Hold Water

Superintendents conserve more water through wise irrigation

BY ANTHONY PIOPPI

Summer Maintenance

Well before the first bulldozer put its blade into the ground for the construction of Bay Club Mattapoisett, superintendent Jon O'Connor and the course's owners were thinking about water conservation for the private club.

It's not that Bay Club, located in the southeast corner of Massachusetts, has an irrigation supply problem. There is plenty of water. But O'Connor and the owners have still put a premium on conservation that will not only extend to the private golf course but also to the housing unit of the project.

With so many areas of the country either in a drought or having suffered through drought conditions the past few years, how to make the most of water is a priority. And with water shortages in many parts of the country expected to worsen in ensuing years, learning how to do the most with the least is a talent almost every superintendent will need.

O'Connor is in an enviable position. Bay Club will have a state-of the-art irrigation system with individually controlled heads and variable flow drive (VFD) pumps so that only the amount of water required is sent out to the golf course.

Ten percent of the greens mix will be of a porous ceramic material that efficiently catches water while allowing excess water to move through. It will also diminish localized dry spots that require hand-watering, according to O'Connor.

Once there is grass, O'Connor will use wetting agents and take advantage of the fertigation capability of the irrigation system.

"The goal is to have a firm, fast track," O'Connor says. "That's the way I've always pre-

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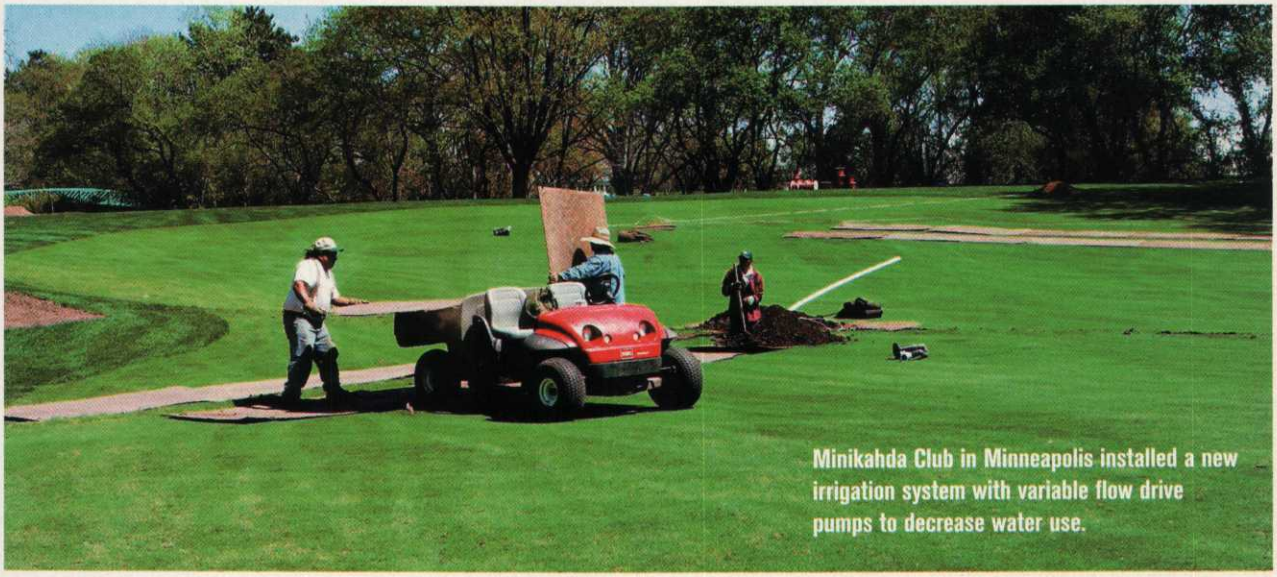

Minikahda Club in Minneapolis installed a new irrigation system with variable flow drive pumps to decrease water use.

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pared my golf courses. You can't provide that and have healthy turf without proper water management."

O'Connor will also be teaching that trick to the owners of the roughly 160 residential units that are part of the Bay Club. As part of the proactive water management, O'Connor will control when water is available to the homeowners, of which 99 percent are club members.

For instance, irrigation water will not be available during the heat of the day. Instead, home watering will have to occur when O'Connor decides. "It's going to create an inherent proactive water-use program," O'Connor says.

