

economy, you have to make do with what you have until things improve,” he says.

Vinchesi says that’s one of the blessings of having such a strange season that is warmer and drier than normal: realizing the shortcomings of your irrigation system and being able to make the case for an upgrade.

“The thing about years like this one is that it shows you the deficiencies in your system which, in a normal year, you would never see. You might discover there is more wrong with it than you thought, or that it’s not as good as you thought,” says Vinchesi. “It’s a good year to document what’s wrong with your system and why.”

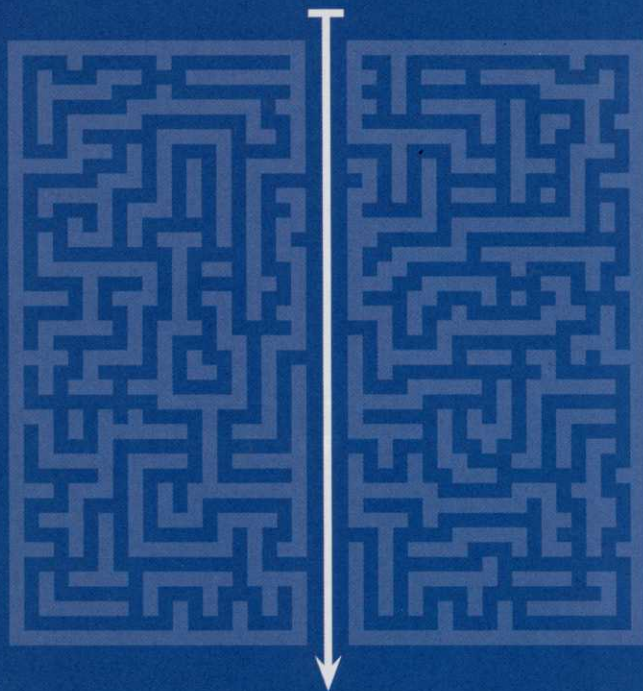
Greg Shaffer of Elcona Country Club in Briston, Ind., has no problems with water supply as he has his own wells. However, he is feeling the pinch from increased electricity costs from running the pumps more. Those costs could be higher, though, if the pumps didn’t have a variable frequency drive (VFD).

“The VFD ensures that they’re only putting out what they need to put out,” says Shaffer.



Water wasn’t the major concern at Elcona Country Club, it was electricity use related to irrigation.

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"They slowly ramp up and slowly wind down so that there's no water hammer, which leads to significant savings in the electrical department."

Even so, more use equals higher bills. Check out these numbers: in May 2011, Shaffer used 1.5 million gallons of water. This May, he used 8.7 million gallons. Through late June 2011, usage was at 5.1 million gallons, compared to 11.2 million this year.

"For the entire year last year, we used 21 million gallons of water, so we're already at half of what we used all last year," says Shaffer.

Fortunately, Shaffer is reaping the benefits of a newer irrigation system installed in 2009 that features a weather station that enables him to monitor evapotranspiration (ET) rates. He will look at the ET rates for a three-day period, and if the ET rate each day was .15, he will irrigate the cumulative total of .45. Sometimes he will stretch it to a four-day period, but if he has two high ET days and the course really needs some water,



Elcona Country Club has been enjoying the benefits of a newer irrigation system.

he will stack two days together and water every other night.

"The theory is that we're putting back out what we used and therefore we're not overwatering," he says.

To minimize wear and tear on the irrigation system, Shaffer divides the course into sections and waters on a deep and infrequent

basis. For example, one night he will water fairways and greens heavily, about a half inch. The next night, he might put the same amount of water on the tees and rough. On the third night, he waters the practice facility and clubhouse.

Vinchesi believes the early start-up of irrigation systems for most supers was a good

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thing as the longer these systems sit idle, the more problems they tend to have. Still, Shaffer worries that the intense use of his system so far this year might lead to problems.

"You still have pumps turning off and on, pressure fluctuation in the lines, and more water running through the nozzles and rotors," he says. "Since we have a new system, we're not really seeing any side effects to this point, but you still have to account for the wear and tear over a period of time."

While Shaffer normally does his preventive maintenance program in May, he still had not done it by late June because he has been using his irrigation system so much.

Chris Tritabaugh of Northland Country Club in Duluth, Minn., doesn't have to worry about running out of water this year or overtaxing his irrigation system. He has gotten plenty of rain through spring up till mid-June. But, like with a lot of superintendents, the wacko weather has put everything ahead of schedule.

"Everything has been a month ahead al-

Get flexible

So, with many areas of the country experiencing moderate to severe drought conditions, are there any steps superintendents can take to use less water in the future and possibly avoid a budget crunch?

Irrigation consultant Brian Vinchesi believes a more flexible irrigation system might be one answer. He uses the example of a straight double row system of one that is not flexible.

