

3,400 gallons a minute, can be treated and will not lose its charge no matter how far it is pumped.

"The science has been around a long time. It changes the make-up of the water," says Streck, who won the 1978 San Antonio-Texas Open and 1981 Houston Open before injuring his knee in the mid-1980s and launching CWS in 1993 with partner/inventor Bud Thomason.

The system costs \$25,000 to \$35,000 and takes three hours or less to install. Maintenance is minimal, Streck says. An occasional transformer replacement within the 2-foot-by-2-foot box, which contains six transformers placed near the pump station, is usually the only part replacement, Streck says. The unit runs on a 120-volt current and costs pennies a day to operate.

More than 90 courses have installed the system over the past 10 years, Streck says. Pointe Royale Golf Course in Branson, Mo., was the first in 1993. Tulsa (Okla.) Country Club was second in 1994. Since

then, Streck adds, such well-known layouts as Congressional Country Club in Bethesda, Md., Pebble Beach Golf Links and Spyglass Hill in Pebble Beach, Calif., and Riviera Country Club in Los Angeles have implemented the system.

Glenmoor Golf Club in Cherry Hills, Colo., installed its system in 1998, says superintendent Dennis Vogt. The course's hard clay soil, along with salt- and bicarbonate-laden irrigation water, led a consultant to suggest the system as a way to get better water penetration and flush salts to the surface.

"We have seen a dramatic change in the amount of puddling, we've used less water and the condition of the course seems to have improved," Vogt says. "We've done other things, but the improvement coincided with putting the ESP in.

"Ron has done a couple upgrades for us, but that's it. There's virtually no maintenance," Vogt adds. "We turn the system off


Continued on page 102

"We've seen a dramatic change in the amount of puddling, we've used less water and the condition of the course seems to have improved."

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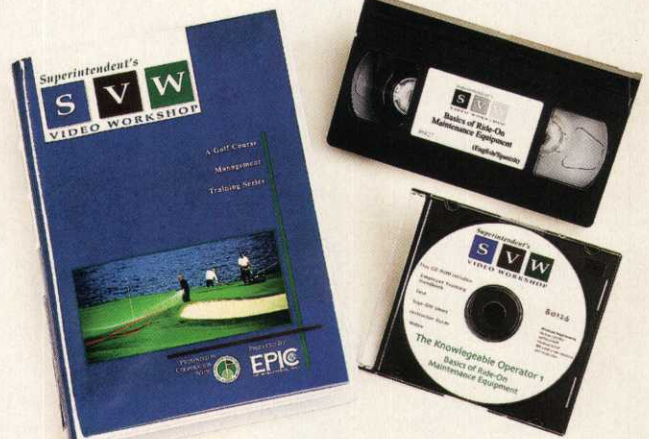
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Real-Life Solutions: Water Treatment

Continued from page 101

in the wintertime when we blow out the irrigation pipes and put it back on in the spring. It is inexpensive to operate.”

Shane Schutte, superintendent at The River Golf Club in North Augusta, S.C., installed the treatment system in November 2000 to deal with a rather unusual problem for a Southern course: mineral-free water from the aquifer-fed spring that fills his irrigation lake. Courses in Northern areas — where irrigation ponds are commonly filled by heavy, mineral-free snow melts — are more likely to have this problem than lowland courses, where irrigation ponds tend to be packed with minerals, Schutte explains.

He first realized the irrigation water was carrying away the minerals and fertilizers in the soil rather than leaving them behind to be absorbed by the turf's roots when he checked the water drawn down through his course's greens by the underground airflow system. The hunter-green-colored liquid that emerged below putting surfaces was full of fertilizers and minerals.

“Water will mineralize itself the first chance it gets,” Schutte explains. “As soon as I would irrigate [with the untreated water], it would strip all my fertilizers out of the soil.”

Why was this happening and how did the Complete Water Systems equipment solve the problem? According to Schutte, his untreated water carried a negative charge, while most of the desirable nutrients in the soil carried a positive charge. The opposite charges attracted, meaning the water molecules bonded with the nutrients and washed them away from the plant roots.

