Rethinking your operation

Top agronomic officers seek efficiencies as costs rise and budgets remain flat p. 26

INSIDE:
Reducing sodium damage p. 36
Testing water quality p. 40
Managing wildlife p. 44
And...
A conversation with Dan Dinelli p. 22
A solid foundation was firmly established in 1955 with the birth of Penncross. The Penn Bent family continued to grow, thanks to the introduction of the Penn A’s & G’s and Seaside II, followed by Penneagle II & PennLinks II. The legacy continues with the recent arrival of Crystal BlueLinks. Just like family, each new variety owes its best qualities to the generation that came before. The Penn Bent family from Tee-2-Green continues to revolutionize the industry, and remains trusted by superintendents around the world.
FEATURES

Superintendent profile

22 PRACTICAL ABOUT BEING GREEN
Dan Dinelli improves North Shore Country Club's environmental standing.

COVER STORY: Course management

26 RETHINKING YOUR OPERATION
Top agronomic officers seek efficiencies as costs rise and budgets remain flat.

Turfgrass management

36 STARVED BY SODIUM
Superintendents mitigate salt levels with amendments, cultural practices and equipment.

Product focus:

Wildlife control

44 INTO THE WILD
Todd Voss shares his approach for controlling nuisance wildlife at Double Eagle Golf Course.

RESEARCH

40 SURFACE WATER QUALITY
Long-term monitoring determines the magnitude of nutrient loss in runoff related to development.
The cooling properties of turf are so effective that temperatures over turf surfaces on a sunny day will be 10 to 14 degrees cooler than over concrete or asphalt.
When it comes to support, we have the rubber to meet the road.
We don't just pay lip service to the idea of great service. We have equipment distributors who have been in the game for decades. A parts network you could set a clock by.

And now, dozens of Stores-On-Wheels® and Golf Sales Reps. Who supply agronomic goods and know-how straight to your course. With the full resources of John Deere Landscapes to back them up.

It's one thing to promise support. We actually deliver.

John Deere GOLF
DO YOUR PART

At Golf 20/20’s annual forum last month, Joe Steranka, CEO of the PGA of America, left attendees with a thought-provoking question about growing the game: “If not us, who?”

The golf industry – the World Golf Foundation, the PGA of America, the PGA Tour, the Golf Channel, and equipment companies on the business and consumer sides of the industry, to name a few – knows it needs to reinvigorate the game. That’s why, at the eighth Golf 20/20 forum, industry big-wigs put their minds together and presented a player development program called Get Golf Ready in 5 Days.

You’ve probably heard this before. The Play Golf America program the PGA of America launched several years ago is one that comes to mind. The Get Golf Ready organizers spent time explaining how this program is different from other programs launched in the past. In short, the program centers on a five-lesson package for the suggested price of $99, plus an introduction to the rules and etiquette of the game. The World Golf Foundation will provide a $1,000 stipend to participating facilities. (For more details, read the news story, “A course for action,” at golfcourseindustry.com/acourseforaction.)

They’ve put thought into the program and have addressed the two biggest concerns facility operators have – retention and accountability. They have plans to keep new entrants to the game coming back to golf after their initial involvement with the Get Golf Ready program. Industry executives are serious about raising money to get this program up and running quickly. At press time, they’ve raised $2.2 million, on their way to a goal of $4 million in three years and $7 million in five.

Joe Barrow, CEO of The First Tee, was the best speaker at Golf 20/20 because he was the most passionate and inspiring. He sparked a fire in the eyes of attendees, explaining how important this player development program is. He’s driving the fund-raising efforts. It’s clear he wants companies to donate money to the cause, but he’s also confident about being held accountable for the money that’s raised and how it’s spent. The return on investment for this program won’t happen for a while. Nonetheless, the investment is needed to help develop a base for the next generation of players, which is the future of your business.

Collectively, these organizations will make an impact on the industry that won’t be seen or felt for years to come. But, they’re acting now. They need to. They don’t have much choice. The game, and the business, need a growth spurt.

However, the faction of industry executives can only do so much. The other faction is you – the people managing individual facilities throughout the country. Do you have a successful player development program at your facility? If you do, how effective are you at retaining new golfers? Is this an area of the business that’s receiving the effort and attention it needs? Are all of the facility’s employees and friends and family encouraged to golf? Jim Singerling, CEO of the CMAA, estimates 70 percent of employees at private clubs don’t golf. That’s about 190,000 people, or a quarter of Get Ready Golf’s goal to develop 700,000 new golfers by 2013.

Superintendents might say player development isn’t part of their job description, but the bottom line is that everybody at a facility needs to have the same mindset about constantly mining new golfers, getting them started and keeping them playing. This mentality will complement what the big boys are doing on a grander, national scale. Actually, if you think about it, your involvement is more important than the big boys’ efforts because you’re the ones executing their plan.

Top industry organizations are doing their part to grow the game. You have to do yours, too. Growing the game is a business-threatening issue industry leaders are taking seriously. How seriously are you taking it?
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Need for optimism
I just got around to reading Pat Jones' October column, "Bummed out," on page 66. Talk about timing. Right after reading it, I had a meeting with my golf operations chairman that covered the very need for optimism and aggressive posturing now while the market (industry) is down. The column makes such good points that I took a copy of it to him for our meeting.

Mike Brown, CGCS
Starmount Forest Country Club
Greensboro, N.C.

Right on
Cheers to John Walsh and GCI. His recent editorial, "Lose the ego," (on page 6 in the October issue) hit the nail right on the head.

Paul DiBattista
Regional sales manager
Professional Turf Products
Belle Vernon, Pa.

Slow play
When I read Donn Hess' letter to the editor, "Slow play," on page 8 in the October issue, two things occurred to me that might help his, and others', slow-play issues. From our experience at Province Lake, rethinking and rebuilding our sets of tees to fit our players and then insisting they play the right sets of tees kept our round times to about 4.5 hours, even on days that we had 220 to 240 people on the course. Our play actually had lower round times when we went from eight- to nine-minute tee time intervals. One of the courses in our area did even better with 10-minute times.

Arthur Little
Former owner
Province Lake Golf
Parsonsfield, Maine

Hard work pays off
Heather Wood's article, "Climbing the 'corporate' ladder," (http://www.golfcourseindustry.com/corporateladder) was a great article. I feel the same as Bill Davis does. Work hard. It does pay off. I wish some of the younger folks would listen to the old guys.

Bob Littleton
General manager
Elk River POA
Banner Elk, N.C.

Clarification
Golf course superintendent James Brown and his assistant Larry Wilk apply Pond Champs black dye at Purgatory Golf Course in Noblesville, Ind. The product information was unclear in the article "Limbo on the lakes" on page 68 in the August issue.

CALENDAR

Jan. 6 - 9, 2009
EASTERN PENNSYLVANIA TURF CONFERENCE AND SHOW
Valley Forge Convention Plaza
King of Prussia, Pa.
Visit www.paturf.org, or call 877-326-5996.

Jan. 7 - 9, 2009
MINNESOTA GREEN EXPO
Minneapolis Convention Center
Visit www.minnesotagreexpo.com, or call 651-633-4987.

Feb. 2 - 7, 2009
GCSAA EDUCATION CONFERENCE
New Orleans Morial Convention Center
Visit www.gcsaa.org/conference, or call 800-472-7878.

Feb. 3 - 7, 2009
NGCOA'S ANNUAL CONFERENCE
New Orleans Morial Convention Center
Visit www.ngcoa.org/ac08, or call 843-881-9956.

Feb. 5 - 10, 2009
CLUB MANAGERS ASSOCIATION OF AMERICA'S WORLD CONFERENCE ON CLUB MANAGEMENT
New Orleans Morial Convention Center
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Use BATTLESHIP III to control broadleaf weeds and your turf will stand strong!

For more information, contact your nearest dealer or Helena representative.
GOOD THINGS FOR THOSE WHO HELP

Interesting things happen when you give your time to your local superintendents association. During the past few years, I've been fortunate enough to experience the benefits firsthand. As a class C (assistant) representative of the Midwest Association of Golf Course Superintendents, I'm fortunate to be involved with an organization that has a track record of being progressive and supportive of assistant superintendents.

First and foremost are the amazing networking opportunities afforded to me. Each month, I participate in the MAGCS board of directors meetings and sit with our superintendent board members, commercial representative and executive director, who are willing to give their time and share their experiences.

I'm sure good timing was a factor in my position as the association's class C representative, but I also believe people help create their own luck. I saw value in the class C committee's work, and when our former committee leader, John Ekstrom, asked me to participate, I was happy to help. During the time I was a committee member, I helped out with everything I could.

During the past 12 months, our group has been asked to help with the setup of a research field day. We interviewed and wrote articles profiling the superintendents who hosted monthly meetings for On Course, the MAGCS publication. Every year we help moderate the educational sessions at the Illinois Professional Turf Conference – an opportunity many volunteers use to become more comfortable with public speaking.

Finally, and perhaps the most gratifying, was working with Habitat for Humanity where we laid sod during a snow storm last December and completed the landscaping this past spring. For a more detailed account of that experience, read Matt Breeden's column in the April issue of GCI on page 10.

While I believe each of these experiences has benefited me personally, that's not my only motivation. I see value in these efforts for different reasons. Some of these opportunities have a more personal gain than others, which certainly makes the decision to help easier. Interviewing and writing an article, for example, is something I jump at the opportunity to do. First of all, you get to tour a property you may not have otherwise had the chance to visit. Secondly, you get to meet new people – networking is one of the biggest benefits of volunteering.

I realize some may scoff that I enjoy setting up tables for a field day or moderating a regional educational seminar, but those are the times when you find out who's in it for the right reasons. Are you volunteering to help out or because it's convenient and might get your name out in the market more?

For me, the less glamorous opportunities are the times when you can best express your gratitude to your association and its leaders for all it does for you. How about the golf outings each month? I bet you've had fun at a few of those. What about the local educational opportunities? It's better than traveling a few hours for a seminar, isn't it? How about activity at the national level? If you ever question what the people at the GCSAA do for you, give them a call the next time you're stumped by just about anything related to our industry. There's a toll-free number. Ask, because someone will be willing to help you.

I'm not trying to make myself out to be a martyr of my association, nor am I trying to make the MAGCS or the GCSAA sound perfect, but think about it. Next time volunteering crosses your mind, do it. Chances are the benefits will be even greater than you thought they'd be.

For me, one of those surprises came this past September when, thanks to the generosity of the MAGCS board of directors, I attended a leadership academy at the GCSAA headquarters. This wasn't only an opportunity to visit the association and hear from great speakers, but another great networking opportunity. I thank those of you who were there with me as an attendee, staff member, sponsor or speaker for a terrific experience.

