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CUSHMAN JACOBSEN RYAN

TEXTRON

Irrigation Evaluation

Continued from page 33

tendent like Pitman, who has more than 30 years of experience, or an outside consultant who specializes in irrigation technology. Pitman stresses that even the most practiced superintendent should keep an open mind about seeking help from an outside consultant. The bottom line is the bottom line and a consultant can help you save thousands of dollars, Pitman says.

Obviously, an experienced person knows what to look for and, more importantly, knows not to overreact to a problem. Remember that jalopy? Just because it had an oil leak didn't mean it needed a new engine. The same holds true with the problems associated with an irrigation system.

For instance, donuts and dry areas around sprinkler heads don't necessarily mean the heads need to be replaced. A person experienced in the process knows that it might only be the nozzles that need to be replaced, Davis says.

There are other telltale signs for other irrigation system woes, including a soaring electric bill. If your system is pumping the same amount of water as last year — but the increase in kilowatt usage from month to month has risen sharply — it's a clue there's something wrong. It could be that pipes are leaking or the pump station's motor is wearing out.

Document that problem

Yeah, the repair bills for the irrigation system are piling up, but don't you dare throw them away. Davis advises superintendents to document irrigation problems and keep track of time and money spent on them.

You know that members of the green committee like to think they know a lot about irrigation. They don't, of course, and won't believe there are problems with a course's irrigation system if they can't see them. That's why you have to show them that file folder.

"I knew a golf course that had old steel pipe in the ground for its main lines," Davis says. "The pipe began to rust and leak. The superintendent of the course documented all of the leaks."

The superintendent had a map of the course on his wall featuring the irrigation system. Each leak in the pipe was marked with a dot. The superintendent also took several photos of the leaking pipes and saved a section of pipe that

had to be removed from the system because it sprung so many leaks.

When it came time for a meeting with his green committee, the superintendent was armed with documentation to support his request to upgrade the system. He showed the committee the map, the pipe and the photos. He stated his case and convinced the committee of the course's dire need. He got what he wanted.

Miller has been there and done that, too. He documented the many problems he had with the course's irrigation system at En-Joie. He wrote a report "in layman's terms" and distributed it to committee members. They talked about the report and how much it would cost to upgrade the system with new wiring, new heads and a computer system with radio controls. Committee members bought Miller's pitch, realizing that components of the course's irrigation system were outdated. "They realized we had to catch up with the competition," Miller says.

However, superintendents should walk a fine line when convincing green committees that their courses need irrigation upgrades. Most committee members are well-educated and take their roles seriously. If the superintendent wants them to spend big bucks on a renovation, they want to know why. But they want to be educated — à la Miller's pitch — and not told what to do.

Proper communication with your green committee or owner is vital during an assessment, and it can pay off in the long run. Pitman, who recently upgraded to a radio control system at Rolling Hills, says he saved the course about \$90,000 last year in water and electricity bills. Pitman says it's all about giving a superintendent the right tools so he can apply his knowledge and do his job successfully. "But you have to be able to show people that you're using to the max what they've given to you," he adds.

Brian Vinchesi, president of the American Society of Irrigation Consultants, points out that golf courses committed to remodeling projects this year will take a long, hard look at every line item because of the current economic slowdown. Irrigation upgrades will get the longest and hardest glances because of their high costs.

Proper assessment of a course's exact irrigation needs has never been more important. ■



Donuts and dry areas around sprinkler heads don't necessarily mean the heads need to be replaced.

Looking for an Irrigation Consultant?

