Our panel of experts sets the record straight on popular myths and misconceptions in golf turf maintenance.

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DON'T BE @THATGUY

People often ask me, "Pat... how can I become a social media powerhouse and dominate Twitter and Facebook?" (Well, people don't necessarily ask me that exactly. Most of the time they're asking me if I'm Bill Cowher. But let's just pretend that they ask me – at least for purposes of having a premise for this column. Look, I have to write a gazillion of these damn things every year and I'm generally starting them about the time the printing presses are warming up. So humor me. But I digress...)

Rather than answering that question, I suggest that they study the social media habits of someone many of you know. I call him @thatguy. Here are a few great examples of the technique that's made him so...noticeable...online:

HE'S OUT TO CHANGE MINDS. He's on a mission to convince the world that his cause is just and true, whether it's politics, religion or an ex-girlfriend who had the temerity to drop him. He knows that if he posts enough memes about something, all of his friends – despite their beliefs – will see the wisdom of his point and actually thank him for that pivotal 412th post about how Star Trek is vastly superior to Star Wars. He's 100 percent right, so he can ignore that rule about how social media is like a cocktail party and it's best to avoid loud discussions about touchy topics!

HE'S A MULTITASKER. He wants to cover all of his bases so he has cleverly set up his Twitter and Facebook accounts to be linked. That way every time he Tweets, it shows up on his Facebook feed. This allows his Facebook friends the opportunity to read posts like "This bar sucks!! #nohotchicks." This is awesome because it shows that @thatguy is a rebel who defies the conventional wisdom that Twitter and Facebook are entirely different media. Besides, he's sure that his Facebook friends enjoy having all of those Tweets clogging up their feeds.

HE'S A CONVERSATIONALIST. Twitter is pretty much like texting, right? So why not have a long back-and-forth Twitter/texting conversation with someone else? Just because it's exhausting for his followers to try to make sense of all of it, there's no reason not to have that 50-post conversation about the starting QB for the Browns offline, is there?

HE'S A HASH ADDICT. Clever use of hashtags is a hallmark of guys like @thatguy. He'll slap #turf, #golf and #LOL on everything to make sure his brilliance turns up in searches for those terms. Never mind that many consider this to be a case of hashtagdiarrhea. This is particularly awesome when he's auto-posting those Tweets over to Facebook (see above).

He's on a mission to convince the world that his cause is just and true, whether it's politics, religion or an ex-girlfriend who had the temerity to drop him."

Nope, my friend @thatguy sets the bar pretty high when it comes to social media. You probably have no chance of being a Twitter Tycoon like him because you're probably keeping your posts apolitical, crafting Tweets and Facebook posts in a style that fits the media, being considerate of your followers by not over-conversing, and keeping your hashtags #simple, #relevant or #fun.

So, when people ask me how to become an uber-expert who can establish a great social media presence and keep followers engaged, I tell them that there's one simple rule: Don't be @thatguy. GCI
You have a hand in creating unforgettable memories.

Long before the first pairing tees off, you’re on the job, making sure the course is in the best condition possible. It’s the kind of hard work that often goes unnoticed. And yet, your devotion and resiliency is unwavering. Because the end result is always where your workday begins.

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Your dedication. Our commitment. Together we have great chemistry.
The annual Carolinas GCSA Conference and Trade Show in Myrtle Beach continued to draw the attention of the national golf industry as the largest regional show. Here are a few highlights from the Nov. 18-20 show:

- Attendance at the show held steady this year, with about 2,000 superintendents and others coming together at the Myrtle Beach Convention Center. Last year’s show brought in about 2,100 participants.

- Gross revenues from the event overall hit an all-time high of $650,000, with about 200 individual companies represented on the show floor. In total, 384 booths were sold.

- Out at Barefoot Resort, 327 golfers took on the annual Carolinas Championship, with Matthew Wharton of Carolina Golf Club in Charlotte, N.C. taking the victory with a round of 79 on the Fazio course. Of those not golfing, 63 shot sporting clays, won by Randy Mangum of Corbin Turf and Ornamental Supply.

- In the classrooms, 1,326 seats were sold across 28 seminars.

- Brian Powell, CGCS of Old Chatham Golf Club in Durham, N.C. as the new president, with Bill Kennedy, CGCS from Chechessee Creek Club in Okatie, S.C. as the new vice president. David Lee of Hope Valley Country Club in Durham, N.C., was elected secretary-treasurer. Chris DeVane of Forsyth Country Club in Winston-Salem, N.C., joined the board of directors.

- George Fisher received the Carolinas GCSA’s highest honor, the Distinguished Service Award for his work in the golf industry for more than 40 years. Fisher started as a golf superintendent and has worked in sales and customer relations management with Smith Turf and Irrigation since 1998.