Volunteering is a gratifying experience. It's not always glamorous (think sod on a Saturday in December), but I bet you'll have fun. You'll enjoy the experience, and you'll be a better person for it. I understand that sometimes you may have to sacrifice time away from something else. You may need to skip a night at the gym or miss watching college football for a day, but that's how you know it's important – when you prioritize giving your time to an association that has already given to you. GCI
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...because we can get the carts coming in the back to get cleaned, washed and housed. The condition of our carts at the end of our lease look as good as day one! It is a very functional building for our space and time.

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WET APPROACH AREAS

Recently, I had the pleasure of golfing with Ron Whitten, golf architecture editor for Golf Digest, and Jim Moore, director of construction education for the USGA. Golf Digest is now emphasizing firm, fast conditions in its Top 100 rankings. This change comes just as Jim and I have noticed more courses experiencing overly wet green approaches.

Better players are revisiting the joys of bump-and-run golf, but average golfers have always used/needed the run-up approach to reach the green. When approach areas are wet and approach shots plug, average players can’t reach a green in regulation. Green approaches should be considered high-priority maintenance areas — equal to greens and more important than tees and fairways — if golf courses are going to play the way they’re designed. Superintendents should view the green and surrounds as an interrelated complex, much like the golf course architect did during the design phase.

I've addressed design aspects of wet approaches by contouring more greens to move more drainage away from the front of the green toward the sides, especially on larger greens with greater drainage volumes. I also contour most green approaches with 4 percent minimum slope — versus 3 percent in other areas — while being mindful that too steep an approach slope will kill an approach shot as surely as a wet one.

I recommend building sand-capped approaches and fairway chipping areas on new courses. Existing courses can create sand-based approaches slowly via aggressive core aerification and removal, together with heavy topdressing. While it’s more expensive, reconstructing approaches with a 4-to-8-inch sand cap and a herringbone pattern of 4-inch tile or slit drains may be the ultimate solution.

Predictable bounces are important in the approach, so any drain pipes in that area require good compaction to prevent settling that will affect play. While catch basins in the approach area might affect play, they help drainage greatly by avoiding long surface drainage runs that always become soggy.

However, there may be a less expensive solution to improve wet approaches on existing courses quickly. Jim is conducting research on wet approaches and sees evidence overwatered approaches often stem from the golf course/irrigation design practice of using part-to-part sprinklers to achieve more precise watering of green and surrounds.

The concept of part-to-part sprinklers to water greens and surrounds is great in principle. But, two old sayings, “The devil is in the details” and “There are always unintended consequences,” seem in play here. Why? Because problems occur when irrigation designers place green irrigation heads at eight o’clock and four o’clock — rather than at six o’clock or the center line of play — to reduce their affect on play. Problems also arise when superintendents set those sprinklers at about 90 degrees to cover just the greens or just the approaches.

This combination of conditions results in four heads — six counting the approach heads — watering the front approach, rather than two or three that cover every other area of the golf course. And when considering that the dwell time — those few seconds part-circle heads stop before reversing direction — also occurs right in the approach, the approach inadvertently receives at least twice the irrigation of any other area on the golf course. Add the traffic and compaction factors typical for approaches, and it’s no wonder they remain wet.

Based on the preliminary study results, Moore suggests a few quick solutions:

- When replacing your irrigation system, consider placing the first head at the six o’clock position, accepting the small risk of shots hitting the sprinkler.
- Use a combination of full-circle and part-circle heads around greens rather than part-to-part sprinklers. Only during summer heat and fall overseeding do the irrigation needs vary enough to warrant using double heads.
- For the outside part sprinklers, adjust the spray pattern to reverse in a less-critical area in the rough rather than automatically setting them to 90 degrees, which adds unnecessary irrigation to the approach. Setting them to almost full circle should move the dwell time area out in the rough, but also consider existing trees, heavy cart traffic areas, etc., and set them on a site-specific basis.
- Make sure to monitor constantly, and periodically adjust sprinklers because they come out of adjustment often.

It’s ironic part-to-part sprinklers, which were adopted to address the problems of different water needs around the greens, have actually added to the problem. With golfers continuing to demand better playing conditions in critical areas of the course, a new emphasis on firm and fast, and budgets being squeezed, you might try this laser-surgery approach to adjusting your sprinklers.
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New university testing proves that NexGen products outperform traditional formulations—and make your pesticide dollars go farther.

NexGen products continue to roll up higher scores. By using only the best active ingredients and improved manufacturing processes, NexGen reformulations provide unbeatable performance—and results prove it. Case in point: Autograph® systemic fungicide (with the active ingredient aluminum-tris) gives you superior control of Pythium and other soil-borne diseases. Autograph even controls Summer Stress and Bentgrass Deadspot when used in a tank-mix.

To achieve a better grade for your turf, call 888.240.8856 or visit www.PhoenixEnvCare.com.
EVALUATE YOUR BUSINESS

As I begin my farewell after five years of penning a marketing column for this magazine, it’s fitting I’m standing in my garage, having taken everything off the walls, from the shelves and out of every nook and cranny where stuff has accumulated for 18 years.

I didn’t realize it when I began my garage cleanup, but this is almost the same process I go through to create clients’ marketing strategies and tactics for their annual marketing plans. I tear the existing plans apart, look at each individual element and put them back in order with some semblance of rationale – a marketing rationale for increasing net revenues by taking advantage of opportunities not recognized or ignored in the past.

Creating your annual golf course marketing plan is a process of objectively recognizing everything you do to promote business and determining what’s working and what’s not generating profitable revenue at your course. More often than not, it also requires creating new strategies and tactics to reach all of your target segments of opportunity play. Like my garage cleanup, be prepared to throw out things that have no useful or foreseeable benefit to your course in the form of driving new, repeat or referral business.

All too often, golf course owners have other business interests, and they fail to get their hands dirty by reflecting on the promotion of their golf course annually. By not doing so, and not questioning the promotional tactics of the club, they’re passively encouraging the club staff to continue as is, mistakes and all. How do you recognize marketing errors when you and your staff are doing the same things you’ve always done? If you don’t know the right questions to ask, find someone who does. They can potentially save you a lot of time and money.

Recently, I visited a new client for the first time. He owns an upscale signature course and development in Pennsylvania. His inner circle management team is full of bright, successful folks but not golf people. After I was given a history of the course and development, it didn’t take many questions to determine the primary marketing mistakes being made year after year since 1997. The chart on this page is a reminder of what should be included in your next annual marketing plan.

There are many important marketing lessons for golf course owners, and no one is more important than another. During the past five years, I’ve enjoyed sharing those lessons with you.

During the past 25 years, we’ve seen our industry change dramatically. Throughout the 1990s, the market became oversupplied with courses, and the problem wasn’t recognized until about 1997. Golfer participation rates decreased in the midst of the decade’s growth and only made it back to 1991 levels in the early 2000s. Today, they’re flat at best. Fuel prices are eating into our profit margins like never before. And now, with the threat of recession, our credit market has dried up.

If you want to thwart these and other problem areas that will befall us inevitably, remember above all this one marketing tip: Talk to your customers. Survey them consistently because they’re your lifeblood, and they’ll always steer your course in the right direction.

Farewell and sláinte. 

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ANYWHERE USA GOLF COURSE MARKETING PLAN

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Purpose statement</td>
</tr>
<tr>
<td>II 2008 daily sales objectives and tasks</td>
</tr>
<tr>
<td>III Golf market overview</td>
</tr>
<tr>
<td>IV Golf rounds demand analysis:</td>
</tr>
<tr>
<td>1. Consumer-reported rounds (population)</td>
</tr>
<tr>
<td>2. Facility-reported rounds</td>
</tr>
<tr>
<td>V Primary business targets</td>
</tr>
<tr>
<td>A. Geographic:</td>
</tr>
<tr>
<td>1. Local</td>
</tr>
<tr>
<td>2. Regional</td>
</tr>
<tr>
<td>3. Feeder markets (if any)</td>
</tr>
<tr>
<td>B. Marketing programs (sales/marketing forms and letters included)</td>
</tr>
<tr>
<td>1. Memberships</td>
</tr>
<tr>
<td>2. Group business</td>
</tr>
<tr>
<td>3. Marketing to tournament and outing coordinators</td>
</tr>
<tr>
<td>4. Hotel/motel partnership programs</td>
</tr>
<tr>
<td>5. Frequent player program</td>
</tr>
<tr>
<td>6. Outside play</td>
</tr>
<tr>
<td>VI Competitor analysis</td>
</tr>
<tr>
<td>VII 2009 sales and marketing strategies and tactics</td>
</tr>
<tr>
<td>VIII 2009 sales and marketing revenue plan</td>
</tr>
<tr>
<td>IX 2009 advertising and promotions</td>
</tr>
<tr>
<td>A. Advertising and promotion overview</td>
</tr>
<tr>
<td>B. Advertising and promotion plan/budget</td>
</tr>
<tr>
<td>C. Marketing budget rationale</td>
</tr>
<tr>
<td>D. Research; quarterly survey</td>
</tr>
<tr>
<td>E. Evaluation of marketing goals</td>
</tr>
<tr>
<td>X 2010 Preplanning calendar</td>
</tr>
</tbody>
</table>
Some products really *dew* live up to their claims!

Disease Triangle

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Disease Agent

DewCure

Moisture Suppression for Turf

An environmentally friendly way to reduce turf disease pressure by reducing turf moisture

Research studies at seven university sites over a four-year period have verified DewCure as a viable tool to reduce disease growth in turf. Incidence of dollar spot, brown patch, anthracnose, and snow mold all show dramatic reductions with the use of DewCure at 14-day intervals (snow mold only: single application). Reducing the foliar moisture needed for these pathogens to grow can help limit the use of fungicides by improving the environment for healthy turf.
MANUFACTURER RELATIONSHIPS

Relationships are the driving force of personal success in the golf business. Having the right contacts is crucial to advancement and, in many cases, simply getting things done. Luckily, the golf business consists of a close-knit group of individuals who share information about how we can improve business and be more successful every day.

In what other industry do businesses open up their doors and offer tours to their peers to explain the secrets of their success? Our businesses are built that way. Many times, we depend on our peers for the answers to the struggles we face.

There's an opportunity to create this type of give-and-take relationship with equipment manufacturers. During the past few years, manufacturers have turned more of their attention to technicians. Many times technicians help make a facility's purchasing decision for turf equipment, and the manufacturers are noticing. Look at how much easier equipment is to maintain. Instead of building a machine and then adding an engine and hydraulics, manufacturers are looking at how difficult a machine will be to service. Even the marketing guys are starting to realize the importance of including the technician's point of view when advertising equipment.