If you're looking for an irrigation consultant in your area, here's your contact list. The members of the American Society of Irrigation Consultants are independent professional irrigation consultants whose experience, training and track records have been verified prior to their acceptance to the group. **Contact information for these consultants is available at www.asic.org.**



ARIZONA

David Powell
Steven L. Sisler



COLORADO

Ainsworth, Henry D.
Richard L. Aust, P.E.
Robert W. Beccard, P.E.
Douglas G. Macdonald
Stephen W. Smith



MARYLAND

Brendan E. Lynch
Paul C. McMahon



NEW YORK

Ken White



ARKANSAS

Mitchell D. Langley



CONNECTICUT

Michael J. Astram



MASSACHUSETTS

Robert M. Healey
Joseph Sarkisian
Brian E. Vinchesi



NORTH CAROLINA

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Ray Arthur
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Jeff Bradshaw
Don K. Burns
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David D. Davis, FASIC, CID
Martin D. Dickson
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Reed C. Grandy
Thomas Nelson Groot
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Eric Montelongo
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Daniel Scaliter
Frank Simon
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George D. Smith
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Carol C.J. Colein
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Robb A. Werley



PENNSYLVANIA

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GEORGIA

Daniel F. Benner
Fredrick G. Hall
Bob Scott



NEVADA

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TEXAS

Hank Granger
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Terry J. Little



KENTUCKY

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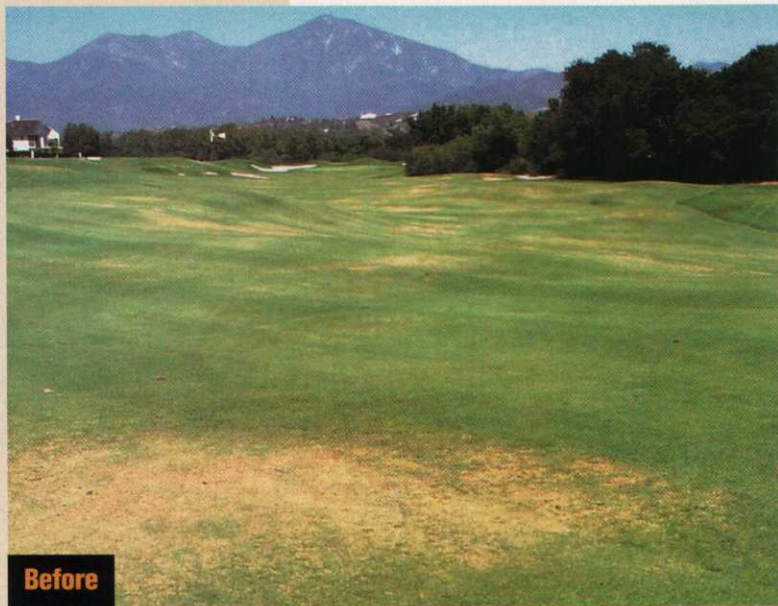


IRRIGATION TRENDS

More Bang, Less Bucks

Customized aftermarket nozzles boost coverage for energy-saving irrigation systems

BY FRANK H. ANDORKA JR., MANAGING EDITOR



Poor nozzle design can cause donuts to form around the sprinkler heads.

Problem

Low-pressure irrigation systems didn't provide adequate fairway coverage.

Solution

Aftermarket nozzles, which changed the water's distribution for more even application, eliminated the unsightly brown spots through better water use.

In the mid-1980s, California energy providers discovered that the state's burgeoning population would soon strain their resources. Since the energy companies couldn't build new power plants quickly enough to handle the increased demand, they decided to encourage conservation instead. They offered superintendents, whose golf course irrigation systems consumed considerable energy, a deal: If they would install lower-pressure irrigation systems (which require less electricity to start and to stop), the energy companies would pay their courses rebates for every kilowatt-hour of electricity they saved.

The energy companies hoped golf courses would replace older irrigation systems that required 100 pounds per square inch (psi) of pressure to operate with newer systems that required half that pressure, says Mike Huck,

a former USGA Green Section agronomist who is now an agronomist for FCI Nozzles, a manufacturer of aftermarket irrigation nozzles based in Coarsegold, Calif.

Courses leapt at the chance to convert their systems and collect their rewards.