"It's watering the rough and fairway with the same sprinkler, and there's nothing you can do about it. If you don't turn it on, your fairway doesn't get watered," he says. "It's the same thing on the greens. If your greens have only full-circle sprinklers, you're watering the greens and around the greens. Those are all things that could be avoided by having a different irrigation system or even an updated control system."

Bradley Anderson of Bittersweet Golf Club is getting with the program by converting his full-circle sprinklers to part-circle sprinklers so that he's only watering the playing surface.

"We have some areas where we have full-circle sprinklers and we don't need them there," says Anderson. "We're watering a certain amount of rough, not an excessive amount, but we're converting those areas to part-circle sprinklers so we can conserve water. And at \$40 per sprinkler to do that, it's not a big cost. I think we're already following the most conservative practices we can, although we're constantly tweaking them."



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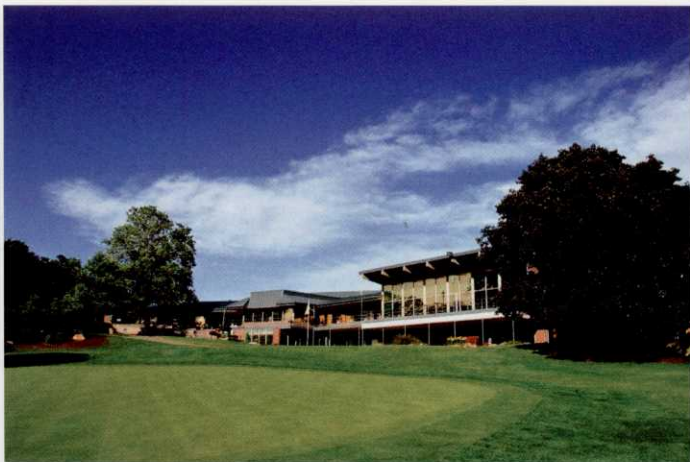
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BITTERSWEET GOLF CLUB

Courses must diversify their water sources.

most to the day," says Tritabaugh. "It has been pretty amazing to watch. We started to see disease in June that we normally don't see till July 4."

Tritabaugh's biggest concern is for his labor budget. This year was the second in the last three years where they had to open early due to the mild weather. He typically plans his budget for opening in the third week of April and brings in some workers the first week of April. But this year, they were a good month ahead of that schedule.

"And being a private course, it doesn't really result in a lot more revenue when you open early," Tritabaugh says. "It's tough when you're on as tight a budget as we are. You almost have to try to make it up at some

point during the season. It's a little bit disheartening when the weather allows you to open early but you end up cutting back to make it work at the end of the year."

When all is said and done, Vinchesi feels the biggest issue relating to irrigation this summer will have been the water supply. He feels that those courses on city water might be better off than those that are not, unless the city enacts a water ban.

"I would be more concerned about the guys who are on a pond or groundwater well where, as it gets drier, it gets lower and stops giving the amount of water it used to or the pond dries up and they have no way to fill it," he says. "On the other hand, the guys who are using city water may not be able to hugely supplement it if it gets too dry and the city cuts them off. So it's important to be cognizant of what's going on with your water." **GCI**

Jason Stahl is a Cleveland-based freelance writer and frequent GCI contributor.

DROUGHT UPDATE

As of mid-June, although most parts of the country were dry, the notable drought was in Florida and Georgia. Most of the country was dry except for Oregon, Washington, Pennsylvania, West Virginia and Virginia. The Midwest was abnormally dry. New Mexico was in a pretty severe drought, as were parts of western Texas. The Southeast was dry, and Northern Ohio and Indiana were, too. Massachusetts was in a slight drought, as was Connecticut, although New York was faring pretty well.

Minnesota has been deluged with rain. Just ask Chris Tritabaugh of Northland Country Club in Duluth. In one 10-day stretch in the spring, they received 6.7 inches, and in an eight-day stretch in mid-June received three-plus inches with more forecasted to come.

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features / specifications

- Multi-Pattern Spray: Fog, Jet Stream, Fan
- Built for 1" and ¾" Hose Flow Rates (range: 7-43 GPM)
- Materials: Aircraft Aluminum, Stainless Steel, TPR Rubber



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High Volume Model:
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- Ratchet mechanism prevents over-tightening damage
- Ultra-durable construction withstands any abuse
- Fire hose quality nozzle feels great in your hands
- Beautiful, consistent spray patterns for life
- Built for 1" and ¾" flow rates

specifications

Materials: stainless steel, aluminum, TPR rubber

Flow: 37 GPM at 80 psi

Inlet: ¾" hose thread (1" brass adapter available, see Page 4)



Magnum™ nozzle pictured with 1" brass adapter (sold separately on Page 4)



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