The AeroLawn 3000 made its debut, getting a bird’s-eye view of the Carolinas Championship. Check out the footage by heading to bit.ly/GCICarolinas13.
The relationship between superintendents and vendors is incredibly important to both sides – and when they’re working together, everyone benefits. But when competition plays rough, sometimes superintendents feel like they need to push back.

Clay DuBose @ClayHomerun
In 2014 business with some vendors will be done differently, some will like it, some won’t!

Clay DuBose @ClayHomerun
Some sales folks are destroying relationships, trash-
ing other companies and their products trying to get ahead.

Jennifer Seevers @jenniferseevers
If you can’t sell your product on its own merit without degrading others it may be time for a new line of work.

Terry Davio @terrydavio
Not a good way to do business at all.

GCI Magazine @GCIMagazine
Going negative is never, ever a way to win customers long-term.

Tommy Hewitt @turf_hewitt
No company has the perfect product all the time. Be honest and you will earn my trust then my business.

Mike Mixon @mikesgolfshop
STAY POSITIVE ! STAY POSITIVE ! STAY POSITIVE !

Join the conversation on Twitter @GCIMagazine!

Clarification
In Henry DeLozier’s November 2013 column, “No other business like it,” he incorrectly cited National Golf Foundation statistics concerning the participation levels for women and minorities, underrepresenting both groups. In fact, women account for almost 20 percent (19.8 percent) of all golfers and minorities account for about 19 percent (19.4 percent).

As a recent trip to Asia was fruitful and there are a few interesting observations to share. Asia is a huge continent, so it takes a while to get around to the many golf meccas that exist or are in development. We often hear China is golf’s next frontier for development. Trust me when I say there is so much more to golf in Asia than China.

Since there are no real accurate records let’s say there may be between 500-600 courses in China, as some are known as people’s parks. There is currently a moratorium on building or permitting golf courses in China with the exception of tourism zones that are dictated by the government to encourage travel, tourism and outside money coming to China.

Most of the architects and builders tell me they have quite a few projects on the drawing board and are just waiting for the new regulations and permitting to take place. Nobody is sure when that will happen, but if and when it does it could be a huge development boom in China. In the meantime, 500 courses that have been developed in the last 30 years is nothing to sneeze at.

Many of the expat jobs that once existed in China have been filled by local superintendents who were trained by the US, UK and Australian superintendents involved in the construction, grow-in and opening of those clubs. There are still a couple dozen of the old guard, but the norm is to transition to Chinese superintendents. Therefore, China is not the land of promise it once was for those seeking superintendent jobs. – Bruce Williams

Podcast pick of the month

It seems like there can never be too much potassium as a turf input, but is that really the case? Dr. Micah Woods, chief scientist for the Asian Turfgrass Center, talked with us about why it’s a better idea to take more control of it as a part of our ongoing series on sustainability. Head to bit.ly/1cjpvSm to hear it.
Every industry has them—popular beliefs that have no basis in fact but are spread around eagerly with an air of certainty. Who knows where they start? A conference, a blog, the corner tavern? While they may be popular, most if not all are false.

Same goes for the golf turf world. In asking industry experts what the most common misconceptions are, they came up with no shortage of famous untruths covering cultivation practices, insect control and other topics.

**MYTH #1**

Warm winters mean more bugs, cold winters mean less.

**VERDICT:** False.

Rick Brandenburg, professor of entomology at North Carolina State University, says this is simply not true.

“Nature has a way of balancing itself,” he says. “You could say since it was warmer that they survived, but so did a lot of their natural enemies. I don’t care if you’re in south Georgia or southern Canada, you can’t assume that you will have more bugs if you have a warm winter.”

First, Brandenburg says a warm winter in Canada doesn’t compare to even a cold winter in south Georgia.

“White grubs such as Japanese and oriental beetles live in both Canada and South Carolina, so insects have incredible adaptability,” Brandenburg says.
**MYTH #2**

Microbes need to be added to improve soil.

VERDICT: False.

"The microbial community in turfgrass soils is plentiful and diverse," Pat Gross, USGA Green Section Southwest Region director, says. "Additions do not improve soil conditions in any significant way. The microbial community is mostly influenced by moisture, air porosity, temperature and nitrogen content."

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**MYTH #3**

Golf courses play better when green.

VERDICT: False.

From a golfer's perspective, they believe courses are better when they're green. Larry W. Gilhuly, USGA Green Section Northwest Region director, defiantly says, "No, they are not."

"They're not as healthy and don't play as good from a pure playing standpoint. Green courses don't play nearly as good as courses with a little more firmness to them. And that would be the North America vs. Great Britain or Scotland approach."

The result, says Gilhuly, is that superintendents are caught in the crosshairs. "The vast majority of superintendents would back off if allowed, but golfers dictate in North America."

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**MYTH #4**

Vertical mowing makes greens faster.

VERDICT: False.

Also from the golfer's perspective is the idea that vertical mowing will make greens slicker. But Gross says the opposite is actually true.