A strong manufacturer/end-user relationship benefits equipment technicians, too. They need to talk about issues they may be having with a distributor, a piece of equipment or changes they'd like to see. Equipment only gets better if technicians can tell manufacturers what they want. Manufacturers are starting to key into this with focus groups to discuss prototype equipment, parts programs and new equipment for the future. They're seeing that close relationships with their customers are a win-win situation. The customer talks about the equipment they want, and the manufacturer builds the equipment the way the customer wants it.

Technicians can build manufacturer relationships by attending trade shows or demonstration days held by local distributors. During these events, technicians have the opportunity to discuss the product and what improvements they'd like to see. This relationship is important for technicians. The better the relationship technicians build with their distributors and manufacturers, the easier it will be to get assistance when they need it.

Technicians should consider the following points when building relationships with these companies:

• If you're going to report problems, try to devise a solution. It's easy to always go to someone when you have concerns, but after a few times, people start to realize the only time you want to talk to them is when you have problems. However, if you can tell them about the problem and suggest a solution, it changes the tone of the relationship.

• Call with legitimate concerns. With all the equipment manufacturers are producing throughout the world, you can imagine how many calls they receive about different topics. When you call, make sure you've exhausted your resources and tried to solve the problem before contacting them. It's just like being the technician at your home course. If you're working on something and five people call you with small issues, it's easy to get frustrated.

• Be courteous. When you continue to have problems with equipment, it's easy to be frustrated and wonder why a new piece of equipment has a problem already or an old piece of equipment has the same thing happening time after time. The manufacturers are just as interested in fixing and diagnosing a problem as you are. When you have an issue, it could mean others have the same. So, rather than getting upset with the individuals about your problem, help them work through the issue so you can learn why it happened and they can address the issue at the factory.

• Think through issues. When you've decided you're going to make the call to the manufacturer, try to have all of your information readily available (model, serial number, hours, etc.). This will save some time because they'll ask for these details. Also, review your issue and understand the problem, so when you're asked about an electrical issue, you understand how it works.

Remember, relationships are the key to advancing in the golf industry. Without them, it's a difficult uphill battle, so always treat everyone you meet with dignity and respect because you never know when you'll need a favor, advice or maybe even a job.
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This is a glimpse of how golfers' behavior impacts the business of facility maintenance and management. Golf course operators can analyze the trends so they can adjust their businesses to the changing market.

**Trending downward**

Every month, people digest reports about rounds played throughout the country. National, state and regional numbers in the reports are significant gauges the golf industry from the demand side.

The charts on this page depict participation, frequency and play rates throughout a 16-year period. The charts provide more of a historical view from a macro perspective. Rates are trending down right now, but with various efforts in the golf industry to grow the game, hopefully these rates trend upward soon.

Although the golfer base is stabilizing, it's failing to keep up with the U.S. population growth of 1 percent; hence, participation rate, or relevancy, is declining (top chart). In 2006, the decline slowed slightly, falling from 10.6 percent to 10.3 percent.

Frequency continues its decline at an alarming rate, falling to its lowest level since the 1990 benchmark period (middle chart). The 2006 frequency rate declined from 23.4 rounds per golfer per year to 21.5 rounds per golfer per year versus 2005.

Following decline in participation and frequency rates, play rate also is now at the lowest level since the 1990 benchmark (bottom chart). In 2006, play rate declined from 2.5 rounds per capita per year to 2.2 rounds per capita per year.

Source: Pellucid Corp. and Edgehill Consulting
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Practical about BEING GREEN
Dan Dinelli improves North Shore Country Club's environmental standing

By Pat Jones

In the Chicago area, the name Dinelli primarily is associated with three storied generations of successful superintendents. The name makes you think of great courses, perfect greens and satisfied members at some of the best clubs in the nation. The name doesn't necessarily make you think of peregrine falcons ... but it should.

Dan Dinelli, CGCS, is a branch of one of the profession's most remarkable family trees and a guy who sometimes wakes up thinking about peregrine falcons ... and bluebirds ... and water conservation ... and native areas.

As the next in an illustrious line of folks who've won the GCSAA's President's Award for Environmental Leadership, Dinelli is humbled by the honor but still pragmatic in his approach.

"It's a double-edged sword," he says. "It motivates and drives me, but it also creates expectations and responsibilities. It puts a bull's-eye on your back to meet those demands."

Dinelli was born into the business as the son and grandson of well-known superintendents in the Windy City. Uncles and cousins have tended the turf at area courses as well. His career path has been simple by most standards. Turf was after earning associate's degrees in parks and ground management and horticulture from William Rainey Harper College and studying turfgrass management at Michigan State, he joined the staff at North Shore Country Club in 1978, became superintendent in 1993 and never left.

When Dinelli arrived at North Shore, the course was typical of most parkland-style facilities in the Midwest. Throughout three decades, he's slowly helped transform it into a showplace for eco-friendly golf and created a reputation as having a bright, scientific mind. Thanks to him, North Shore is nothing less than a living laboratorv - it's just a question of to what degree.

When I visit other courses, I usually notice things like these in urban areas that can prove high-end playability and practical environmentalism can coexist.

How did it feel to win the GCSAA's environmental award?
I was shocked. There are so many people in our industry who've done wonderful things and have been instrumental in our evolution. I'd just never considered being one of them. There's still much more I can and want to do to further our efforts. Besides, success includes others, my family, support from North Shore membership and the dedicated staff, including my cousin Jerry Dinelli.

What led you to this?
I've loved being on the GCSAA's Environmental Programs Committee for the past five years, but I've always been interested in ecology and wildlife. Before my two girls came along, my wife and I traveled a lot and studied environmental habitats. We spent time in the Philippines to learn about the Philippine eagle - there are only 300 in the world - and went bird watching in Costa Rica and other tropical forests. I love the diversity of our planet and the opportunity to constantly learn more about it. We've also been volunteers in the peregrine falcon release in Chicago (which reestablished the rare birds into the city).

All that background spilled over to the way we try to manage North Shore - constantly trying to improve the habitat and the facility's diversity.

What are the three most important steps a superintendent can take to make a facility more environmentally friendly?
First, it takes planning. We couldn't have done what we've done without a long-range plan and a great support system within the club. You have to sell the need, and that stems from planning.

Second, you have to recognize it needs to be a complete approach. Improved playability, aesthetics and environment - it all needs to integrate into one package. The three things are inseparable in our business. The superintendent has to orchestrate that by formulating a plan and selling it to the membership. That's one of the reasons we do so much research here. Yes, it helps others, but it also demonstrates ideas to our membership that helps them accept what we think we need to do.

Finally, you have to be open-minded and continue to grow and learn. If you commit yourself to this path, you'll reach your goals.

You know, 170 acres of open green space in the middle of a city is a powerful thing from an environmental standpoint. There aren't many landscapes like these in urban areas that can contribute so positively to the community. That's a big responsibility and big opportunity.

When you visit other courses, what things make you cringe and think, "Boy, they should fix that"?
What pops into my head aren't so much the problems but the opportunities. Like many courses, we used to be mowed fenceline to fenceline. We implemented our first wildflower garden in 1981 and have been diversifying the property since. When I visit other courses, I usually notice things that are there that would be fun to enhance, such as places that could be tweaked to attract more birds and butterflies and diversity in habitat.

I'm envious of other courses sometimes because we're flat. It would be awesome to have the opportunity to play around with a property that has elevation changes and different microclimates. Often, there's so much that can be done for little money.

Are most golf courses making the grade these days?
I want to believe we're all environmentally friendly - it's just a question of to what degree. There are always more things to do, even simple things such as adding birdhouses, which you can make yourself for practically nothing during the off-season. How can you naturalize out-of-play areas and save money at the same time?

But I talk to superintendents who still believe Audubon and environmental programs cost a lot of money.

The bottom line is that it needs to be a program you implement over time. You don't have to jump into it with both feet and go hog-wild. Take your time, plan, spread it out and budget a little bit every year. I'll argue it'll save you money in the long run.

Tell us about CITYgreen.
We were updating our 2,000-plus tree inventory with help from Chris Bechtel from the Morton Arboretum. I asked to collect the data needed to complete the model CITYgreen, which I found while surfing the Internet researching environmental benefits from landscapes. CITYgreen
was developed by American Forests to help communities quantify the value of their tree expenses in terms of dollars and environmental benefits. It helps to justify and further develop their tree programs. Chris collected data from our trees, and we fed it into the program. It tells you how much the trees contribute to the environment. It would be great to have an expanded model that includes turf. We already have done the research about what turf contributes to the environment. It just needs to be written into a model like CITYgreen.

From that experience, I came up with an environmental balance sheet—an itemized list of how the golf course affects carbon dioxide and contributes positively in other ways versus the inputs we use and energy we consume. It could be a great management tool. My gut tells me we still consume too much, but at least we'd know where our strengths and weaknesses are and where we can make the greatest improvements.

Why isn't that being done?
It's on the GCSAA's radar and a matter of priority. I can say with certainty that we stand favorably compared to many other land-use activities and sports. Think about NASCAR, one of our nation's biggest spectator sports, for example. But, we can still do more. I'm concerned about our use of nitrogen. Nitrous oxide, a byproduct of fertilization, is hundreds of times more powerful than CO₂ and long-lived. It may not be as prevalent as CO₂, but it will be on the government's radar soon. Our perspective about how we fertilize may be impacted.

What else keeps you up at night?
Water is still No. 1. The GCSAA is updating the (1988) Stuart Cohen study of water quality on Cape Cod golf courses to see what's changed. They're also creating IPM templates so all superintendents can have a plant health care plan and a tool to help us better understand how to best use inputs compatible with our site. The GCSAA is engaged in many great things to improve our industry, the environment and golf, but it still boils down to each superintendent pitching in.

What do you tell those who don't understand golf and assume it's full of polluters?
There are always people who act on emotions and fear. You need to welcome them, have them visit your facility and take a look. Whenever I've done that, I've yet to have someone leave with the same concerns. They begin to understand these plants need to be viable, healthy and active to offer the immense benefits they're capable of. You can't beat an on-site visit to win someone over.

How do you sell the club on your actions?
You have to use a shotgun approach to communicate environmental benefits. Use your green chairman. Their interest is golf, so you have to...
And the winners are ...

