WaterTight

SUPERINTENDENTS NEED TO PREPARE TODAY FOR TOMORROW'S WATER RESTRICTIONS

COMING TO AMERICA in 2020 — increased population, increased industry and increased drought.

Of course, these three increases also mean more intense scrutiny of freshwater use, and golf courses will be in the hot spotlight. If golf course superintendents aren't bracing now for increased regulation of irrigation in 10 years, they had better start.

How bad could regulations get? That's difficult to say, considering it depends on a number of factors, including geography. But one thing is certain — human consumption will always come first in any part of the country if the reservoir is really running low.

"When water is scarce, people are going to get water into their homes long before the golf industry and other segments of the green industry get water," says Grady Miller, Ph.D., turfgrass professor from North Carolina State University.

But even if fresh water isn't scarce, Miller says it's inevitable it will be more regulated in the future, including for golf courses.

"In North Carolina, we'll have state legislation in the next 10 years that will control the water at some level," Miller says. "What that level will be is hard to say right now."

Golf courses that use municipal water will be at the mercy of local ordinances, Miller says. If there's a drought, municipalities have the right to shut off the water on golf courses. It's a different scenario when compared to courses that draw water from on-site ponds or lakes, which are under state jurisdiction, Miller adds.

Miller believes any regulation will be state by state, not by the federal government. With geography playing a major role in water availability, golf courses

could face different dilemmas at different times.

Consider California, where late last year the state introduced a mandatory 20-percent reduction of freshwater use by 2020. Yes, all golf courses must comply.

But Jim Husting, certified superintendent of the Woodbridge Golf & Country Club in Woodbridge, Calif., wonders how the state will enforce such a measure.

"There are too many laws on the books, and there's nobody to enforce them," Husting says.

In time, Husting expects everybody in California will have to report everything about their water use, which is already occurring with surface water. But someone will have to keep track of all that information, put it in a database and operate that database, which will take time, Husting points out.

More than 3,000 miles away on an island in the Atlantic Ocean, Jeff Carlson, superintendent of the Vineyard Golf Club on Martha's Vineyard, is used to dealing with water regulations. The island of Martha's Vineyard is designated as a "sole source aquifer," which protects drinking water supplies in areas with few or no alternative sources to the ground-water resource. Hence, Carlson is restricted in how much water he can use daily.

"In order to irrigate the golf course and in order not to have a shortfall of water, we built a retention pond, which a lot of courses do," Carlson says.

The New England area receives about 44 inches of rain annually. Between the water Carlson can draw from the aquifer and the course's retention pond, you'd think the course would get enough water. And it does, but there are additional regulations with which Carlson must comply.

Regulators realize the Vineyard Golf Club won't deplete the aquifer, but they also don't want the golf course to impact area surface water, such as salt marshes, by pumping too much water for irrigation.

Carlson has no problem with the regulations.

"Regulating water use is kind of a good thing," he says. "Because then you end up with golf courses that are dryer."

Carlson realizes the freshwater situation is worse in the West than in the Northeast. But he expects more regulation in 10 years, especially in parts of New England where there's more runoff.

"I think we'll see a gradual reduction here in using potable water for irrigation," he adds.

Mark Esoda, the certified superintendent of the Atlanta (Ga.) Country Club, points out that more regulation could make freshwater more expensive. Courses could end up paying more for measuring devices, such as meters, as well as additional fees.

"We spend a lot of money for water management," Esoda says.

In Florida, more golf courses are using effluent water because they realize freshwater regulations will only get tougher in time. Joe Hubbard, the director of golf course maintenance for the Broken Sound Club in Boca Raton, Fla., estimates that about 10 percent of golf courses were irrigating with effluent in 2000. That percentage has climbed to 50 percent in 2010, and Hubbard expects the number will soar to 80 percent in 2020.

The state government is in charge of potable water in Florida. Miller suspects other states will take Florida's lead, "because it allows those states to control water and regulate it."

Miller says there's a good reason for superintendents to become more proactive with the issue.

"If you don't become more proactive in what you do with water, the state will come in and mandate what you do," he says.

Dave Phipps, certified superintendent of Stone Creek Golf Club in Oregon City, Ore., expects golf courses will be watched more closely for their water use, but he doesn't expect any draconian regulations come 2020.

"As an industry we're going to be so on top of this," he says. "But it needs to be more than just golf courses; it needs to be the entire green industry. We need to prepare today for tomorrow's legislation."

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▶ Joe Hubbard, director of golf course maintenance for the Broken Sound Club in Boca Raton, Fla., expects 80 percent of Florida golf courses to be irrigating with effluent water by 2020.

Taking charge

According to a *Golfdom* survey of nearly 500 superintendents last year, superintendents are concerned about increased scrutiny of their freshwater use as well as decreased availability of fresh water with which to irrigate. When *Golfdom* asked superintendents, "What is your biggest concern regarding the water you use for golf course irrigation?" 37 percent of superintendents said "increased scrutiny of its use," and 29 percent answered "decreasing availability."

Some superintendents believe the two answers go hand in hand. They believe increased scrutiny of their use by environmental groups and politicians will contribute to a decreasing availability of water with which they can irrigate their courses.

Proactive superintendents, realizing they'll face tougher water restrictions in the future, agree they need to act now to get out in front of this issue.