Although superintendent Jeff Johnson is not growing in a golf course, he is also adapting his water usage, thanks to a new irrigation system that also includes VFD pumps. The system was installed as part of the restoration work being done at The Minikahda Club in Minneapolis.

Since opening in the middle of May after a six-month shutdown, Johnson is using less water than before, using 1,200 individually controlled heads. The previous system had 675 sprinklers set up in blocks that created all sorts of problems.

"If we wanted to dry out greens, then tees suffered," says Johnson, who's in his ninth season at Minikahda, third as the superintendent. "Before, we didn't have individual head controls. We ended up having to go out and shut off heads (by hand) in low areas."

Although the area is coming off its second wettest summer on record, Johnson is aware problems could be around the corner. "We were always conscientious of what we put down," he said. "We only water areas that need it."

Some areas of Minikahda that needed water before require less now, and it has nothing to do with the new irrigation system. As part of architect Ron Prichard's restoration of the Donald Ross design, trees that were ill planted or popped up on their own over the years were removed. The result was better turf. "We cut trees down and the rough got thicker on its own," Johnson says.

Like Johnson, superintendent Kevin Stinnett of Heritage GC in Wake Forest, N.C., had enough water. Unlike Johnson, he had ongoing problems due to the dry conditions that ravaged the area.

"We definitely had plenty of water. Our concern was we couldn't get it out there, " Stinnett said. The water supply for the 2-year-old Bob Moore Jr. design is a nearby creek.

Like many other superintendents, Stinnett used wetting agents to increase the efficiency of his irrigation, which was mostly done at night. But he also had to hand-water to solve his problems.

> **"I try to give the plant what it needs when it needs it."**
> KEVIN STINNETT, HERITAGE GC

"We pulled a lot of hoses. We had two or three guys out there every day," he says. "I try to give the plant what it needs when it needs it. We try to do the right thing for the grass."

At California's Woodland Hills CC, where a restoration project is underway, superintendent Steve Sinclair and some club members also decided to do what's right — and they were rewarded for it. They installed a new irrigation system to water the course more wisely. And because they did, Sinclair says the club received a reimbursement for $35,000 from the water department.

Sinclair said the Los Angeles Department of Water and Power (LADWP) rewarded the course, not for saving water, but for using it more efficiently through the Water Conservation Technical Assistance Program. He said LADWP members came to the course and conducted a "catch can" test. They placed collection containers at set intervals at about 12 irrigation heads and ran each head for the same amount of time. They then measured the water collected in each catch

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Minikahda Club installed a new irrigation system with 1,200 individually controlled heads. "We only water areas that need it," says superintendent Jeff Johnson.

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can. When the new system was installed, LADWP conducted the same tests and found the water dispersal was more uniform and thus more efficient. The course was also rewarded because it went to a computer-controlled system.

Sinclair is also a fan of surfactants, but he hopes his biggest tool in conserving water will come through cultural practices. That program already commenced with the ending of the club's winter overseeding program, greatly reducing water consumption.

Sinclair also wants to restore natural sections of the 1925 Bill Bell design that have evolved into turfed areas that now require water, nutrients and pesticides. As part of a restoration program, Sinclair and some club members hope to turn the barrancas, dry for much of the year, back to natural areas complete with undergrowth. Unfortunately, some members aren't buying into the idea even though Sinclair said the green chairman is on board with the project and has been touting the benefits in the club's newsletter.

"Education is the only way you can do it, but they still aren't buying it," Sinclair says with disappointment coming through in his voice.

Architect Brad Booth who designed the Bay Club with partner PGA Tour pro Brad Faxon says education is a key ingredient to designing, building and maintaining golf courses that are not meant to be lush and green but rather those that change with nature. Those layouts, Booth says, play one way when damp and soft and another when dry and firm. According to Booth, such a course is more interesting and harkens back to golf's roots.

"There is a joy in playing a golf course over and over. It's not the same thing (every time)," he adds.

Courses that use less water may not be a choice but a mandate in the near future. Government agencies on every level have been paying more attention to water issues during permitting in recent years, Booth says. "They are looking hard at how you're acquiring water and how you conserve it," he adds.

Of course, the way to avoid the problem altogether is to get rain when you need it. "It's all timing," says Minikahda's Johnson. ■

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