"The older irrigation systems wasted a lot of power," Huck says. "The old motors ran at full speed from the beginning of an irrigation cycle, which meant huge surges of electricity while they ran. The newer systems, featuring variable frequency drives [a pump system that starts and stops pumping water to the irrigation system gradually rather than at once], cut electricity use by 20 percent to 30 percent. The energy companies were paying enormous rebates — some as high as \$60,000. A lot of courses were lured to replace their systems with that amount of money on the table."

One such golf course was Oakdale (Calif.) CC. It switched its irrigation system to a low-pressure model, which provided the energy-savings it promised. Combined with the energy company rebates, it appeared to be a good deal. Unfortunately, there was a catch.

The problem

Oakdale superintendent Mike Olson quickly discovered the downside to his course's decision. The original low-flow nozzles weren't designed to handle the force of the water being pumped through the system. As a result, the nozzles often broke as the high-pressure water demolished them. Olson says he'd seen the problem before at other courses, so he knew Oakdale wasn't alone in dealing with it.

"The maintenance on these systems became such a headache," Olson says. "You were

fixing the system almost as much as it was running. That wasn't acceptable."

Superintendents first asked irrigation manufacturers for help, Huck says. To their credit, the companies retooled the courses with more reliable nozzles at no cost. The new nozzles didn't break as often as the originals, and they still maintained the energy savings. Unfortunately, they didn't provide adequate fairway coverage because their water sprayed in a constant, straight-line stream, says Olson, who rapidly discovered members didn't like the resulting donuts around the sprinkler heads.

"It's hard to explain to screaming members why there is brown grass surrounding a sprinkler head," Olson says. "They think it's as simple as readjusting the trajectory on the water. Every time we tried to do that, however, the location of the brown grass simply moved to another part of the irrigation arc. We were in a no-win situation."

The pressure from his green committee for a solution became unbearable, Olson says. He wracked his brain for a solution.

He could completely retool his pump station to boost the water pressure, increasing his coverage with the current nozzles. Such a plan, however, would cost so much it would negate the energy savings — again. Olson despaired of finding an adequate solution until he stopped at the FCI Nozzles booth at a trade show to see what it had to offer.

The solution

An FCI representative suggested installing aftermarket nozzles into his existing sprinkler system. FCI nozzles can be customized to provide increased coverage.

Aftermarket nozzles, even the customized ones that FCI produces, are traditionally less expensive than the nozzles built by manufacturers, so they can often be a bargain for superintendents.

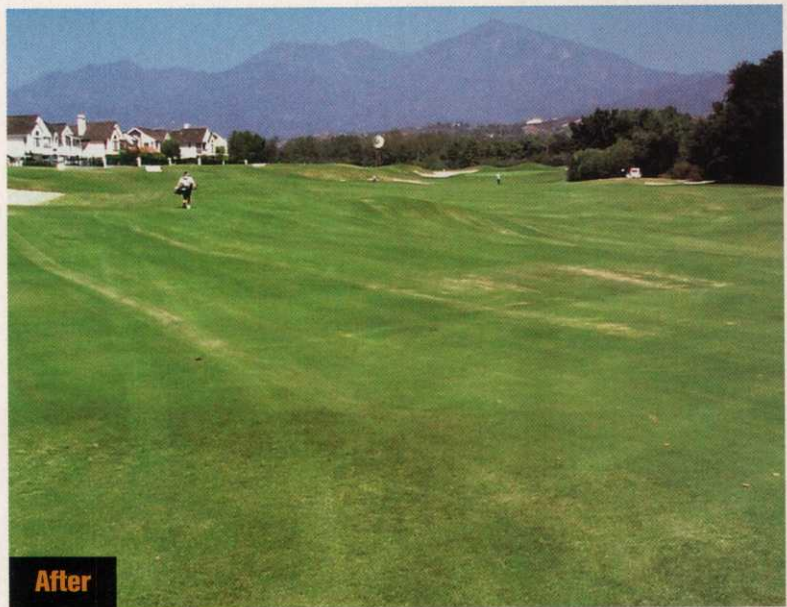
The trick to eliminating Oakdale's donuts was to divert some of the water as it passed through the nozzle, so it hit closer to the head and applied the water more evenly. "We created a nozzle that has a notch at its opening that is lacking in other nozzles," Huck says. "It changes the trajectory on a portion of the water. As a result, you have several different arcs within an irrigation stream. Water is hitting more turf uniformly than with tradi-

tional nozzles."