In addition to awarding Dan Dinelli the President’s Award for Environmental Stewardship, the GCSAA will honor others at its Education Conference Opening Session in New Orleans Feb. 5. They include:

- Mark Esoda, CGCS, Atlanta Country Club – Col. John Morley Distinguished Service Award
- Monroe Miller, Blackhawk Country Club, Madison, Wis. – Col. John Morley Distinguished Service Award
- George Hamilton, Ph.D. (deceased), Penn State – Col. John Morley Distinguished Service Award
- Thomas Lavrenz, retired superintendent – Leo Feser Award
- Col. John Morley (deceased), GCSAA founder – Old Tom Morris Award

Winners of the Environmental Leaders in Golf Award and Excellence in Government Relations Awards have yet to be announced. To read GCI profiles on Esoda and Miller from earlier this year, visit www.golfcourseindustry.com/09awardwinners.

emphasize the benefits for playability and economy as well. Use your Web site, newsletters, open houses – every resource you have. It needs to be somewhat subliminal. You can’t force-feed them because they’re busy, successful people who want to relax and play the game. You just put it out there and hope it takes and they find a comfort level with the idea.

Do you preach the “brown is beautiful” message?
It irks me that people say “green is bad.” I argue a healthy, active growing plant offers the most ecological benefits. Then, there’s playability – sustainable golf is best on healthy turf – and that’s usually green turf. Dead turf costs money to fix. We need to be responsible and green.

Who inspires you?
Frank Rossi of Cornell’s turf program can sing like a bird in front of a crowd. I called him a few years ago and asked how I could be more like him as a speaker.

Obviously, my grandfather Frank Dinelli and dad Joe Dinelli were inspirations. Some people might argue there are too many Dinellis in this business, but I love ’em all.

From an academic standpoint, I admire Mike Boehm at Ohio State. He’s a great teacher, person and scientist. Eric Nelson from Cornell also is on that list. I’d add my professor from William Rainey Harper, Dr. Metcalf, and Paul Rieke, Joe Vargas and the late Ken Payne from Michigan State.

Do you think golf will be affected by the new presidential administration led by another Chicago guy?
No matter who’s in the job, if the economy doesn’t turn around it’ll continue to impact us. There are a few things that worry me. Taxes and unions are potential threats. Union shops discourage efficiencies, often raising the cost of doing business, and open voting on unions could lead to many more courses becoming unionized. It would be difficult to see any benefit in that.

Let’s face it, the overall model is that wealthy people help drive our economy, support venture capital and contribute to industry. More taxa-
Rethinking your operation

Top agronomic officers seek efficiencies as costs rise and budgets remain flat

The agronomic aspect of golf is the driving force of the business. The big issue at hand is rising costs and flat budgets, which are putting pressure on golf course managers, forcing them to rethink their operations.

Top agronomic officers of management companies, who meet once a year at the National Golf Course Owners Association's multiowners conference, are addressing that issue. The TAO group consists of between 15 and 20 superintendents representing about 1,200 to 1,500 golf courses throughout the country.

"We found out people do things differently, but sharing ideas in a competitive environment is for the betterment of the industry," says Scott Zakany, president of Championsgate, Fla.-based IGM, a provider of outsourced golf course maintenance services with 45 properties in its portfolio. "We oversee a lot of golf courses and can be a driving force in the industry. You always come across people who think they can do something cheaper and better. And in a flat market, we're always trying get more bang for our buck. We need to be smarter. Everything we do affects the bottom line."

The TAOs wonder where the industry and the courses they operate are going to be in one year, five years and 20 years. But the main issue now is the economy, says Bryan Bielecki, vice president of agronomy for Vienna, Va.-based Billy Casper Golf, which has 100 facilities in its portfolio.

"We were in the process of finalizing budgets for 2009, and it was difficult because of fear in the market," Bielecki says.
The term ‘top agronomic officer’ might be new to some. The title refers to a superintendent who oversees the maintenance of all golf courses at a management company. TAOs meet once a year at the National Golf Course Owners Association’s multicourse owners conference. Ted Horton, a consulting superintendent who’s part of the senior management team at ValleyCrest Golf Course Maintenance, has been attending the multicourse owners conference since its inception about 12 years ago. At the time, he was working at Pebble Beach Golf Links, which was the location of the first meeting.

“It was all CEOs, and they didn’t have a clue about the environmental effects of what the superintendents were doing,” Horton says. “I gave a brief talk and was asked to come back each year to give an update about the environment.”

The TAOs were pulled together by owners to work on operating problems that affected the industry and explain why operating costs couldn’t be more predictable, says Ray Davies, director of golf course maintenance and construction at Petaluma, Calif.-based CourseCo.

“A time like this is a time for change, meaning things that aren’t acceptable in normal times

TIME TO MAKE CHANGES

BCG isn’t the only company considering such changes. Having TAOs in one room creates opportunities to influence each other and the industry, says Ray Davies, director of golf course maintenance and construction at Petaluma, Calif.-based CourseCo.

“A time like this is a time for change, meaning things that aren’t acceptable in normal times

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might have to be acceptable now,” he says, citing less water use and acceptance of brown turf. “We can’t have wall-to-wall green turf.”

Other examples of change include implementing high-tech irrigation systems, which can save labor, and investing more in solar power.

“Solar power might not cover 100 percent of a facility’s power needs, but it will save them money,” Davies says. “Golf courses tend not to go away, so they’ll have time to get the payback.”

The pressure felt during the first few years of the last downturn (2001 to 2003) forced operators to reduce costs in the short-term when, in hindsight, long-term changes needed to be made. Reducing fertilizer and chemical applications, as well as aerification, are examples of short-term savings. Reducing the acreage of highly maintained areas creates long-term savings.

“It’s difficult to reduce acreage with a parkland setting because it doesn’t mesh well with the course design,” Davies says. “But with new courses, you can do whatever you want.”

Operators need to start thinking about things such as shutting down nine holes if they’re an 18-hole or larger facility if demand isn’t there, Davies says.

“You have to manage demand,” he says, comparing it to new baseball stadiums that seat 40,000 to 45,000 fans instead of the older stadiums that sat 60,000 to 80,000 fans. “They’re controlling price points and demand.”

Davies suggests operators look at how and when they buy their equipment to take advantage of opportunities in the marketplace. For example, superintendents should plan what they’ll need for the coming year so they can get a deal in the off-season, making one large purchase order – if a club has liquidity. If one doesn’t have liquidity, it won’t be able to get as good a deal.

When it comes to buying, Zakany says IGM makes sure to get the best price based on volume, which improves profitability.

Davies says CourseCo is questioning its processes to make sure it’s allocating its resources properly. The company is challenging basic assumptions to make sure it adjusts to market changes.

“Is it possible to get golfers to accept things they normally wouldn’t, such as reduced golf course acreage; watering less, which, in turn, reduces mowing; or drought-tolerant turfgrasses?” he asks. “What does generating 10,000 fewer rounds annually do to the pace of play, which is still an issue? Is your traditional source of labor still the way to go? These are the type of questions we need to be asking ourselves.”

It’s more challenging to be more efficient, Zakany says, adding that
there has to be a smarter way to address labor because it eats up 50 to 60 percent of maintenance budgets.

"If you're maintaining a golf course with 20 people, think about how can you do it with 16," he says. "Think about what golfers are going to realize."

BCG is looking at labor and frequency. For example, if it takes 48 hours a week to mow fairways, the company is considering mowing them twice a week instead of three times a week.

Another market change: tournament play, which has declined at the facilities CourseCo maintains. Because of that, the company is aggressively marketing tournament play by interacting with its customers.

"You just can't discount," Davies says. "You can discount to those golfers who wouldn't have come to the course to begin with, but you can't offer a discount to those coming to play golf anyway."

People are worried about deferred capital, too, Davies says. Money is tight, which is affecting construction, renovation and irrigation projects. But that can also create opportunities.

"When the construction market declines, you can attract people or builders to do small projects, when normally, they wouldn't look at the projects because they're too small," he says.

Superintendents also need to think differently in terms of delegating and trusting their staffs more, Davies says. Some tasks, such as mowing, might be done better late in the afternoon and early evening, so a superintendent would need to delegate and have people work on the course when he's not there. Davies suggests maybe even having two shifts on staff.

"You have to break the paradigm of 'I have to watch everything,'" he says.

When it comes to cost savings, Bielecki says BCG focuses on water and chemical use.

"Our strategy encourages superintendents to use generics on the tees, fairways and rough and name brands on the greens," he says. "There are some generics that are just as effective as name brands, but there are other generics that are not. If the residual of some generics is a short time frame, it might cost you more in the long run."

Despite all of BCG's operational suggestions, the company leaves it to superintendents to dictate and meet product expectations.

"The superintendent at each course is the most educated decision-maker based on having input from golfers," Bielecki says. "We feel we're already at peak efficiency operating our golf courses, but we might have to spend less, which would impact product expectations. We start with what product we want. When doing detail work, the question is how often should these tasks be done. We're compromising some of that in the shoulder months."

In a down market, many businesses cut back on marketing, but Bielecki says BCG needs to be (continued on page 34, sidebar on page 32)
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MYTH BUSTING

In the past, superintendents haven't looked at management companies in the golf market positively. Critics say companies treated superintendents poorly and were unprofessional. That has changed for the most part as management companies try to reverse their reputations.

Management companies are much more sophisticated than they used to be, says Ted Horton, a consulting superintendent who's part of the senior management team at ValleyCrest Golf Course Maintenance.

Top agronomic officers at the National Golf Course Owner Association's multicourse owners meeting earlier this year addressed this issue.

"The superintendent is where the rubber meets the road," Horton says. "A superintendent who works for a management company must be a team player who's a good businessman and agronomic guy."

Ray Davies, director of golf course maintenance and construction with CourseCo, believes the TAO group spends too much time worrying about the image of management companies.

"They want the bad image put to bed," he says. "They're treating superintendents better now than they have in the past. The superintendent is the hero in our company. You are what you are. I'm not worried about image. It's a competitive issue, not an industry issue."

The TAO group conducted salary, longevity and compensation surveys among their companies and compared them to the GCSAA norm. In most cases, superintendents who work for management companies are earning equal or better in pay and had comparable or higher education than the GCSAA norm, Horton says.

"If you want to work and grow for one of these companies, you need to be more of a businessman than the norm," he says. "You need to work closely with the management team at each course and need to be astute with the numbers. I work with owners, and they want superintendents who work with the management team and keep an eye on the bottom line."

The goal at most management companies is to increase their portfolios with more golf courses, Horton says.

"Although each has a different niche, they feel the stand-alone operation probably doesn't have as high a degree of professionalism or that it can take advantage of the synergies of being managed in a portfolio with other courses," he says. "I see multicourse management companies growing at the expense of stand-alone operations, but I don't know if most of the golf courses in the country will be operated by management companies."