Perhaps nobody in the industry has been more proactive in dealing with this matter than the Atlanta Country Club's Esoda, who spearheaded an effort by the Georgia Golf Course Superintendents Association to enact best management practices for irrigation, a move that benefited the golf industry's image statewide. It wasn't an easy task and it took several years to accomplish, but 246 of the 256 Georgia GCSA member properties stepped up to participate in surveys that documented their water use and irrigation-reduction practices.

Participating golf courses disclosed how they effectively used irrigation systems, new grass varieties, wetting agents and plant growth regulators to use less water. They also documented their usage patterns and areas where they decreased irrigation during a 2007 drought, including how they discontinued the practice of overseeding to save water resources.

The Georgia GCSA partnered with the Georgia Environmental Protection Division (GEPD) in the project, and their relationship has blossomed into one of respect.

"[The GEPD] has realized we were not the water abuser they thought we were," Esoda says.

The relationship is so good between golf and government in Georgia that regulators are looking out for golf courses. In June, the Georgia Water Stewardship Act went into effect, allowing for daily outdoor watering for purposes of planting, growing, managing or maintaining ground cover, trees, shrubs or other plants only between the hours of 4 p.m. and 10 a.m. by anyone whose water is supplied by a water system permitted by the Environmental Protection Division. Irrigation by golf courses is exempted from the act, however.

"We were exempt because they know we're responsible water users," Esoda says.

Esoda can't speak for all superintendents around the country, but he knows of some who are getting out in front of the water issue, much like the Georgia superintendents did. He mentioned a group of superintendents in Austin, Texas, who are working toward BMPs for irrigation.

Esoda expects tougher regulations around the country in the next 20 years. He's asked if superintendents are taking the issue seriously enough.

Esoda thinks for a moment and answers the question this way. He explains that 20 percent of people act as volunteers for one cause or another. The other 80 percent sit back and let the 20 percent do the work. Esoda's fear is that only 20 percent of superintendents are being proactive.

Esoda believes most superintendents are taking the water crisis seriously, but they need to act. "They need to take it one step further," he adds.

Phipps believes superintendents can become leaders in teaching others how to become more responsible with water use. But superintendents and their golf courses have to upgrade their own images as water users first.

"We have to let people know what we're doing and how we're doing it," Phipps says.

Carlson agrees.

PHOTO (TOP) BY: FRANK DIMARCO

"We need to position ourselves to lead the way," he says. "We're in a position where we can do that. We have the knowledge base, the interest and the skill set to be out in front of this."

In time, Carlson would like to see golf courses evaluated for their playability in accordance with how little water they use, not how much.

"But golfers' perceptions have to change, too," Carlson says. "And golfers have a real hard time with anything that's not green."

Says Husting, "I see golf courses maybe not looking as pristine as they used to partly because of water restrictions. But is the golfing public ready to accept less than pristine conditions?"

The effluent factor

Is irrigating with effluent water the answer to increased regulation? Yes and no.

In the case of Broken Sound and other Florida golf courses, effluent makes great sense.

"More and more environmental groups are blocking (Southern Florida) municipalities from dumping wastewater into the ocean on the reefs," Hubbard says.

As a result, more golf courses are working out agreements with municipalities to irrigate with effluent.

For years, the city of Boca Raton dumped about 6 million gallons of treated wastewater into the ocean.

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Miller points out the concept of going organic on golf courses is getting more attention in the golf course maintenance industry as part of the overall green movement. He wonders if a strict irrigation concept could also gain a foothold as part of that movement. Could the day come when a golf course promotes that it only irrigates 10 acres of greens and tees in an effort to be the best conservationist golf course in town?

Thanks to an agreement between the city and Broken Sound, much of that water — about 1.6 million gallons a day — is now directed to the club's two golf courses for irrigation. Boca Raton paid $13 million to build the infrastructure to get the water to Broken Sound, which pays about $300,000 in utilities to get the water. Now, Broken Sound always has water for irrigation — even during water restrictions.

"We couldn't ask for a better partner than the city of Boca Raton," Hubbard says. "And the water quality is just phenomenal."

While effluent could probably solve a lot of water woes, there are some issues, mainly its availability. Husting calls effluent a "viable alternative," but the infrastructure must be in place to get the water from point A to point B.

That said, it would cost a lot of money for Woodbridge to irrigate with effluent because the infrastructure is not in place.

"Millions of dollars would have to be spent to get a pipe here," Husting says. "And somebody has to pay for it. Do you think a country club is going to survive that assessment? Probably not."

The problem in North Carolina and other less-populated areas is producing enough effluent water to use on golf courses, Miller says. Poor quality effluent is also an issue.

"There's some reluctance to even want to use it," Miller adds.

The color green

To deal with increased regulations, Miller expects more golf courses will be designed and renovated to irrigate with less water, which is already happening. In 2020, there will also be more drought-tolerant turfgrass varieties, more efficient irrigation equipment and more water wise-minded superintendents.

And what about golfers? Well, it may be that they will be forced to change their demands for lush and emerald-colored green turf. Hard and fast fairways may become popular after all.

But Esoda probably speaks for many superintendents (and golfers) when he says he doesn't want to hear anybody else say that "brown is the new green" when it comes to golf course turfgrass. The statement was uttered by United States Golf Association president Jim Hyler earlier this year.

"Grass is supposed to be green," Esoda says. "But you shouldn't over-water it." ■