"It temporarily slows them down for a couple days," he says. Gross says it goes like this: members are always asking what the club down the street is doing, and when they hear the superintendent is vertical mowing, all of a sudden they think their own superintendent isn't vertical mowing enough.

"And they're completely oblivious to what the practice really achieves and why it's done," says Gross.

---

**MYTH #5**

Applying a little extra water is always better.

VERDICT: Usually False.

This is not always true, says Gross, unless the course uses recycled water and must manage salinity.

"This attitude results in a waste of water along with soft, wet playing conditions," he says. Gilhuly concurs, saying a lot of people believe this but the top superintendents do not. "But they're forced into it by people who think golf should be green."
Your pest problems will always stay the same.

**VERDICT:** False.

Brandenburg believes there is the perception out there that the pest problems you’ve had for 20 years will continue to be the same problems you have in the future. And that’s simply not correct, he says.

“If you look at the diseases and weed issues we’ve dealt with over the last 20 to 30 years, those have changed, partially because products we use and our cultural practices have changed. The same certainly holds true for insects on a golf course. As we change how we do business and the products we use, we see shifts away from some problems to others.”

The best example, Brandenburg says, is 30 years ago when he started his career in the southeast and people were concerned about sod webworms.

“The reality is I haven’t seen a sod webworm problem in 20 years in North Carolina. But 30 to 40 years ago, people had problems with them.”

Brandenburg stresses that a problem that you’ve historically had that eventually subsides isn’t necessarily an indicator that you’ve done something wrong; instead, it’s a reflection of changes in production and cultural practices.

“Insect problems do change over time, not overnight but over 20 to 30 years,” he says.

---

**MYTH #7**

We don’t have to worry about insects developing resistance to products we use.

**VERDICT:** False.

“Historically, we have seen it with certain products that were used so much that soils contained many microorganisms that would break it down very quickly and it wouldn’t work,” says Brandenburg.

The idea of “Well, it’s working so let’s use it again and again,” has been proven to be a bad strategy in, for example, the northeastern U.S. with the annual bluegrass weevil.

“Being on a golf course setting where we think insects come and go all the time, resistance is an issue that superintendents need to be concerned about because it can and does happen.”

---

**MYTH #8**

Rolling greens will compact the soil.

**VERDICT:** False.

Gross says that’s simply not the case. And there is a lot of research validating that, whether it’s on native soil or sand greens.

Gilhuly agrees, saying he runs into that all the time.

“All the research shows it doesn’t compact the soil at all but just wears the leaf blade off,” he says.

“So if the turf starts to go on the edges, it’s because of wear and not because of compaction.”

Gilhuly cited the 2010 U.S. Senior Open in Washington where the superintendent thought he could firm up the approach by rolling it six times. Gilhuly then tested it with a Tru-Firm and found that it didn’t change at all.

(continued on page 48)

“Katana® absolutely knocked them out for me!”

– Daryl Pearson, Golf Course Superintendent, Winterstone Golf Course, Independence, Mo.

Winterstone Golf Course Superintendent Daryl Pearson had a problem – one that golfers and ownership had noticed: weeds.

“We had it all,” Pearson said, “All the broadleaf weeds: clover and dandelions, plus Poa and yellow nutsedge. But the biggest problem was fescue, especially in target areas.”

His solution: A single application of Katana® Turf Herbicide.

“Katana absolutely knocked them out for me,” Pearson says. “I haven’t had to retreat those areas. They’re all still clean.”

Katana delivers exceptional control of 58 sedges, broadleaf, and grassy weeds, plus Poa annua and the fescue that had invaded Pearson’s fairways.

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THE 2013 GRAINY AWARDS

The year’s best cues and miscues.

It’s time for the second annual Grainy Awards. It’s certainly been a year of wild theatrics in golf, roller-coasting back and forth between soap opera and tragi-comedy. There’s been everything from failed coups, to anchors aweigh, rules infractions by the great and not-so-great, even critical reviews for the image of a near-inanimate object acting comatose on a schoolroom floor. With so much acting, shot producing, and even a little bit of make-up (Tiger and Stevie shaking hands), it’s time to get down to business. So with apologies to the Oscars, I’m borrowing some of their categories to award the year’s best cues and miscues.

Best Animated Feature: Brandel vs Tiger
Self-confessed 4th-grade math-cheater Brandel Chamblee took on Tiger Woods, who apparently is in need of a Rules of Golf book stocking stuffer. Thankfully, this drama came to an end as quickly as it started. Too bad Chamblee had to turn in his card from the writer’s union while he remains an A-List performer.

Best Director: Matt Shaffer, Golf Course Superintendent, Merion Golf Club
Shaffer took on an unprecedented (at least over the past three decades) project in a challenging location with many moving parts and unpredictable weather and proved the “little course that could” packed a big punch.