Horton says superintendents like the independence of working at a stand-alone course, but he believes most courses need a bit more supervision and expertise from a management group or company. Efficiencies from professional management eventually will be attractive to more mom-and-pop operations, but they don't want to lose control, Davies says.

"It's possible to do both," he says. "We don't put our name on the course. We operate the golf course on the owners' behalf. It reflects them. We don't want to brand the golf course, we want to brand our company. Our job is to reflect the owner's standards and values." GCI
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CHANGE FOR THE ENVIRONMENT

Like profits, the environment is a driving force behind operational changes.

"There’s a lot of talk about being ‘green,’ but what does that really mean?" Zakany says. "Recycling or integrated pest management ... whatever it might be, you need to stand apart from the competition."

The collection of golf facilities IGM maintains is diverse, Zakany says. In several regions of the country, the No. 1 resource is water, and the company has made cutbacks. So, turf managers need to figure out several ways to conserve water and use it more efficiently. Examples include:

- Not overseeding
- Using moisture sensors
- Applying chemicals to retain moisture
- Planting drought-tolerant type turf
- Reducing the number of highly maintained acres.

"It’s not all about color," he says. "It’s about what you’re doing for the environment. TV hasn’t helped us any, although the British Open helped. It’s good to see courses on TV that aren’t Augusta National green."

Bielecki says all of BCG’s golf courses are in Audubon International’s Cooperative Sanctuary Program and have reduced the number of highly maintained acres.

Using organic products is another operational change driven by the environment. However, organic products aren’t short-term solutions; they’re long-term fixes. Superintendents who choose to use these types of products need to stick with them because it takes longer to reap the benefits, Zakany says.

"Many management companies are incorporating organics into their turfgrass management programs," he says. "Costs aren’t as high as they used to be for organics."

Implementing more environmentally friendly practices to maintain golf courses requires superintendents to clue in golfers on the maintenance business. One question looms in that regard: Can members live with a higher threshold of weeds or disease pressure?

"We want to respect and satisfy golfers yet dictate practices that are sound businesswise," Zakany says. "But you have to educate the membership." GCI
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Sodium’s effect on a turfgrass plant is like putting tape over a person’s mouth, says Hans Gardner, golf course superintendent at Falcon Ridge Golf Course in Mesquite, Nev. “Salt plugs up the sites on the roots that intake air, water and food, so the plant is only taking up a small portion of what you’re putting down,” he says, equating that to a human who can’t ingest food or water and starves as a result.

“If you don’t get rid of the salt, you’re pretty much wasting fertilizer and water,” Gardner says.

There are natural and man-induced reasons golf courses register high levels of sodium and other salts in soils and water. For example, it’s common for coastal golf courses to suffer from high salt irrigation water. Arid regions, too, are typically predisposed to soils that accumulate salts because irrigation water evaporates quickly before it can move the minerals through the root zone, leaving sodium behind.

Another common reason for the problem is the use of effluent water, which typically has high sodium levels thanks to water softeners and other treatment processes.

With the public’s increasing attention on water conservation and with only about 12 percent of courses currently using effluent water, few would dispute the number of facilities using effluent water will skyrocket in the years to come. That means more superintendents will be charged with navigating the challenges that come with highly sodic irrigation water.

**MAKING APPLICATIONS**

Just as there are a number of reasons for salt problems, there are a number of ways to mitigate them. David Soltvedt, CGCS, at the Ridge at Castle Pines North in Castle Rock, Colo., has dealt with what he calls a moderate sodium problem since he arrived at the 18-hole, daily-fee facility in 2004.

If nothing else, in his 12-year career working at six golf courses, he’s learned water quality is relative.

The year Soltvedt arrived at the Ridge, the metropolitan water district forced the facility to switch from well water to an effluent/well water mix. Now, Soltvedt irrigates the course with an 80/20 mix. Since 2004, sodium levels have increased almost 500 percent.

“Our water isn’t that bad — probably a five on a scale of one to 10 in effluent water quality — but nonetheless, our water isn’t making it any easier,” he says. “It’s not so poor that we have to use sulfur injection like many facilities in the southwest.”

For the Ridge, the biggest detriment of having high sodium water has been the soil’s inability to drain properly, especially in low areas. These circumstances resulted in the installation of about a mile’s worth of drainage since 2004, costing the facility about $25,000.

Soltvedt’s ongoing plan to manage the sodic water includes applying wetting agents and calcium sulfate (gypsum). He also uses salt-tolerant turfgrass, Brightstar SLT ryegrass, when he grows in a new sod nursery or fills divots. The course has Poa annua/ryegrass fairways, Providence bentgrass greens, bentgrass/ryegrass tees and bluegrass roughs.
Because sodium displaces calcium and magnesium in the soil, Soltvedt applies calcium sulfate at a rate of 500 pounds per acre to greens and tees annually. The application takes place during aeration; the material is applied and dragged in. At $800 a year, the cost of calcium sulfate is just a sliver of the maintenance department’s annual budget, which Soltvedt declined to disclose.

Additionally, Soltvedt spends about $8,000 annually on wetting agents, which are injected into the irrigation system, to help the water move through the soil.

In Mount Dora, Fla., Philip Morris Jr. also makes regular applications to control a salt problem created by effluent water. The golf course superintendent at Mount Dora Golf Club has been dealing with sodium-plagued, soil-sample results for the 18 years he’s been at the 18-hole semiprivate course. On seven different occasions during his tenure, the green committee has talked about rebuilding the greens as a result of the sodium problems.

"This year, they were talking about spending a couple hundred thousand dollars on rebuilding the greens," he says. "But with the way the economy is, the bank said we couldn’t rebuild."

Morris, who maintains the course with a $100,000 annual budget, asked for freedom to experiment this year to control the problem—dull, thinning greens that generally weren’t responding to fertilizer.

"I said, just let me play around; don’t tie my hands down," Morris says, noting two of the greens were registering sodium levels of 44 percent and 38 percent, classified as very high. "You would have thought I was taking a soil sample from Daytona Beach."

In April, Morris began monthly applications of a soil amendment called SaLibre at a rate of 32 ounces per acre. By late October, the sodium levels on the two problem greens mentioned above declined to 17 percent, classified as moderate.

Morris says he’s happy with the results, considering he uses about a half gallon per application, which costs less than $50 a month.

"With a small budget, you’ve got to be creative, and if you find a product that works, you don’t stray too far from it," he says.

**ADDING EQUIPMENT**

Though Soltvedt and Morris haven’t needed to install equipment to mitigate their water quality issues, Gardner can’t say the same. Like most of the golf courses in southeast Nevada, Falcon Ridge Golf Club in Mesquite has a sulfur burner, which is a 5- by 3- by 3-foot machine that heats sulfur on-site to create sulfurous acid, which is injected into the irrigation system.

Gardner has been at the 18-hole public course, which he maintains with a $1.2 million annual maintenance budget, for a year and a half, and had a hand in purchasing the system. He says all four courses in the area he’s worked on dur-
The past 14 years have had a sulfur burner. Sodium problems are common in southeast Nevada, Gardner says, because many courses use effluent water or water from the Virgin River, which registers high mineral levels in the summer when it runs low.

Gardner grapples with salt levels that vary greatly from hole to hole—from below 200 parts per million to as high as 750 parts per million. Superintendents use sulfur burners—or the alternative, sulfuric acid injection systems—for two primary reasons: displacing salts from the soil and clearing moss and algae from lakes and waterfalls by lowering pH levels quickly. The machines create sulfurous acid, which lowers the alkaline conditions in the water, which neutralizes the bicarbonates that harden the soil and deny water penetration. This process, assuming the course has adequate drainage, allows sodium and other minerals to be leached out of the soil.

One stigma these units face is they emit strong odor and that can be distracting for golfers and employees. Gardner says that was the case with earlier units, but that's not a concern with newer ones, like Falcon Ridge's.

The sulfur burner, which Gardner purchased from Aqua Dulce for about $15,000, burns about five to 10 bags of sulfur per day. Falcon Ridge consumes about a ton of sulfur every three weeks. Gardner estimates he most recently paid about $800 a ton for sulfur, which, like many commodities related to golf course maintenance, has been on the rise. In fact, the cost caused him to cut back in the late summer and early fall months since the weather has cooled down and the sodium-related issues lessened. He plans to run the machine again for a few weeks at a time when the weather warms up in March or April and again in May and June.

For Gardner, the battle to eliminate salt problems is an ongoing process.

"Unless you find a way to get rid of the salts, the plant doesn't thrive at all," Gardner says about Falcon Ridge's turf, which is a bermudagrass base overseeded with ryegrass in the fall.

Gardner augments the sulfur burning process with a twice yearly process in which he aerifies, applies gypsum at about 500 pounds per acre and then waters heavily to leach the salts down into the soil.

The real key, though, is keeping up with the soil's status through quarterly tests.

"We get the results, and then we do what we need to do when we need to do it," Gardner says. GC

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Surface water quality

Long-term monitoring determines the magnitude of nutrient loss in runoff related to development

New golf course development represents a dramatic change of land use. Golf courses often are constructed close to natural streams or water bodies. Establishing a new golf course requires removing the original natural soil cover, which represents a potential for contamination of nearby streams, lakes and ponds through soil erosion and nutrient transport.

Runoff occurs when the precipitation rate exceeds soil infiltration capacity. Runoff creates soil erosion, causing transport of pollutants (soil nutrients, suspended particles, pesticides) from one place to another. Soil erosion at two to 40,000 times the preconstruction erosion rate has been reported by Wolman et al. Soil erosion, and particulate and nutrient transport, can increase the concentration of nutrients in surface water, consequently harming wildlife habitats by inducing uncontrolled growth of algae, depletion of dissolved oxygen available in the water, fish kill and pipeline clogging.

While construction could affect the natural stream condition significantly, golf course operations require inputs of fertilizers that contain plant nutrients (nitrogen and phosphorus) and irrigation to maintain turf in acceptable conditions. The potential of surface water contamination through soil erosion and nutrient transport from golf courses has been a subject of environmental concern. Studies have reported water quality of native grassland, while others evaluated water quality affected by golf course operations.

This long-term monitoring study has been developed to assess the magnitude of the nutrient loss effect on the surrounding surface water during the different stages of golf course development. To the extent of our knowledge, this is the most extensive long-term study evaluating the nutrient concentration in surrounding natural surface water before, during and after construction of a golf course.

Many research works have been conducted to establish baseline water quality of native grasslands. Other researchers have conducted studies on golf courses to evaluate the impacts of golf course operations on surface water quality.