What the treatment system does, he says, is slam electrons into the water, giving it a neutral charge. All the nutrients stay in the soil rather than bonding with the water, allowing the grass roots the opportunity to absorb the nutrients. Within a couple of weeks of using the system, the irrigation water coming out Schutte's greens was crystal clear,

What the treatment system does is slam electrons into the water, giving it a neutral charge.

meaning it was carrying away virtually no minerals. Schutte says he went from having almost no roots on his putting-surface grass to having turf with roots almost 6 inches long.

“I'm growing bentgrass in Augusta,” the superintendent says of his putting surfaces, which are located just a few miles from famed Augusta National.

Schutte says the system paid for itself fairly quickly, cutting his watering by 30 percent and fertilizer needs by two-thirds.

“I went from watering 15 minutes a night down to 10,” he says. “That has to do with the water molecule size. With the water [prior to treatment] having a negative charge, it was forming hydrogen bonds with itself. So the water molecules were very large. This unit breaks everything down into single H₂O's, meaning the soil can actually hold the water better. That's why I believe I water less.”

“Anyone's water is also going to take some nutrients away,” Schutte adds. “When you pump this water, it takes none of your nutrients away unless you get rain.”

Streck, who plans to play some Champions Tour events this year, is in charge of Complete Water Systems' golf division, which makes up 10 percent to 15 percent of the company's sales.

“Agriculture is the primary business,” he says. “Farms can till the soil, let a field lie fallow for a year or two and let the soil settle down. A course cannot do that. It is open 365 days a year. Our product will do positive things to the soil without tilling. It is a soil-conditioning system.” ■

Blais is a freelance writer from North Yarmouth, Maine.

FRESH

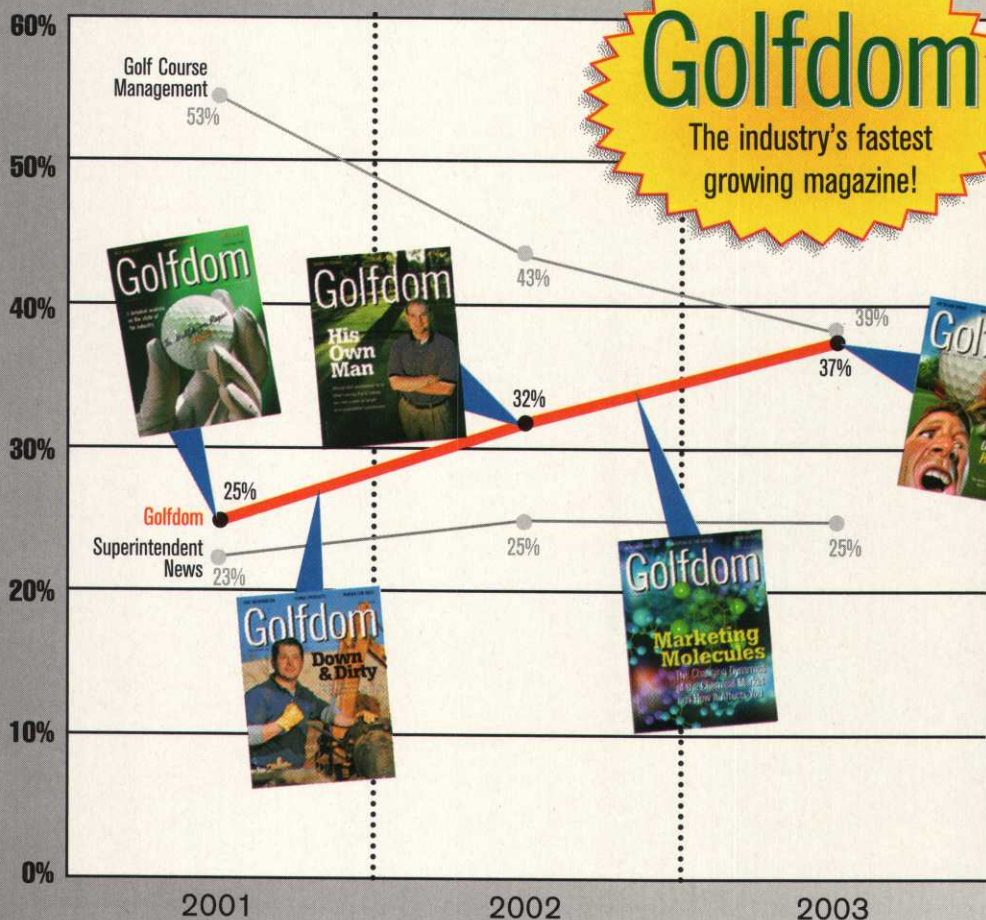
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A boss happened by the local golf course and saw one of his absentee employees about to drive his ball off the first tee. "How are you doing, Don?" he asked the embarrassed worker. He then turned to the man playing with him and said, "And you must be Don's grandmother. Tell me, are you feeling better?"