Best Original Score: Dustin Johnson
Lands Wayne Gretzky’s daughter
Nothing more needs to be said! Let’s hope they make beautiful music together.

Best Sound Mixing: Team USA at the Solheim Cup
The cacophony of whining and complaining became deafening about everything from the Rules to the time of day to the sun coming up in the east — earned the team a special award for their remake of “The Ugly American.” Congratulations to Team Europe for exuding grace, class, and sportsmanship from start to victorious end. Their collective behavior earns them a nod for Best Silent Feature.

Best Animated Short Film: “Dufnering”
Actually, it was more like un-animat-ed. And the comedy hit of the season. Lead actor Jason Dufner also earned a nomination for best supporting actor following his heart-felt (butt-felt?) embrace of his wife’s rear projection at Oak Hill in the wake of his PGA Championship victory. (Yes Jason, they like you. Her, too!)

Best Adapted Screenplay: The Rules of Golf
Get me rewrite! The Rules of Golf were in the news more this year than any time in recent memory. From armchair analysts calling into the networks, to balls at rest moved, to 14-year-old Guan Tianlang being indoctrinated into the big leagues the hard way, even a couple of DQs thrown in for good measure, The Rules of Golf made headlines right to year’s end when the USGA and the R&A announced a whopping 87 changes to this venerable book. A Best Editing nomination is in the bag!

Best Adapted Screenplay: Fox Sports
This award is being given in expectation that beginning in 2015 the golf audience will be treated to either a masterpiece or a mess when Fox takes on the U.S. Open. The hope is that future Opens will be more “That’s Entertainment” and less “Apocalypse Now.” Maybe they’ll try to illuminate the golf ball as they did the puck in hockey a few years back. For a billion dollars plus, they’ve got to come up with something.

And now, the big winners:

Best Director: Ted Bishop, President, PGA of America
Considering the other “directors” he was up against, this award was a slam dunk for Bishop for his staunch defense of his constituents—PGA professionals—and for taking a firm stance against the anchoring ban proposed by USGA and R&A.

Best Actress in a Leading Role: Inbee Park
She put on a great show in nearly every performance. Too bad no one came to the theaters to watch.

Best Actor in a Leading Role: Phil Mickelson
Tiger Woods may be the Meryl Streep of this category (nominations nearly every year, occasional victories), but how could I not bestow the best actor award on Phil for his overseas heroics at the Scottish Open followed the next week at the British. His historic Sunday at Muirfield, with full family in tow, was easily the most memorable moment of 2013 for Phil and golf fans everywhere. And knowing Phil, his acceptance speech is still going on.

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Supers in the spotlight
When the situation calls to engage the general public, a stand-out superintendent makes all the difference as the game’s representative.

by Trent Bouts

At 6’3”, dark-haired and with a jaw line as rigid as rebar, Darren Davis could be the next James Bond if he wasn’t so happy growing grass instead. Those looks may be a factor in why Davis, golf course superintendent at Olde Florida Golf Club in Naples, Fla., is one of a handful of superintendents in the country whose profile extends beyond the far side of the driving range.

Last year, a poll by another magazine declared him among “the most famous living superintendents” in the country. His face and words have appeared in print and on screen for more than 20 years in outlets ranging from his local chapter magazine to the Golf Channel. Also in 2012, the same year he was elected to the board of the Golf Course Superintendents Association of America, this magazine, Golf Course Industry, gave him the Kaminski award for outstanding leadership in social media.

“He has a presence about him, definitely,” explains Jeff Bollig, who spent nearly 20 years as GCSAA’s senior communications director. He left GCSAA in November.

But for an inch or two, the same could be said of Bob Farren, CGCS from Pinehurst Resort in Pinehurst, NC who also made that list of the most famous. As one of the public faces of the golf course story for enormously successful U.S. Open Championships at No. 2 in 1999 and 2005, Farren saw the kind of ink never experienced by the previous generation. Never experienced, perhaps, but it’s not like it was never imagined.

On the contrary, superintendents spending time in the spotlight was very much the vision of leaders like Randy Nichols, CGCS who helped steer GCSAA and, by extension, the profession it serves, into a new era while president in 1993. That impetus to raise the profile and improve the image of the golf course superintendent was central to the roles occupied first by Pat Jones, now editor of GCI, and until November by Bollig.

The directive was for GCSAA’s communications department to build platforms for superintendents to be seen and heard. The thinking was that if their work was better understood, it would also be better appreciated and, ultimately, better rewarded. But theories often require modification once they leave the lab for the real world and there were hurdles from the outset.

For one, superintendents operate mostly out of sight. Invariably, their office is
tucked deep on some pocket of the property where it’s further by concealed behind fences or strategic plantings. They are busiest on the course when golfers are not, and, in fact, are often resented when exceptions occur. Further still, it didn’t – and still doesn’t – help that golf course stories can be difficult to sell to editors and tell to readers.

