Water ways

A simple, daily irrigation maintenance routine can help save 2 to 3 percent of a golf course's annual irrigation water usage, says Shawn Emerson, director of agronomy at Desert Mountain Community, a group of six courses in Scottsdale, Ariz. That might seem insignificant, but it adds up, especially when combined with other practices. Regular system checks can save a course at least 10 percent of its irrigation water usage throughout a year, Emerson says.

A simple task many superintendents aren't doing is checking daily pump-station water output numbers with irrigation computer readings, Emerson says. If the amount of water that came through the pump station in a day is greater than the amount the computer ordered, the maintenance staff knows water is wasted.

"Things change," he says. "The computer is working right, but over time, nozzles wear out, so the amount of water coming out can change."

If the numbers are off, this tells the crew nozzles likely need to be fixed or replaced.

Emerson, who says he has been performing this routine for 10 years at different courses, estimates he's saved 15 to 20 percent of total irrigation water usage each year during his career. This was achieved not just by comparing pump station and computer numbers, but also with other regular system checks and, when necessary, maintenance.

Emerson's crew has a few other irrigation maintenance practices it follows. One of these is deficit irrigation. Emerson monitors the evapotranspiration rate on the course, which tells him how much water was lost from the plant. By monitoring, he figured out he only needs to put a percentage of the water lost back into the plant to maintain it at a healthy level. He usually replaces anywhere from 60 to 90 percent of the water lost in the plant.

Each turf variety has a different tolerance level for this practice, so superintendents will need to determine what percentage of water replacement is too low for that particular plant's threshold, Emerson says.

Another conservation tool is a standard irrigation system checkup.

"We have people who go out in the field and run the sprinklers at the holes for two minutes on each sprinkler to make sure everything is operating correctly," he says, adding that each designated irrigation crew member checks three or four holes each week.

The crew members make sure there are no leaks in the system. Also, if a sprinkler isn't turning

properly, it can mean one area is getting too much water and another area isn't getting enough. The problem could be something as simple as a rock stuck in a nozzle, causing a nonuniform distribution pattern.

"It's simple stuff, basic generic stuff," Emerson says. "The hard part is to create a routine to do it."

Regular irrigation system checks can save as much as 10 percent of a course's irrigation water usage, says Shawn Emerson. Photo: Shane Link, Dreamstime.com

While many superintendents might think they're understaffed and can't add another item to the crew's maintenance schedule, it can be beneficial to take the time, Emerson says. Catching and correcting irrigation inconsistencies reduces water consumption, which also reduces the water bill. An efficient irrigation system can reduce a course's electric bill. Catching problems early also can reduce costly turf issues.

"Instead of being reactive with it by waiting to see signs with the turf, we send people out to catch problems with watering before they arise, not after," Emerson says. "It's no different than taking care of your car. There are maintenance schedules that need to be done on a routine basis to make sure there are no problems."

Besides, it can take only a few minutes a day – or about an hour each week – to check the system. Emerson recommends checking a few holes each day. It takes about 10 minutes to check the pump-station numbers with the irrigation computer numbers.

Emerson admits he has more resources at his fingertips than a smaller public course would, but says the task is important enough for courses of any size to do.

"I've worked at smaller golf courses, and (regular irrigation checkups) are part of the assignment," he says.

It's even more crucial for superintendents with a limited budget or water supply to make sure their systems are running properly to avoid extra costs.

"Obviously, the more you can check, the sooner you can solve any problems," Emerson says. – *HW*

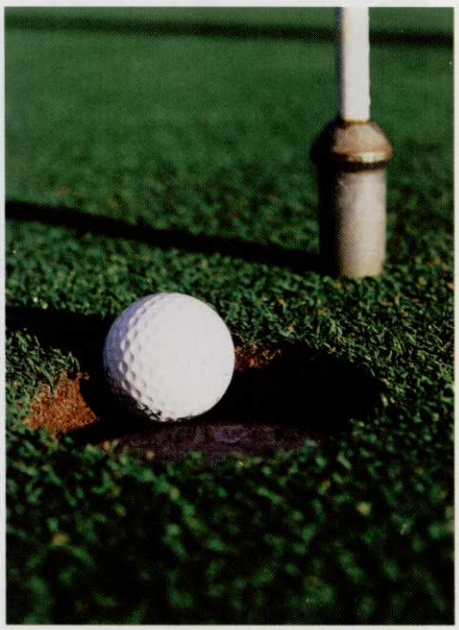
Counter caterpillar care

Destructive turf caterpillars usually go unnoticed on golf courses until damage is noticeable. This was the message David Shetlar, Ph.D., entomologist at the Ohio State University Extension, shared at a recent Ohio Turfgrass Foundation regional seminar.

"They're always sliding under the radar until they build significant populations, and then superintendents say, 'What was that?'" Shetlar says.

The most common varieties of turf caterpillars in Shetlar's region include black cutworm, fall and yellow armyworm, common armyworm and true sod webworms. Black cutworms and fall armyworms can't survive Ohio winters, so they generally spend that time in the Gulf Coast states. It's common for the insects to be picked up in a storm as a moth and eventually land in northern states from Iowa to Ohio.

The first generation of black cutworm matures in late May or early June. They



Turf caterpillars slide under the radar until they build significant populations, says David Shetlar, Ph.D.