been

## Water, Water Woes Everywhere

BY JOEL JACKSON



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CRISIS

cultivating for the past few decades. We're familiar with reclaimed water and know its limitations. However, it still remains a new source in many parts of the country and growth in its use is still possible.

So it frustrates those who practice diligent resource stewardship to read about municipal governments pumping hundreds of millions of gallons of reclaimed water into the ocean with one hand and imposing watering restrictions on all users with the other. Add in the millions of gallons of expensive potable water lost through leaks in the aging pipelines and uncapped artesian wells, and you wonder who's running the show.

Another Bozo moment came recently in my neck of the woods when the regional water authority, in the midst of a major media water conservation campaign and the imposition of tighter restrictions on outside watering, turned around and granted a water-bottling company a permit to pump 500 million gallons a month out of the aquifer. That's just what we need — another brand of bottled water in our "critical" water crisis.

But installing purple pipe and fixing the leaky infrastructure takes a lot of money, and it's much easier to just write an ordinance mandating restrictions on use. Even a fool can see that's a "law" of diminishing returns.

The conundrum is the more water we save, the less money the utilities make and the more expensive it becomes to use less water.

Only when it comes to irresponsible governance and management of water supplies does it seem there are no limits.

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