Most reporters don’t know their dollar spot from a Dollar Tree. And even if they do, the pure turf stuff hardly makes for sexy copy. “I would tell any superintendent, ‘If you even utter the words anthracnose or pythium, I’ll shoot you!’” Bollig says. “You’ll lose them (reporters).”

Then there’s the question of the interviewees themselves.

Historically, and to this day, the vast majority of superintendents prefer to let their work do the talking. The very nature of that work reinforces a tendency towards caution and moderation. They are not encouraged to take risks, stick their necks out. The stakes are simply too high should things go wrong.

Contrast that with the media’s reputation for stirring the pot and you can see why the two groups are not exactly attracted to each other. No superintendents want to earn their facility a bad headline.

All of which goes to explain, or more accurately, justify, Bollig’s completely off-the-cuff and tongue-in-cheek response on the subject of generating publicity for golf course superintendents: “We want some attention, but we don’t want it.”

When he came on board at the national headquarters in Lawrence, Kan., the plaintive cry from the profession was constant: “People just don’t understand and appreciate what we do!” It was true. Credit to the likes of Bollig and others stretching back 20 years now, including a string of volunteer leaders at GCSAA and paid administrators like Steve Mona, now at the World Golf Foundation, that the chorus of complaint has lost some volume.

Today the profession enjoys more time in the spotlight than ever before. Over the years GCSAA has invested big money buying airtime and column-inches. But it has earned plenty more by massaging relationships. As Bollig reflects, “What price tag do you put on a 45-second discussion about GCSAA and its members by David Feherty during the Sun-
day afternoon telecast of the Masters?" The upshot, generally speaking, is that today's golfer has a far more sophisticated view of the golf course superintendent.

Whether that progress has fully delivered on the original premise is up for debate. GC-SAA's salary surveys might suggest so. But any picture has been muddied severely by events like the bursting of the tech bubble, 9/11 and, more recently, the recession. The accompanying contraction in golf and golf spending has few superintendents cheering about their professional outlook. Yet none are worse off because of the superintendent image campaign. They would be if Caddyshack was still the only thing out there.

For all of that, there is another significant aspect to the story that swirls about in the shadows outside the spotlight occupied by the likes of Davis, Farren and a small cadre of others. Recently, another of that band, Ken Mangum, CGCS, from Atlanta Athletic Club was inducted into the George Golf Course Superintendents Hall of Fame. He had already been on the cover of the association's magazine earlier in the year for winning GC/SA's Distinguished Service Award and was before that, in 2011, when hosting the PGA Championship.

"There was a point (around the PGA Championship) when I lost count of the number of magazine covers I was on," Mangum says. "And, you know, I did hear from some people saying, 'I'm getting tired of seeing your face,' in a joking manner. I guess it's like complaints about your golf course. You don't get many directly but you hear about people saying things to each other."

Mangum is not alone in that experience. "Certainly, I've heard people criticize friends I have in the business who are the in the spotlight regularly," Davis says, in the same breadth acknowledging the logical extension that others likely take similar pot shots at him.

Mark Esoda, CGCS, from Atlanta Country Club was inducted into the Georgia GC/SA Hall of Fame at the same ceremony as Mangum. Perhaps in cart-before-the-horse fashion, he had already been inducted into the Georgia State Golf Hall of Fame two years earlier. His leadership on the frontlines of water issues and more has seen him quoted beneath many headlines and the winner of multiple awards. He too has heard and felt the grumbling. "That sentiment is out there," he says. "There's been private stuff and stuff that has filtered back to people. It's not just in
our profession. It's in everything, this tendency to be resentful of success. I don't know why it is but I think it's out there. I would be less than honest if I said I wasn't aware of it."

Jeffrey Connell, now superintendent at Fort Jackson Golf Club in Columbia, S.C., was on his way to becoming president of the Carolinas Golf Course Superintendents Association in 2010 when he became uncomfortable with the amount of publicity he was getting. The Carolinas GCSA was the first regional association in the country to employ a full-time communications director and as a rising star Connell was one focus of resultant media traction.

"It was all so new and I was getting some heat from other guys in the business who were tired of seeing my face," he recalls. "But then I realized I could refer media enquiries to some of those Atlanta Athletic Club's Ken Mangum

same people. And that was always the goal, for everyone in the profession to benefit because it was finally a superintendent, not the golf pro, talking about the golf course."

"Not everybody sees you as a serial murderer," Esoda laughs. "Our families, our employers and the vast majority of our peers, they appreciate it. The few detractors out there are not going to get in the way of the good that comes out of it. Everybody in our industry has the obligation to step up and defend what we do. If you're not going to then you're doing yourself and the profession a disservice."