Golfdom's

JUKE
 of the month

candy hearts

As a several-times burned, petulant and overly cynical 18-year-old, I came up with a theory about Valentine's Day. The holiday was nothing but a dark cabal by the chocolate, flower and greeting card industries to boost sales in a normally weak retail season, I insisted. Not only that, the holiday was bogus on its face, allowing boyfriends who were first-class buffoons all year to shamelessly atone for their jerkiness with a box of Brach's, some mawkishness from Hallmark and rows of roses.

Unfortunately, this harangue went on for almost another nine years, and it didn't do me much good if I happened to have a lady friend. It takes a big man to admit he's wrong, and a bigger one to not curse Cupid when he's hit you smack in the head with the arrows of love. I got hit hard.

So, when you know you're love-struck, there's but two things to do: first, embrace it; two, get your better half some Sweethearts Conversation Hearts. It's a tradition that dates back to St. Valentine himself.

One story claims that Valentine was a priest in third-century Rome who agreed to marry several Roman couples in secret, in defiance of a rule banning the practice by Emperor Claudius. The tyrant discovered Valentine's actions and threw him in the clink. In jail, Valentine met a young blind woman, the daughter of his jailer.

THE SWEET CONFECTIONS WITH THE SAPPY SAYINGS ARE NOW A PART OF THE VALENTINE'S DAY TRADITION **BY MARK LUCE**



They fell in love, and while he was on his way to execution, legend has it that he wrote her a note that ended, "From Your Valentine." OK, so it *wasn't* a candy heart, but it was the message sent to a loved one that inspired the establishment of a day in his honor. Our culture just made it our own by transcribing these love notes onto candy hearts because nothing says Valentine's Day better than satisfying a sweetie's sweet tooth.

One learns (often the hard way) that if there is a day to be dorky about your dearest, Feb. 14 is it. And there has never been a better way to revel in silly, lovey-dovey sayings than Necco's classic chalky candy — Sweethearts Conversation Hearts.

Now DIG ME, the idea for printing sayings on candy hearts originated back

in 1866, when Dan Chase, brother of Necco founder Oliver Chase, used colored paper to put sayings on candy, deeming them "Motto Hearts." It's TRES CHIC to know that each year the Necco Co. produces nearly 8 billion conversation hearts, which if kissed together cheek to cheek would span from Los Angeles to New York and back. To cap it off, all of those hearts, made from late February to the following January, sell out in but six weeks.

The company offers the traditional smaller hearts, that carry 10 new greetings each year, and the larger hearts with longer messages. All of the hearts, in the trademark white and red, have an unmistakable sound when you shake them.

But if you really want to shake things up, did you know that you could actually have a slew of hearts printed with your own flirty (but not filthy) sayings? There's a small catch, of course. If you want your own words on the hearts, you must buy an entire production run of 3,500 pounds. For the record, that's about 1.6 million different ways to say "KISS ME."