Olson says he was skeptical of FCI's promise, but at about \$15 per replacement nozzle, he figured it was worth a try. "It would be easier to replace a few heads to see if the product worked than to replace a whole pump station," Olson says.

Outcome

Olson bought 10 aftermarket nozzles and installed them on one of the most troublesome fairways. The results were visible within days.



PHOTOS COURTESY OF FCI NOZZLES

"You could really see the difference," Olson says. "Where there were dead spots before, there was now healthy turf."

Still, Olson wasn't ready to purchase nozzles for his entire system. He purchased 100 more nozzles and installed them at other problem areas on the course. Only when he was convinced that the aftermarket nozzles improved his irrigation coverage over a couple of months did he decide to retrofit his entire system. He says he's waiting to see how the system performs during a real California summer, with multiple days over 100 degrees F. Last summer was unusually cool.

"It took me a while to be convinced, but this is the only nozzle I've seen that can provide me with this kind of coverage with a low-pressure irrigation system," Olson says. "I'm keeping a close eye on the system because the last time we tried to fix the problem it backfired." ■

Aftermarket nozzles can provide better coverage because they can be customized.

**Read another
Real-Life Solutions
on page 73**

The anonymous mail keeps pouring in. This time, the package arrived in the form of a small audiocassette. Sources could not confirm, but the tape appears to be a recording of a 2001 Augusta National GC Green Committee meeting. Transcribed verbatim [with audio clarifications in brackets], the tape reveals the inner workings of America's most exclusive club committee.

[Audible click of tape starting]

"Thank you all for coming to our annual meeting of the Green Committee. For the record, committee members present include on my left, my good friend and counterpart from the great state of South Carolina, Mr. Hootie Johnson. On my right, also from South Carolina, my trusted colleague, Mr. Hootie Johnson. And myself, here at the end of the table, your comrade in ... uh, strike that, your club chairman, I'm Hootie Johnson. As usual, our staff will not be present. Nor will our current consulting golf architect, uh ... that would be ... *[inaudible, papers shuffling]*, ah yes, Mr. George ... excuse me, Mr. Tom Fazio.

"First matter for the committee is the Chairman's report. I've been going over the numbers, gentlemen. Brings back fond memories of my years in the banking industry. Now, in that line of work, we did not accept red numbers. Red means you are losing money. We only liked black numbers. That means you are making money. That means growth. Progress. Profit. Good stuff like that.

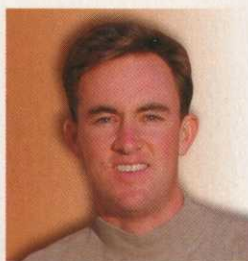
As I look over our scoring averages for the Masters tournament, I feel we need to do something about these holes where our Masters invitees are in those red numbers, which means they're averaging under par. We are obligated to our shareholders, err, patrons, to turn these red numbers into black ones. All in favor say, "Aye."

[One "aye" audible.]

"Furthermore, we must eliminate the very thing contributing to these red numbers. I've concluded we simply have too much of this fairway grass. The Masters and our patrons will be better for it should we trim 30 percent off our fairways, while increasing our trees, second-cut and sand traps by 30 percent. Any objections?

Committee Meeting Is a Big Hoot(ie)

BY GEOFF SHACKELFORD



TAPE REVEALS
INNER WORKINGS
OF AMERICA'S
MOST EXCLUSIVE
GREEN COMMITTEE

[Five seconds of silence.]