Mangum concurs. "I think we all have a responsibility to generate a positive impression," he says. "I guess some people could be jealous because I was on TV a lot during the PGA Championship but I felt like I had a
It was all so new and I was getting some heat from other guys in the business who were tired of seeing my face. But then I realized I could refer media calls to some of those same people. And that was always the goal, for everyone in the profession to benefit because it was finally a superintendent, not the golf pro, talking about the golf course."

— Jeffrey Connell, Fort Jackson Golf Club

huge responsibility for the whole profession. My job is to make my club, my profession and, I guess, me, to look good along the way.”

It may be easy for some people to forget that Mangum is 60 and has been in the business a very long time. It’s not as if he fell into the role and status he now commands. Above all else he’s had to be able to grow grass in order to survive so long, let alone thrive. He had to learn the other stuff on top of his “day job.” None of it came as a birthright.

Mangum was a rookie superintendent at a municipal course in Montgomery, AL when the director of the Department of Parks and Recreation called to say a camera crew was on its way to film a five-minute public service announcement promoting the golf course. He wanted Mangum to do the talking.

“We didn’t go out onto the golf course,” Mangum says. “It was all shot in a room with a camera four feet away from my face and I had to talk for five whole minutes. I was maybe 25 and when it was done I said right there and then that I was not going to let myself feel like that again. I won’t ever forget that moment staring into that camera. I hope that film doesn’t exist anywhere. I’d hate to see it today.”

Mangum subsequently made good use of public relations and communications education provided by GCSAA, whether at the annual conference, now Golf Industry Show, or when he was on the national board of directors. “Those are the classes guys should be taking,” he says. “But what fills up first at every conference? The agronomics. You’ve got to get out of your comfort zone.”

At 46, Davis may be closer than Mangum in age to today’s me-generation but it’s not like he takes that proximity for granted. More than a decade after leaving Penn State with a turf degree in 1991, Davis went back to college at Florida Gulf Coast University, graduating summa cum laude with a bachelor of arts in communication in 2007.

“You know what, everything I’m doing I’m doing because I enjoy it and I want to give back,” he says. “Sure, it can be very comfortable behind the scenes. But if we want to get our profession out of the valley then we have to get out from behind our desks or we’ll never get anywhere.”

Ultimately, it comes down to a simple question, whether it’s Esoda speaking to government officials or the likes of Davis, Farren or Mangum speaking to the Golf Channel. “Who would you rather have the people go to for information about your golf course,” Mangum asks. “The general manager, the golf professional … or you?”

Trent Bouts is a Greer, S.C.-based writer and frequent GCI contributor.

WHEN SPEED MATTERS

SPEEDZONE WINS.

The competition can talk all they want, but when the checkered flag drops, the winner is clear: SpeedZone® Broadleaf Herbicide for Turf. SpeedZone delivers broad-spectrum control of the toughest weeds fast. In fact, you can see visible results within 24 hours. That means more happy golfers, and it’s one of the reasons SpeedZone is the #1 speed herbicide on the market.
Jeff argues sand capping fairways makes course expensive and unnecessarily difficult to build, but there are benefits to consider.

As a young, green-as-a-pea golf course architecture intern, I read an article lauding some upscale new course for sand capping fairways. I joked that perhaps someday, we would be building USGA spec fairways. While we haven’t got there yet, we seem to be slowly moving in that direction.

The prevailing wisdom in the first 500 years of golf course building was to use native soils. As golf spread from the sandy shores of Scotland, God apparently didn’t foresee the need to provide adequate sandy golf soils everywhere, and man had to adapt. Early architects experimented with soil improvements, focused mostly on greens. Improved soils for tees and fairways couldn’t be far behind.

As golf courses have generally drifted further from the “natural” to the “constructed” mode, sand capping the fairways does make sense, as many golf courses have struggled with inadequate topsoil, despite many cultural attempts to correct deficiencies.

Like other trends, sand capping seemingly originates at high-end courses because: They can afford it; they are keeping up with the Jones’s; or their members have unrealistically high maintenance expectations.

Since courses play follow the leader, I believe sand capping would be accelerating even faster, if not for the combination of a down golf economy and the million-dollar price tag generally associated with it.

I dislike the idea because it makes courses unnecessarily difficult and expensive to build. However, it’s been necessary on some of my new and re-model projects because of inadequate topsoil quantity or quality. Where we have sand capped on renovations, it has improved the turf dramatically.

With deteriorating irrigation water quality in many areas, it is common for the existing topsoil to become contaminated with salts. In these cases, sand capping allows flushing irrigation salts through the top layer, which is becoming as much necessity as luxury in some cases. Many courses would benefit from this expensive procedure in long-term benefits, if they can afford.

The whole process is both complicated and time-consuming during construction, which must be figured into any schedule.
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GETTING FROM GOOD TO GREAT
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We’re in constant pursuit of excellence. It is our nature to want to improve and be the best we can be.