**LITTLE KITTEN CREEK WATERSHED**

The Little Kitten Creek watershed is located in southwestern Riley County on the west side of Manhattan, Kan. (photo on page 42), covers 1,063 acres and has a typical Midwest topography with elevations ranging from 1,378 feet to 1,115 feet, decreasing from north to south. Land surface slope ranges from 0.04 to 0.14 (m/m) with an average channel gradient of 0.032 (m/m).

Originating from the northwest of the watershed, Little Kitten Creek flows about two miles from north to south before it leaves the studied watershed. It continues to run until it joins Wildcat Creek, a tributary of the Kansas River. Little Kitten is an intermittent stream. During a typical year, between five to 10 runoff events occur, resulting from intense, convective thunderstorms. The channels of the drainage network are dry for most of the remaining time.

Soils from nine different series were found in the watershed (Table 1 below):

- Alluvial lands are located near channels and are frequently flooded. The soils of this series are silt loam, clay loam, silty clay loam and silty clay.
- The Benfield series is the most common in the watershed; they’re well drained with medium-to-rapid surface runoff and low permeability.
- The Breaks series is located in small V-shaped drainage ways. Soils of this series are found on steep slopes, are usually deep and are mostly silt loam or silty clay loam with some silty clay in the subsurface.
- The Clime series comprises calcareous soils located on uplands; they’re moderately deep soils with a silty clay loam texture.
- The Dwight series soils consist of a thin surface layer and dense subsoil; they’re composed of silty clay, and are moderately well drained and have low permeability.
- The Irwin series is derived mainly from weathered shale, is generally found on upland ridge tops and side slopes, and has low permeability.
- The Irwin series comprises calcareous soils located on uplands; they’re moderately deep soils with a silty clay loam texture.
- The Dwight series soils consist of a thin surface layer and dense subsoil; they’re composed of silty clay, and are moderately well drained and have low permeability.
- Reading soils consist of deep, nearly level and gently sloping soils on stream terraces and foot slopes in creek valleys. They’re formed in alluvial sediments and are composed of silt loams and silty clay loams.
- The Tully series are sloping soils located on foot slopes and are formed in thick colluvial and

<table>
<thead>
<tr>
<th>Table 1. Soil series for Little Kitten Creek watershed</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Soil type</td>
<td>Percentage</td>
</tr>
<tr>
<td>Alluvial land</td>
<td>5.1</td>
</tr>
<tr>
<td>Benfield</td>
<td>43.5</td>
</tr>
<tr>
<td>Breaks</td>
<td>9.9</td>
</tr>
<tr>
<td>Clime</td>
<td>16.4</td>
</tr>
<tr>
<td>Dwight</td>
<td>7.8</td>
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<tr>
<td>Irwin</td>
<td>3.6</td>
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<td>Ivan</td>
<td>1.9</td>
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<tr>
<td>Reading</td>
<td>3.6</td>
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<tr>
<td>Tully</td>
<td>8.2</td>
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alluvial deposits. They're mainly comprised of silty clay loam with some silty clay. They're well drained, and the subsoil is slightly permeable.

Benfield, Clime and Tully series soils are classified as hydrologic soil group C, which account for 68 percent of the watershed. Alluvial lands and Ivan soils are classified as B (11 percent), and Breaks and Dwight as D (21 percent). Because of their textures (erodibility factor $K=0.37$) and locations in the watershed, Alluvial lands, Benfield and Tully are the most erosion-prone soils in the watershed.

As part of the Flint Hills rangeland in northeastern Kansas, the Little Kitten Creek watershed had a pasture cover land use before construction of the typical mixture of tall grasses and woods with around 89 percent grasslands, 11 percent woodlands and negligible residential lands. Construction of the golf course started in July 1998. By early 1999, alteration of land cover had attained its peak when about 20 percent of the total native cover was removed. By April 2000, the course was completed and disturbed lands were covered with grasses.

Climates in northeast Kansas are controlled by the movement of frontal air masses over the open inland plains topography. Seasonal temperature and precipitation extremes are common. During the summer, temperatures can reach 100°F or higher. Winter months are characterized by influxes of cold, dry polar air with temperatures as low as -4°F. About 70 percent of the average annual precipitation of 34 inches falls during the warm growing season, April through September. Only 10 percent of the average annual precipitation falls as rain during the relatively dry months of December through February.

**MATERIAL AND METHODS**

To monitor the environmental impacts before construction (pasture cover), during construction and during early operation of the golf course, three stream gauging stations were set up in the watershed. Two stations, N16 (north of hole 16) and N14 (north of hole 14), were located on the north side of the area to monitor the quality of water entering the golf course property. South Little Kitten was located at the south boundary of the golf course to monitor the quality of water leaving the golf course property.

ISCO 3700 portable samplers (top photo) and a sampling station.

Raw samples were stored in a freezer for future laboratory tests. Laboratory analyses were conducted at the soil testing lab in the department of agronomy at Kansas State University. Water samples were analyzed for total nitrogen, total phosphorus, NH4-N, NO3-N, ortho-P, total suspended solids and total dissolved solids. Field parameters measured at the time of sampling included specific conductivity, hydrogen-ion activity (pH), water temperature and dissolved oxygen concentration. Results discussed in the following section focus on total nitrogen and total phosphorus.

Background water quality monitoring (pasture cover stage) was conducted before the start of golf course construction in July 1998. Water quality at this period was used as a baseline to evaluate the impact of construction and early operation of Colbert Hills Golf Course. Water quality monitoring also was conducted during the construction period, from August 1998 (when construction work officially started) to April 2000 (when the golf course officially opened for play). Monitoring of water quality during early operation of the golf course was conducted from May 2000 through October 2006.

**WATER QUALITY PASTURE COVER**

The water quality of unpolluted water bodies is dependent on the local geological, biological and climatological conditions. These conditions control the mineral quality, ion balances, and biological cycles of the water body. To preserve the quality of the aquatic environment, the natural balances should be maintained. Background quality knowledge is necessary to assess human impacts.

**Construction.** The loss of land's natural coverage promotes rapid and significant erosion of soil surface, thus enhancing the loss of nutrients in runoff during and after rainfall events. Change in land use can highly increase the concentration of nutrients, such as nitrogen and phosphorus, in the natural streams.

**Early operation.** It was hypothesized that stabilization of the nutrient concentration in natural streams would be a slow process. Thus, monitoring of the early operation period was important to determine how long it would take...
the watershed streams to recover back to native stage-like conditions.

Watershed conditions changed during the three different stages of management the land experienced from 1998 to 2006. The area had pasture cover until 1998. There was a dramatic effect on the stability of the soil structure when the natural soil cover was removed. The high potential for runoff and contaminant transport to surface waters, upon the occurrence of rain events, is significantly higher under such conditions.

Once golf course turf has been established, the potential of surface water contamination through soil erosion and runoff decreases significantly. However, the application of fertilizer could represent a source of increasing nutrient transport to surrounding streams.

RESULTS
Water quality changes in Little Kitten watershed are affected by total nitrogen and total phosphorus. Mean values and standard deviations were used to describe the trend of total nitrogen and total phosphorus changes through the three different studied stages. Weather conditions (dry years versus wet seasons) increased the variability of the data collected. However, the mean values were obtained using all collected data points for the correspondent watershed stage. Standard deviations represent the variability of the data.

TOTAL NITROGEN
On average, 1.3 mg/L of total nitrogen was in Little Kitten Creek as it entered the golf course property during the eight years of study. The averaged value didn’t vary significantly during the 1998 to 2006 early operation period. During the pasture cover stage, the total nitrogen concentration in the surface water entering and exiting the watershed was similar and not different statistically. This information is important to demonstrate that beyond the boundaries of Little Kitten Creek watershed there was no significant change in soil management that affected the incoming total nitrogen. However, the outflow data showed a different response than the total nitrogen concentration in the inflow.

Once the construction stage started, the measured total nitrogen concentration increased significantly in the surface water because of runoff, especially when heavy rainfall events occurred. An average of 4.0 mg/L total nitrogen was determined during the years of construction. The total nitrogen measured values exhibited significant variation. Importance of this result is that the concentration of total nitrogen in the stream during construction is sensitive to soil management and weather condition.

The average concentration of total nitrogen in the outflow during the early operation stage (May 2000 through October 2006) was observed to be smaller than that observed during the construction stage. An average concentration of 2.4 mg/L total nitrogen was determined. The standard deviation indicated the variation magnitude of the total nitrogen concentrations in the surface water decreased once soil vegetation cover was reestablished. During the first six years of the golf course operation, a reduction of the total nitrogen concentration was observed. However, the early operation total nitrogen concentration was about double that of the pasture cover total nitrogen value. Establishment of turfgrass required fertilization, which was a potential source of total nitrogen in the watershed.

TOTAL PHOSPHORUS
The total phosphorus in the inflow didn’t change significantly throughout this study. The inflow average total phosphorus values for the pasture cover, construction and early operation stages were 0.49, 0.26 and 0.30 mg/L, respectively. During the pasture cover stage, an average value of 0.45 mg/L total phosphorus exited the watershed. Removal of soil vegetation cover increased the average value to 0.87 mg/L total phosphorus. Increase of total phosphorus concentration in surface water was because of erosion and runoff enhanced rain events, and lack of surface vegetation during the construction period.

An aerial photo of Little Kitten Creek watershed and Colbert Hills Golf Course area after construction.
Similar to what was observed for total nitrogen, the concentration of total phosphorus in the water decreased during the early stage operation. Vegetation reestablished on the surface was the main cause of the reduction of total phosphorus concentrations in the surface water. The recovery of the surface cover reduced erosion of soil particles and reduced transport of nutrients to surface water streams.

Concentrations of total nitrogen and total phosphorus were found significantly greater during golf course construction than during the pasture stage. The increase of eroded soils carried particle-bound nitrogen and phosphorus to the stream. Inflow and outflow total-nitrogen-to-total-phosphorus ratios of the averages, at the three studied stages, were always lower than 8, which indicated limiting nitrogen availability in the streams.

The study of nitrogen and phosphorus in surface water is extremely important because excessive amounts of both nutrients in natural streams lead to eutrophication problems in lakes and water bodies. This study indicates that, if course management is operated adequately, the surface water quality in a golf course-dominated watershed can be returned back to its original conditions. GCI

Steve Starrett, Ph.D., is an associate professor of water resources engineering in the department of civil engineering at Kansas State University in Manhattan. Yunsheng Su, Ph.D., P.E., DWRE, is an engineer for the Watershed Protection District in the county of Ventura, Calif. Travis Heier is a project engineer for HDR in Forsyth, Mo. Jamie Klein is a project manager at Terracon Consultants in Columbia, Mo. Jeff Holste is a project intern engineer at J.R. Engineering in Colorado Springs. Monica Paloma, Ph.D., is an assistant professor in the civil engineering department at Cal Poly University in Pomona, Calif.