"Good, 30 percent across the board both ways, and we'll review the numbers next year. I will inform Mr. Fazio of his working orders.

Now, what are we going to do with Mr. Jack Nicklaus and his opinions? He has been critical of our past efforts to get into the black. He has been talking to many of these so-called writers and has not been complimentary of our changes. Our patrons should not have to hear this. Recommendations?

[Several seconds of silence, papers ruffling.]

"Well, if no one else has anything, let me say, I think that as much as it pains us, we will offer Mr. Nicklaus a membership in our club. I also would propose playing golf this fall with two former champions after we've made the 30 percent across-the-board modifications. Any suggestions as to who might best, uh, convey the message to our patrons?

[Several seconds of silence followed by coughing.]

"If there are no objections, I propose Mr. Mark O'Meara and Mr. Tiger Woods. My experience tells me that Mr. O'Meara will do what we ask of him. Maybe he'll write a complimentary commentary in one of those golf magazines. Same goes with George, err, I mean Tom Fazio. We'll have him go on our good friend Arnold Palmer's television network and spread the gospel to the patrons.

[Sound of notebook closing.]

"Well, that was productive. I want to thank you all for your time and insights. I'm sure our patrons and our members are most grateful for this committee's efforts. I propose we adjourn this meeting. Thank you so much for coming Mr. Johnson, Mr. Johnson and especially to you, Chairman Johnson."

Geoff Shackelford doesn't know who's sending him this stuff in the mail — but he likes it. He can be reached at geoffshackelford@aol.com

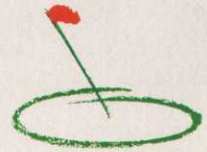
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CIRCLE NO. 113



News from the Big Show

Here's our report from the 73rd GCSAA convention

Editor's note: We left cold Cleveland for sunny Orlando with pasty complexions. We returned home to cold Cleveland from sunny Orlando four days later with pasty complexions. You get the drift — we lived in the Orange County Convention Center for all that time! How else could we bring you such a comprehensive report from the 75th GCSAA Conference and Show last month? Read on.

He's OK

GCSAA CEO Steve Mona made the biggest news of the show. Fortunately, it didn't turn out to be bad news. Mona collapsed on Thursday during the show after experiencing an attack of a neuro-cardiac condition. Thankfully, the trim and athletic Mona is doing fine.

He regained consciousness after fainting and was taken to an Orlando hospital, where he stayed overnight. Tests revealed that Mona has an easily treatable condition known as Neurocardiogenic Syncope, "a transient loss of consciousness causing collapse with spontaneous recovery." The cause is "transient global cerebral hypoperfusion" or a sudden cessation of cerebral blood flow for six to eight seconds.

Mona returned to the show on Saturday for a few hours and then went home the same day. He was back in the GCSAA office on Monday.

PDI ... Who Cares?

Where were the Professional Development Initiative's (PDI) backers and critics?

Less than 100 superintendents attended a seminar titled "PDI Implementation Update" during the show. PDI, of course, is GCSAA's program to "improve the knowledge, skills and abilities of superintendents" to make them more com-



Can you say walk-up crowd? When the trade opened on Thursday, hundreds of showgoers joined the registration line at the same time. Doh! Yikes! Arrghh! When the line refused to die, GCSAA officials let many showgoers on the floor sans badges.

petent and marketable. Last year, superintendents voted PDI in by a wide margin. While PDI was the talk of the GCSAA show last year in Dallas, it was not this year. The lecture hall was not even one-quarter full for the seminar.

Certified superintendents John Maddern and Mark Woodward, members of GCSAA's Board of Directors, updated attendees on the timeline for PDI's implementation. A pilot program featuring about 200 members is set to begin in September and run through March 2003 before PDI is officially implemented on July 1, 2003.

Maddern announced that a new Code of Standards was approved. The code, much like the certification Code of Standards, contains policies and procedures for the administration of Class A membership. "This is a living document and will need revisions in the future," Maddern said.