Three decades ago, author Tom Peters put that time-honored truth onto the pages of a business best-seller and he’s still adding disciples and riding the financial windfall.

Long before Peters prescribed a path to excellence, Dr. Martin Luther King was reminding us that excellence should be the goal of us all.

“If a man is called to be a street sweeper, he should sweep streets even as Michelangelo painted, or Beethoven composed music or Shakespeare wrote poetry,” King said. “He should sweep streets so well that all the hosts of heaven and earth will pause to say, ‘Here lived a great street sweeper who did his job well.’

You would have to say legendary UCLA basketball coach John Wooden, whose UCLA teams won 10 national championships in 12 seasons, knew something about motivating players toward that goal. “If you don’t have time to do it right, when will you have the time to do it over?” the Wizard of Westwood often asked.

Excellence is the objective for every club and every course, as well as for the people who run them. But in the absence of great motivators like Wooden and King, how do we pursue — and most importantly sustain — excellence? Here are five actions to consider.

DEFINING MEASURABLE GOALS. Set your goals and measure results against a pre-established standard of excellence. Goals without measurement are simply good intentions. Just as you can measure green speed or moisture content in the soil, you also can measure excellence in its simplest forms.

ESTABLISHING A REPEATABLE PATTERN FOR SUCCESS. Which actions and results create the standard of excellence that you’re seeking? Which systems and processes sustain the desired results? Is it time-oriented, volume-specific or a percentage of a greater whole? Things that get measured get managed; they also tend to get better.

How will you and your management team consistently exceed the standards you have set? The key to consistently performing at a high level is repetitive action and practice. One must invest the time and effort to become extremely proficient at executing the aggregation of simple acts that add up to superior results. As Aristotle wrote, “We are what we repeatedly do ... excellence, then, is not an act, but a habit.”

In “Outliers,” author Malcolm Gladwell told of the law of 10,000 hours. He cited the example of the night-after-night practice that the Beatles invested in the early ’60s, testing sounds, instruments, lyrics and rhythms to create what everyone who has never paid the price of 10,000 hours assumes to be a gift. If excellence is a gift, it is a gift those who achieve it bestowed on themselves.

The key to consistently performing at a high level is repetitive action and practice.

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How will you and your management team consistently exceed the standards you have set? The key to consistently performing at a high level is repetitive action and practice.

DREAM BIG AND SET GOALS THAT LEAD TO EXCELLENCE. In “Good to Great,” author James Collins encourages seekers of greatness to develop BHAGs — big, hairy, audacious goals. The improved likelihood of achieving greatness as a result of setting and working toward aggressive goals is proven in the sports and corporate worlds. Club managers, golf professionals and golf course superintendents can do the same. What’s your BHAG?

EVALUATE, ADJUST AND RAISE THE BAR. In “Good to Great,” Collins makes the point that “good enough” never is. The pattern of superior performance must be monitored and improved in order to sustain progressive improvement. Each manager — from the GM to the superintendent — must develop a reiterative method of study and evaluation to ensure the outcome continually improves.

In any business, there are those who excuse themselves from the pursuit of excellence by assigning blame or making excuses. They never seem to have the budget or the staff or the support to do an excellent job. These are the same people who get stuck in the same ruts and seem eternally frustrated.

In contrast, the pursuit of excellence can be extremely empowering. In concert with your owners and managers, set goals for the coming year that are reachable under current conditions and with your very best effort. Once you achieve those goals, you might just find that it’s a lot easier to ask for a budget increase and maybe a larger staff to tackle the next set of goals.
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Erik Sides sees it time and time again. Golf crews think they’re doing something good when they meticulously wash off a mower after use, sometimes every day. But they don’t realize the harm they could be doing to the mower’s electrical components.

“Washing the mowers is great, but a lot of times they’re using an irrigation line with irrigation water pressure which is really high with a huge amount of water,” says Sides, executive director of the Equipment & Engine Training Council. “If they spray the instrument panel area where the key and PTO switches are, water intrusion into those switches could cause a ‘no-start’ condition down the road.”

Another issue, Sides adds, occurs when the source for water typically used for washing is...
One common sense issue rarely thought of when troubleshooting an issue with a mower, for example, is referencing the service or operations manual. “A lot of times, the operator book will have plenty of information even for a novice to go through and read and troubleshoot some things,” says Eric Sides, executive director of the Equipment & Engine Training Council.

One of the best ways to head off improper operation issues, says Tracy Lanier, product manager, John Deere Golf, is to have a good understanding of how, for example, a greens mower is supposed to operate. She calls this understanding “what’s normal” with the operation, and reading the operator manual is key.

“You can prepare ahead of time by spending time reading the operators manuals and becoming familiar with the machine,” Lanier says. “Knowing where the operator manuals are stored is also very helpful when the technician is not around to help answer the question.”