Credit: USGA Turfgrass and Environmental Research Online 7(18):1-9.

Kinston (N.C.) Country Club is an 18-hole, traditional-style golf course — established in 1924 — that has undergone expansion, renovation and layout changes throughout the years. In 1999, the 130-acre course became a Certified Audubon Cooperative Sanctuary.

While the club was seeking certification, there was a focus in the news and state legislature about pollutants in the nearby Neuse River. The club’s staff was concerned about a possible negative image as a pollution source because the club is in the Neuse River basin and uses fertilizers.

Audubon certification was a step in the right direction for the club’s image as an environmental steward, but certification didn’t provide documentation that would support the course’s maintenance practices that protect and ensure water quality. That was about to change.

In 1998, the golf course maintenance staff implemented a proactive water monitoring practice to monitor surface water surrounding the course. Along two edges of the golf course, city storm drain water and surface water combine and flow through a drainage ditch almost 10 feet wide and 8 feet deep. On an average day, there’s about a foot of water in the ditch. During a heavy rain, water may rise to 6 feet. Ultimately, this water drains into a creek that drains into the Neuse River.

The maintenance staff collected water samples at two sites — a point where the water enters the course at the start of the drainage ditch and a point where the water exits the course before entering the creek. All samples were sent to North Carolina State University for analysis. Early test results showed the water leaving the course seemed to contain lower concentrations of nitrogen compared to the water entering the course. Therefore, the disciplined and methodical collection of the water samples appeared to be worthwhile; however, the water monitoring program didn’t provide long-term data to prove the golf course was filtering water in the ditch.

Fortunately, the crop science department at N.C. State also was concerned about water quality and, specifically, the effects of nitrate leaching — the movement of nitrates through the soil. Many forms of nitrogen are present on a golf course, and depending on the circumstances, some may be considered a water pollutant. A form of nitrogen that receives the primary attention for environmental impacts is nitrate. High levels of nitrate may have environmental impacts such as promoting algae growth. Research had been done about the effects of nitrate leaching in soils that included cool-season turfgrasses, but little research had been done in an environment that supported mostly warm-season varieties of turfgrass.

N.C. State scientists intended to conduct research on nitrate leaching in soils associated with warm-season turfgrass. They wanted an active, real-world environment in which to conduct research. One of two golf courses they chose was Kinston Country Club because of the water quality monitoring already started by the club’s staff.

First, N.C. State researchers installed devices called lysimeters around the course to measure the soil’s nutrient levels near grass root zones. They also drilled shallow wells to measure levels in the groundwater. Additionally, the research team and Kinston’s staff continued to sample the surface water surrounding the course. The idea was that the water moving through and under the golf course’s grounds would be contributing to the water in the ditch and Neuse River.

N.C. State scientists found the water leaving the golf course contained lower nitrate levels than the water entering the course. The reduction of nitrate levels was partly because of the groundwater seeping into the ditch from the golf course and diluting the surface water in the ditch. Also, vegetation left to grow taller, thicker and in a more natural state along the edges of the ditch served as a riparian buffer strip and helped to filter runoff from rain and irrigation.

These natural areas and buffer strips created during the Audubon certification process helped the environment by creating a habitat and removing pollutants before they reached the groundwater and surface water. Having the findings of a well-recognized and highly respected university show the course wasn’t hurting the environment was invaluable.

Ultimately, the proactive approach Kinston staff took helped change local public opinion of the golf course. A little extra work brought N.C. State to the club and added some legitimacy to the club’s claim that it wasn’t polluting, but actually helping to improve water quality.

On top of that, some important research took place, and Kinston staff established a great working relationship with N.C. State. It feels good to know that our efforts helped change the perception of our profession and contributed to meaningful research. GCI

Manage your image with proactive research

By Dean Baker, CGCS, and Buckley Brockmann, assistant superintendent, Kinston Country Club

K

impACT

ON THE BUSINESS
Situated on land that abuts a 4,630-acre state park, Double Eagle Golf Course – with 450 acres of its own – is in a position to have more than enough animals here and there, says golf course superintendent Todd Voss.

Voss has been at the 18-hole private club in Galena, Ohio, since it opened 1991. He started as an assistant and then took the reins as superintendent in 1996.

In central Ohio, where Double Eagle is located, geese, deer, rabbits and small animals, such as raccoons and skunks, top the list of wildlife concerns. The most severe wildlife-control situation Voss handled was almost a decade ago when skunks infiltrated the facility and folded up the grass like carpet, he says.

Because skunks eat insects, many golf courses have this problem in the fall, when skunks hunt for grubs.

Voss hired licensed professional trappers, who had to prove the pests were causing damage and obtain permits before eradicating the skunks. This service, which is offered by professional trappers and some traditional pest control companies, starts at about $100 per pest. Voss said the trappers removed about 50 animals from Double Eagle.

Though it was a pricey service and the turf damage occurred only on the out-of-play areas near the clubhouse, it had the potential to develop into a bigger problem for the members and guests staying at the club’s overnight cottages.

“The last thing you want is a guest to run into a skunk at night,” Voss says.

Geese cause all kinds of problems, including crop damage, bird strikes and interruptions to golf play. Voss uses a combination of spray and traps to keep them at bay.

Geese are considered a pest if they damage the turf and vegetation on the golf course. Voss uses spray and traps to keep them at bay.

Other wildlife aren’t as threatening to guests but can wreak havoc on a golf course. When it comes to turf, geese are enemy No. 1, Voss says. Geese cause all kinds of problems, includ-
ing turf damage caused by nipping, aesthetic concerns associated with droppings and slippery walkways.

Voss has a two-pronged strategy to control geese, which strike the hardest in the spring. First is his pair of Golden Retrievers, Bunker and Nittany (Voss is a Penn State grad).

"I'm lucky enough to live on property, so I can get them any time there's a problem," he says of the two dogs, who are Voss's pets first and the course's geese chasers second.

His second tool to combat geese is a gun similar to a starter's pistol that launches "crackers," which scare off problem birds when they explode about 100 feet down range.

Again, living on the course is an asset, Voss says, joking that firing crackers is his full-time job in the spring. He points out this method wouldn't work for facilities surrounded by homes, which Double Eagle isn't.

OH DEER

Deer are another animal that primarily damage out-of-play areas, feasting on ornamental shrubs and trees during the winter and perennial and annual gardens in the spring. Though the turf doesn't sustain much deer damage aside from occasional footprints, deer are a problem for Voss because he maintains the facility's landscaped areas, too. Out of an operating budget in the $500,000 to $1-million range, Voss spends about $5,200 on landscaping each year.

"Deer are definitely one of our challenges because we have so many and because they eat everything," he says.

Throughout the years, Voss has learned to deter deer by maintenance practices, careful plant selection and applying repellents.

Because leaves, stems and buds of woody plants are a staple for deer, Voss makes sure all trees are trimmed up to 5 feet.

"Anything that's low to the ground gets munched on quite a bit," Voss says.

He's right. Deer consume between 2 and 4 percent of their body weight in dry matter daily, according to the nonprofit Internet Center for Wildlife Damage Management. Bucks consume the greatest amount in the spring — as much as 6.4 pounds of dry food per day. Does' greatest daily food consumption occurs in early fall, just before breeding season.

Starting in November, when Double Eagle closes every year, the lack of people on the course and reduced maintenance activities allow free access for the deer, Voss says.

By the time spring rolls around, Voss is selective when it comes to the annuals he plants in the flower beds. And perennial selection now is much different from when the course opened almost two decades ago.

"We stay away from tiger lilies," Voss says. "Forget hydrangeas and tulips."

Rabbits, too, eat many of the same flowers as deer. Voss has learned to plant later than he used to and to select annuals that don't bloom until May. Impatiens and snapdragons are two annuals that remain on his list, after ruling out many others throughout the years.

In addition to avoiding deer-attracting plant material, Voss protects Double Eagle's landscaped areas with winter applications of a repellent product called Liquid Fence Deer & Rabbit Repellent.

"It's one of the only products I've tried aside from some of the cayenne pepper products, but if you keep it sprayed on, the deer stay off," Voss says.

His staff makes about seven or eight applications — in backpack sprayers — during the winter.

"It takes a good four hours to spray everything," Voss says, noting the staff covers all the shrubs and beds in the areas around the clubhouse, guest cottages and the main entrance.

In addition to what Voss describes as a slight rotten egg smell (the product is made of about 25 percent putrescent egg solids), the downside is reapplication is necessary after it rains and every several weeks.

"I go through a lot of it, but I'm smart enough to buy it during the auction at the Ohio Turfgrass Conference and Show every year," he says, estimating he acquires the product at about 50 percent off.

The product is listed around $125 per gallon of concentrate on Liquid Fence's Web site.

"Every year I get about 10 gallons, and that's enough to last me for the year," Voss says.

Voss, like most superintendents, does what he can to rid a facility of nuisance wildlife while maintaining the natural beauty of a course — one of the reasons so many people are attracted to the game of golf.

"The bottom line is, as suburbia keeps growing, homes and courses are on what used to be woodlands, so there are going to be animals," he says. "It's just finding that balance. We're in the same boat as everyone else." GC1
WATCH AND LEARN

Many golf course superintendents are entering the “off season” and seeking opportunities for continuing education. As you assess the options for local, state or national technical conferences and gather information to keep current on topics that impact your operation, don’t overlook the opportunity to volunteer at a professional golf event in your region during 2009.

You may ask, “Why should I take time away from my golf course in mid-season to help someone else?” Consider the following:

1. By attending a professional event, you’ll be able to experience the massive effort required, involving extra equipment, personnel, course closings, enhanced staffing, additional financing, tournament budgets and posttournament cleanup regimes. This is an opportunity to document the scope necessary to accomplish certain high-maintenance tasks through pictures, videos, daily notes and idea exchanges. After several days of volunteering, you’ll be able to bring this information back to club committees and present a logical debate about why your course can or can’t provide similar conditioning levels based on budget, staffing and equipment realities.

2. Not everyone can volunteer for the Masters or U.S. Open Championship. However, you’ll see and learn as much, if not more, by attending a PGA Tour, LPGA Tour or Nationwide Tour event in your region. The preparation is as thorough with upgraded conditioning demands and similar daily tournament set-up procedures. You may be able to spend time talking with the host golf course superintendent during down times between preparation segments.

