

In the **EAST**, Water is Plentiful But Superintendents Expect More Regulations

BY ANTHONY PIOPPI,
CONTRIBUTING EDITOR

THE SUBJECT "WATER ISSUES" is not one normally associated with the Northeast portion of the United States, where the average rainfall is between 40 and 46 inches annually and water quality, for the most part, is excellent.

Like everywhere else, though, how local and state governments view water usage is changing and golf courses will be, and are, affected.

At places like The Golf Club at Oxford (Conn.) Greens, a Mark Mungeam design that opened in 2004, the plan was to never touch the aquifer to irrigate. "For the most part, we rely on storm water to recharge our ponds," said superintendent/general manager Bryan Barrington.

Situated in the midst of a real-estate development, rainfall at Oxford Greens is first directed through a 300-foot grass swale, stone rip rap, then into a settling pond before spilling into the irrigation

pond. Barrington said the water quality consistently tests very high.

In drought conditions, Oxford Greens taps into the municipal water supply. Barrington says the last time the course needed to do that the cost for 5 million gallons was about \$10,000.

Barrington also grew in Red Tail Golf Club in Devens, Mass. While there, Barrington was constantly monitoring his water quality to make sure he had no impact on what flowed beneath his course.

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restrictions imposed by the city's utility company. Kloska figured if the course manufactured its own water, it wouldn't be at the mercy of the utility company during droughts and wouldn't be affected by soaring water prices.

Kloska is right, and he expects more courses along Florida's coast to opt for reverse osmosis in the future, especially since the water-management district wants courses to stop using shallow wells.

Kloska and Esoda also expect more Southern courses to irrigate with effluent or recycled water. Coastal cities are discovering they can no longer discharge wastewater in rivers and the ocean, Esoda says. Hence, golf courses will become a market for them. "I can see this happening more in densely populated areas where there are limited resources," he adds.

Esoda says water quality is not an issue in his area, but he realizes superintendents in coastal areas can't say the same. Kloska has few water-quality issues, but some of the courses that use effluent have challenges, such as high phosphorus.

Kloska predicts new and old golf courses will continue toward using turfgrass varieties and plants that use less water. Kloska also believes smaller water-recycling systems are the future and will be used to irrigate courses.

The good thing about the slow economy is slower population growth, which equates to less development, which won't put a drain on water use in the South, Esoda says. "I don't see any kind of real increased growth rate through golf in Georgia and maybe even the Southeast for the next five years," he adds.

Kloska agrees. "The only positive about the economic slowdown is development has gone to zero, which means the need for more water has dwindled," he says. "But in five years, when the economy is rolling again and new homes and developments are being built, the issue will move to the forefront again." ■

Despite Water

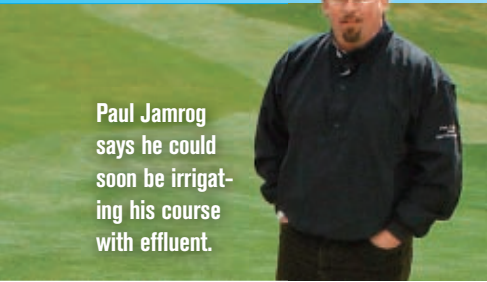
BY JOHN WALSH,
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JUST BECAUSE A GOLF COURSE is located in the Great Lakes region doesn't mean it's exempt from dealing with water issues. While availability usually isn't an issue, cost and quality are for some.

Even though the issues aren't as serious as those in the Southwest, superintendents in the Great Lakes region can't take the precious resource for granted.

The Lochmoor Club in Gross Pointe Woods, Mich., has unsuccessfully dug wells for years to find water. At one time, the club purchased all its irrigation water from the city of Detroit.

"We're unusual in the Detroit area in that we have to pay for water," says golf course superintendent Mike Mulkey. "We're only a couple miles from Lake St. Clair. The club tried to



Paul Jamrog says he could soon be irrigating his course with effluent.

“There was a laundry list we had to test for,” he says. “They wanted to know what was going into the ground. They also wanted to know what they had for a baseline.”

For Paul Jamrog, superintendent at Metacomet Country Club in East Providence, R.I., municipal water is how he irrigates but that could be changing.

Although Jamrog keeps the Donald Ross design dry and firm, the club was advised by the water district to seek an alternate source. Right now, Metacomet pays .0285 cents per cubic foot

of water along with a 7 percent sales tax. The cost is expected to rise dramatically when the municipal water infrastructure undergoes a massive upgrade and prices skyrocket to recoup the expense.

“Where do we go from here? It’s something that has to be addressed,” Jamrog says.

Metacomet tried drilling wells but that produced little water, and Jamrog estimates it would take 12 or 14 wells to keep an irrigation pond recharged. Part of the problem is the brackish Providence River runs right past the course and deep wells would most likely draw from the salty water.

Jamrog says there’s a possibility he could one day be irrigating with effluent provided by a nearby treatment plant.

“All this is going to come to a head in the next five years,” he adds.

Then there’s David Berard, the certified superintendent at Dorset (Vt.) Field Club, who gets water for his course from a 3-acre pond dug into a gravel aquifer that quickly recharges.

“It’s a wonderful pond,” he says, noting water quality is fantastic, only slightly high in pH.

Berard says other courses in south Vermont also irrigate from self-charging ponds. Berard, though, knows it’s a matter of time before regulations tighten in Vermont, where the state has legal control over all types of water, including aquifers. ■

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Availability in the **NORTH**, There Are Hurdles

get water from the lake but, politically, couldn’t do it because of municipalities and conservation groups that put the kibosh on it.”

In 2002, the club completed an \$800,000 project that comprised creating a large retention pond that ties to its irrigation pond. The retention pond was created to catch as much rainwater and snow melt as possible. The 12-million-gallon-capacity pond filled completely the past two winters.

“The 12 million gallons we save by collecting is worth \$60,000,” Mulkey says. “The cost of water has increased, and that was the main reason the club built the retention pond — to save money on water.”

Mulkey spends \$60,000 a year to purchase water from the city of Detroit. That amount of water, half of what he uses, is in addition to the 12 million gallons he retains from rainwa-

ter and snowmelt. “During a typical year, we would use \$120,000 worth of water,” he says.

The 36-hole Olympia Fields (Ill.) Country Club has plenty of water because it sits on an aquifer and is close to Lake Michigan. There are two wells on property and one recharges the irrigation lake. The club doesn’t pay for water, it just pays for the electricity to pump it.

But water-quality problems stem from road salt and debris in a creek that drains into a pond on the course used for irrigation. In the spring, a large amount of sodium accumulates in the pond. “We drain the pond, fill it up with well water and repeat the process,” says certified superintendent Sam MacKenzie.

In 2007, the South golf course was renovated. Planning the project, the architect wanted to tie the pond to

the 13th and 14th holes via the creek. MacKenzie recommended diverting the creek around the pond to create a wetlands area that would filter the salt and debris before it entered the creek. In the end, the creek couldn’t be completely diverted, so some of the contaminated water still enters the pond. That said, the sodium content of the pond the past two springs has been cut in half. ■

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Mike Mulkey says his club saved money after building a big retention pond.