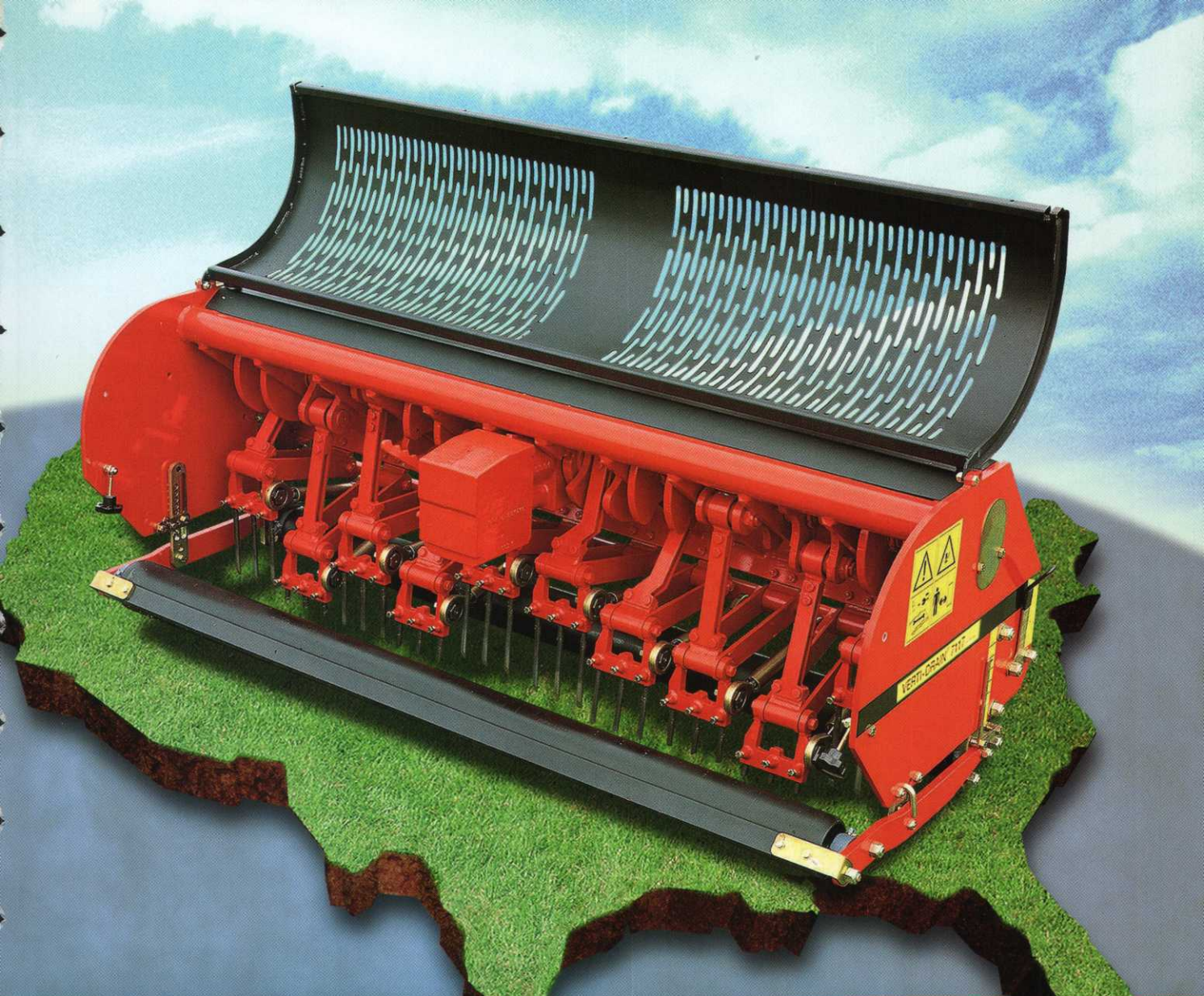
Mark Luce, a freelance writer based in Lawrence, Kan., really digs his wife Jennifer.

GOLFDOM, Volume 60, No. 2, (ISSN 1526-4270) is published monthly by Advanstar Communications Inc., 131 W First St., Duluth, MN 55802-2065. Subscription rates: One year \$30 (U.S. and possessions), \$49 (Canada and Mexico) and \$78 (all other countries). Air expedited service is available in countries outside the U.S. and Canada for an additional \$45 per year. Current issue single copies (prepaid only) \$5 (U.S. and possessions), \$7 (Canada and Mexico) and \$8 (all other countries). Back issues (if available, prepaid only) \$10 (U.S. and possessions), \$14 (Canada and Mexico) and \$16 (all other countries); add \$6 per order shipping and handling for both current and back issue purchases. Periodicals postage paid at Duluth MN 55806 and additional mailing offices.



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