3. Beyond personal education, your goal should be to gather information to improve operations, course conditioning, labor delegation, equipment maintenance, practice area preparation and fostering relationships with club committees and outside contractors. Arrive at the golf course each day with a multipoint outline of questions for the host mechanic, irrigation technician, spray technician, associate golf course superintendents and on-course operation personnel or vendors. Don’t hesitate to ask why, who, how or where. Asking pertinent questions will garner great ideas, tips and options that may improve your operation, budgets, spray and fertility programs, irrigation philosophy and turfgrass cultural practices. Watch and listen to those who have been through previous tournament experiences.

4. Every golf course has Rules of Golf issues and questions that go unanswered, such as proper golf course marking of water hazards, out-of-bounds issues, abnormal ground conditions, penalty strokes and other weird situations that may be debated within the grill room. Observing Rules of Golf experts in the field may provide answers or opinions that can resolve an ongoing concern at your facility. The best time to approach on-course officials is during practice rounds.

5. Volunteering at tournaments is an opportunity for your staff. For assistants and interns, this should be viewed as a means to meet, greet and network with more experienced professionals. If you’re sending staff to an event, do so with a specific assignment to gather information that will assist your operation or their self-improvement. Emphasize that just sitting in and listening to the “mature” golf course superintendent will provide valuable educational opportunities, future connections and enhance the “we” and team concepts of coordinating your operation for a major event.

6. Planning and organizing is the most difficult task for any host club and superintendent. Though not on the scale of a major championship or PGA Tour competition, your club’s annual invitational event will be enhanced by witnessing what’s involved. Golf course setup, fairway contouring, hole locations, bunker preparation, primary rough heights, equipment placement and maintenance logistics are all areas worthy of observation. Take pictures or video to document the maintenance plan of the host superintendent and, inevitably, your own event will benefit.

7. You can learn from the host facility before the event. If it’s close to your facility and the host superintendent is changing or rebuilding a certain feature of his golf course, such as teeing grounds, sand bunkers, drainage, tree removal or putting greens expansion or regrassing, make a point to visit during various stages to record and observe what’s happening. This experience will be valuable if your golf course is contemplating on-course changes.

8. Usually the sponsoring organization, be it the USGA, LPGA or PGA Tour, will have a field representative visit periodically to monitor the progression of the course changes or to review course agronomic conditioning. This is another opportunity to ask questions, take pictures and learn firsthand the current technology for accomplishing these projects.

If you use your tournament volunteer experience to your advantage, it may enhance the reputation you have within your own club. Additionally, you’ll be able to accept greater career challenges, improve your job security, develop quality training methods for staff and use your own time more wisely.

By experiencing golf course preparation at a higher level, you’ll be prepared to communicate what’s involved to prepare a golf course for the world’s best players and how it can enhance your own golf course to your membership. Through professional documentation, indicate the thoroughness of your operation for your member’s daily enjoyment. GCI
Collar protection

The Muirfield Village Golf Club in Dublin, Ohio, home of the Memorial Tournament on the PGA Tour, prides itself on near-perfect turfgrass and playing conditions. Paul B. Latshaw, MSM, CGCS, director of grounds operations, and Jake Gargasz, golf course superintendent, thought of a unique way to help keep the collars in excellent condition.

When operators are cutting grass with the Toro Greensmaster Flex 18 walk-behind greensmowers, they turn the mowers on the collars, which are covered with three portable pieces of HDPE plastic sheets placed end to end to protect the collar from wear and tear.

The ¼-inch-thick plastic sheets are 60 inches long by 30 inches wide. There are four “handles” that are cut out with an electric jigsaw for the operator to move them easily from one end to the other as the greens are mowed. The plastic sheets, which cost less than $50 each, are available from a kitchen countertop store. The time it took to cut out the four handles is about 15 minutes each.

Trailer modifications

Donnie Adkins, president of Daniels, WVa.-based Aspen Corp.’s golf division, his brother Ronnie, vice president, and Lenzie Bennett, shop foreman, modified a Pronovost model 5103S three-sided dump trailer for more efficient use on fairway and rough turf. Their modification to the trailer, which has a 10,000-pound capacity, included:

- Adding larger, special-order turf tires and wheels;
- Modifying the tandem axle beams to double their strength;
- Adding 4-inch lift kits to raise the dump body from rubbing on the larger tires; and
- Lowering the trailer hitch about 8 inches to compensate for the trailer body being about 12 inches higher than before.

The 4-inch lift kit, tandem axle strengthening and trailer hitch were prefabricated in-house using scrap and new metal at their shop.

Adkins and Bennett have a patent pending on their modification ideas.

The total cost for the parts, supplies and labor was about $5,000. SCI
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SUPERINTENDENT PROFILE  
continued from page 25

tion and a down economy hurt them as well as the rest of us. We do so much that benefits the community economically. We have a wonderful caddy program, for example. That’s a huge contribution to the community. I hope we get the ear of the politicians, and the golf industry can continue to thrive.

How do you balance your environmental reputation with the real world? We often want to fantasize about being “organic,” but for now it’s a bit of a pipe dream. Some green things work, some don’t. To go completely organic, managing a highly manicured monoculture such as turf, in a disease-prone area like Chicago isn’t realistic. Snake oils and witches’ brews are way too common. We’ve tried most of them, and it’s discouraging. But, at least you learn what doesn’t work. With some, their effectiveness relies on integration with other inputs and cultural practices supporting the holistic approach. But there are no silver bullets.

Your name comes up a lot when companies talk about who’s testing their products. When someone approaches me to test something, I ask who’s already done the university research. We’re not researchers, we conduct on-site evaluations. That’s a different standard. We’ve learned to be cautious because we’ve learned the hard way about how people position what we do and say. Now, whenever I want to do a formal study, I try to pull in local researchers to be part of it. People like Derek Settle, Ph.D., at Chicago District Golf Association, Tom Voigt, Ph.D., and Bruce Branham, Ph.D., at University of Illinois and other professionals. It gives us a much higher comfort level.

How do you want to be remembered? As someone who was approachable, helpful and hopefully open-minded but driven by science.

Final thoughts? Despite everything, the environmental movement is alive and well. Water, climate change and energy will drive much public concern. As a society, we’ve been lulled to sleep for the past few years. It’s like the energy crisis. We had an early warning in the 1970s and then kind of forgot when gas got cheap again. This is chapter two of the environmental movement, and golf will occupy some people’s concerns. Our job is to get them to listen to science. It needs to be part of every superintendent’s job. Short-term solutions are out. We need to think long term and about the big picture if we’re going to sustain the great business we’re in.


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CHICKEN LITTLE MENTALITY

My Blackberry – yes, I've finally given in and become one of those information-crazed, PDA-toting dweebs – buzzed incessantly the night of November 4 and the morning of November 5.

As people from throughout the golf industry responded to the outcome of the presidential election, the messages, texts and e-mails ranged from “I'm moving to Canada!” to “I can't believe we’ve become a socialist nation!” to “It's the end of the world as we know it.” But, the main theme was, “This is going to be terrible for the golf business.”

I was tempted to reply, “Oh my, the sky is falling!” and hit “send all” on my cursed communication device to all of the Chicken Littles out there.

But, I resisted that temptation because, like many of you, this isn’t my first rodeo. I’ve been through this before, and we’ll probably go through it again.

My friends – as John McCain is overly fond of saying – let me tell you one thing about the outcome of the 2008 presidential election that I well and truly know for sure: The sky isn’t falling on the golf industry.

First, let me be clear: The sky is most definitely sagging over American business in general. It isn’t going to be pretty for anybody for a few years. But it’s largely understood that no president is bigger than a global economic cycle. Basically, we’re all in the same boat for a while no matter who’s the captain.

I don’t think the Obama administration will be better for small to mid-sized businesses, such as golf courses. There’s no question for-profit operators will see tax increases of some kind or at least a rollback of Bush’s tax cuts. But I don’t believe we’re any more likely than anyone else to be on the White House’s hit list for more regulation or special disfavor. It’s not as if golf – like the insurance or petroleum industries – actively opposed his candidacy through political action committees or other institutional efforts. Hell, even if we wanted to try something like that, we’re just not organized enough to do it.

The bottom line is that this new administration, most assuredly, has bigger fish to fry than us. Also, remember the industry brouhaha that accompanied Bill Clinton’s election in 1992? His liberal agenda supposedly included putting Al Gore in charge of the EPA and letting him eliminate pesticides and tightly regulate “resource wasters,” such as golf. Gee, you know what? That didn’t happen. Instead, golf grew dramatically, and we made inroads with the government and began to carve out a reputation as relatively good environmental citizens.

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My sense is that, like Clinton, Obama may be more of a centrist when it comes to business and the environment. I hope I’m right. The real risk comes from Congress, but that’s another column for another time.

The other thing that’s happened since 1992 is that we’ve made significant improvements in our environmental performance. Most of the chemistry used now is superior, less toxic and much less mobile or persistent. Water management technology and “smart” genetically improved turf-grasses also have advanced tremendously. We’ve fixed almost all of the gaping holes in our eco-friendly story, and that will serve us well.

Recently, I interviewed the chief of EPA’s nonpointsource pollution division regarding its concerns about the green industry. Pesticides and fertilizers barely figured in the conversation. Their main problem with lawns is they tend to be part of nonpermeable developments. In short, rainfall hits them, runs off in massive quantities and erodes streams and watersheds without having a chance to recharge groundwater. Guess what golf courses tend to do? Act as big-ass recharge basins for groundwater.

And, to give credit where it’s due, the GCSAA has done a pretty fair job of staying in front of the EPA and other regulators with environmentally positive messages. When the time comes for the administration to start pointing out good guys and bad guys, I’m pretty sure we’ll make the “nice” list instead of the “naughty” list.

Finally, the allied golf community has, at long last, gotten off its collective keister and started promoting the remarkable economic impact of our industry on Capitol Hill. The PGA Tour, PGA of America, GCSAA and other organizations seemed to have a good first round earlier this year with the National Golf Day concept.

And, despite other reservations I have about Tour commissioner Tim Finchem, he’s the de facto leader of this effort, and you can’t deny he knows his way around the Beltway. After all, that’s where he got his start before landing in the commish job.

So, it may be a bit dreary and overcast right now, but the sky remains plenty high above our heads. But remember, Chicken Little got bonked on the head by an acorn or two in that old kid’s story. I fully expect acorns from local and state governments will continue to drop unexpectedly on our noggin’s from time to time. The risk to us is that we worry so much about the danger from the sky, we forget about those acorns that could still knock us silly if we’re not paying attention. GCI
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