



Water Hazard

Summer is just heating up, but water-use issues are reaching a boiling point in many parts of the country. Fifty-seven golf courses in south Florida were fined in late April for failing to report their water consumption amid south Florida's "third worst drought in 80 years," according to the South Florida Water Management District.

Weekly reporting requirements were imposed in March under a phase-1 restriction, which required a 15-percent savings in Martin and St. Lucie counties. About half of golf courses complied with the weekly reporting requirement at that point.

When phase 2 took effect two weeks later, it imposed a 30-percent water savings and cracked down with \$500 fines for golf courses that failed to report weekly usage. About 93 percent of the required 336 golf courses have complied with the reporting requirement since then, according to water management district spokesperson Julie Huber.

Fines between \$500 and \$10,000 could be levied on golf courses that overuse their quota when consumption is calculated at the end of each month. April's numbers were still being assessed at presstime.

"Everybody must do their savings part,

and golf courses are the big white elephant out there," says Steve Pearson, superintendent of Falls Country Club and president of the Palm Beach County Superintendents Association. "Everybody sees us, and when it comes to crunch time, many feel that all the water should be going to homeowners."

The water district continued to tighten its belt in mid-May when it progressed to a phase-3 water restriction in Palm Beach and Broward counties. Golf courses within those counties are required to cut water use by 45 percent or face fines.

Golf courses use about 3 percent of the water governed by the management district, Huber says. Other recreational facilities consume about 3 percent as well.

Pearson has cut his usage in half voluntarily, down to about 10 million gallons a month. He says his members are sympathetic because of all the regional publicity surrounding water issues, but telling them why conditions are changing is still crucial.

"Communicate what you're doing not only to who you work for, but also the media and others so that our story will translate into a better understanding of what we are doing

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Drought pushes some courses to reclamation, and the rest of the country isn't far behind

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and what we are trying to do,” he says. “It’s more than a mandate; it’s the right thing to do.”

Pearson says he’s been able to mitigate some of the impact by upgrading irrigation equipment, including sprinkler heads and computer controls, and he relies on cultural practices to help keep turf healthy. A longer cut and wetting agents can make or break a putting surface in extreme conditions. And he gave up on watering out of bounds areas and parts of the rough months ago.

“We get brown,” he says. “We first cut off on the roughs, then we weaned off the fairways, but we certainly want to keep enough for tee and green surfaces. [Now that it’s at 45-percent reduction] I imagine we will cut quite a bit off the tees, but the greens will always have enough unless we get into some kind of crazy thing.”

But it might not be that easy for superintendents doing grow-ins. Fragile new turf will suffer without enough water before establishment.

“The water management district is not going to be giving variances for those who are doing grow-ins because of the seriousness of the drought, and they were pretty emphatic at the meeting,” Pearson says.

The only golf courses with enough water in south Florida and many other parts of the country are the ones using reclaimed water. With potable and surface water and lakes under the microscope, the industry is delving into additional ways to be better stewards or resources. Reverse osmosis plants are being used on golf courses in south Florida to provide better quality water supplied from reclaimed plants. It’s feasible for golf courses near an ocean to have their own R/O plants because they can dispose of the brine by-product.

They’re not that lucky in Scottsdale, Ariz. So an alliance of 20 golf courses is chipping in to expand and maintain an R/O plant for the water reclamation district. With sodium building up in soils and just about 10 inches of rain per year to flush the soil, superintendents struck a deal to expand the 10-year-old R/O plant at a price tag of \$100,000 per golf course per year. That’s a \$2 million annual subsidy for the plant for the next 25 years.

“It’s cheaper than taking the current water and amending it at the property to make it into something I can use,” says Shawn Emerson, director of agronomy at Desert Mountain, a golf community with six Jack Nicklaus-designed tracks in Scottsdale. He organized the area golf courses to negotiate the deal with the water management district.

The new plant will supply about half of Desert Mountain’s irrigation water, and the other half will be tertiary-treated effluent. The end result will be water with about 125 parts per million of sodium, Emerson says.

“Water and soil have a relationship together,” he says. “Soil damage leads on to other stresses that the plant can’t handle, such as drought stress, disease stress, rapid blithe and things like that because the plant is not healthy. The plant becomes a couch potato. It gets fat and lazy without the proper nutrients.”

But the water comes at a price. The additional \$100,000 tacked on the water bill for the 20 participating golf courses is a significant investment, considering Emerson’s water and electricity bill is about \$250,000.

Although building an R/O plant for your local reclamation district might be extreme, it’s clear that the price of reclaimed water is rising like tides in most parts of the country, partly because demand for recycled water is on the rise, and partly because cash-strapped municipalities increasingly view it as a revenue source.

So it goes at the Island Country Club on Marco Island. Certified Superintendent Wayne Kappauf is facing a near 50-percent hike in his reclaimed water rates as his five-year contract is up for renewal. The island’s developer actually built the destination around the golf course and hotels with a reclaimed water plant from the get-go. But after years of deregulation and then government takeover, Kappauf is likely to pay about \$100,000 for

water that was almost one-quarter that cost 12 years ago.

“They’re trying to create revenue, and they’re looking at golf courses like our budgets are unlimited,” he says. “We’re just going to pass it along to our members, which looks like about a \$100 dues increase. So they are going to be affected.”

Despite the rising price, he says using recycled water is the right thing to do for any golf course that has the option. It’s a prime way to demonstrate that golf courses are good stewards of the environment and natural resources.

“I’m very proud of the fact that this golf course has used nothing but re-used water since it was built, and I think it’s our obligation to do that,” Kappauf says.

More courses undoubtedly will need to use recycled water as more municipalities scrutinize potable water consumption, scuffle over sources and boost rates.

“I don’t care if you are in New York, Chicago or Washington, all business is going to go effluent at some point,” Emerson says. “They’re not going to allow people to use groundwater or drinking water on golf courses for much longer.” ■

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— SHAWN EMERSON
THE DESERT MOUNTAIN CLUB