Reading the operator manual, for instance, would help avoid the tendency to leave marks on the green, tear up the hill or slip while going up a hill. How? By understanding what the proper tire pressure is.

“You ask, ‘Why is there 26 lbs. of air in this tire?’ says Ron Laurita, product and technical manager for Jacobsen... ‘And they say, ‘Well, it didn’t look right.’ It’s only supposed to have 10 lbs. of air, but they overinflate it because they only gave it the eye test. It’s always good to verify with a tire gauge.”

Turf equipment are amazing machines, so it’s good to know how to keep it in top condition and how to best troubleshoot in-field issues.

reclaimed water high in sulfides and salt, which can wreak havoc on metal and cause corrosion.

“It may not happen right away, but a week or a month down the road, you have a no-start condition because the contacts in the key or PTO switch have been corroded,” says Sides.

Keeping washing to a minimum allow golf crews to avoid having to troubleshoot no-starts down the road, says Ron Laurita, product and technical manager for Jacobsen.

“We recommend washing only once a week and blowing them off with air the rest of the time,” Laurita says. “Limit the water to the cutting units and air blow the actual machine. If you want to hand wash, fine, but we don’t recommend pressure washing because it promotes more problems.”

Washing aside, the No. 1 problem Laurita hears about at his call center is that the unit won’t “start” or “crank.” The cause is usually related to battery cables that have molded terminals, which can corrode over time. However, since these terminals are molded, you can’t see the corrosion.

“Probably the easiest thing you can do to eliminate that is to take a pair of cutters and cut that molded terminal off, strip the wires slightly and put one of those clamp-on style replacement battery terminals on the wire, which will give you a new area to which you can connect the cable,” Laurita says. “And the average guy can do that.”

Another common problem has to do with hydraulics. Following proper filter change procedures, Laurita supports the old adage: “An ounce of prevention is worth a pound of cure.”

“Your most important hydraulic filter change is in the first 50 hours of use,” he says. “The reason is because every single component on that machine is tight and has to break itself in, and you’re going to get the most metal contamination in a hydraulic system within the first 50 hours.”

Sides sees hydraulic leaks all the time, typically from golf crews not having a routine preventative maintenance schedule in place to make sure there is no hose damage.

“I’m out mowing and all of a sudden a hose bursts and I have oil all over a green or tee box,” says Sides. “A lot of that is preventable through either a daily or weekly inspection of hoses.”

The main hoses to watch are the ones responsible for moving reels and decks up and down, Sides says. For four-wheel drive machines, it can be hoses for the rear wheels because those wheels are always moving left-right-left-right.

Hose issues are fixes that are typically done in the field, Sides says. “Before you get it back to the shop, you’ll either a) have to go out and tow the piece of equipment back in slowly, or b) fix it in the field. But a lot of times, it’s, ‘The mower shut off while I was mowing.’ A seat switch or a wire has fallen off because it got grabbed by something. I typically don’t like operators trying to diagnose an issue – it’s best to leave it up to someone who knows the
A "HOLE" OTHER MACHINE

Aerators are different beasts entirely than mowers in that they’re more mechanical with less electrical components. This dictates whether they can be accurately diagnosed and fixed out in the field without an expert involved. And when it comes to aerators, the recommendation is “no.” If there is a bent time, broken belt or loose chain, Sides says it’s best for the operator to shut the machine down and notify somebody.

“Whether it’s a supervisor, mechanic or superintendent, they should be informed that something is wrong – because they could tear up where they’re aerating or, mechanically speaking, they could further damage the machine,” Sides says. “If it comes out of time, you have pieces that could hit together and break and cause some severe damage.”

One might think that, because aerators are simpler than mowers, they can be fixed by nearly anyone. But Ron Laurita, product and technical manager for Jacobsen, disagrees.

“Even though aerators are slightly simpler without sophisticated electronics, there are a lot of moving parts – chains, sprockets and belts – to get all that reciprocating motion,” he says. “It’s usually something simple, so I always recommend starting with the simple things first because nine times out of 10, it will be something simple: batteries, filters, cables, connections, etc.”

Even so, sometimes there are electrical issues, most commonly with safety circuits, says Tracy Lanier, product manager, John Deere Golf.

“This can be easily diagnosed on our 2500B PrecisionCut and 2500E E-Cut greens mowers with our ‘Sit on Seat’ on-board diagnostics system,” Lanier says. “This system, along with our white-box controller, machine in and out, knows the safety circuits and has the skills to do the repair.”

Another thing best left to a trained technician is anything that requires opening into or removing a fitting from a hydraulic circuit. “That’s something someone who doesn’t know what they’re doing doesn’t want to get involved with,” Laurita says. “You can introduce contamination into the system without realizing it. Also, let’s say you want to work on the cutting units and they’re up in the air and have a leaky cylinder. The first thing the guy does is crack a fitting loose. Well guess what? All that pressure is up against that fitting, and now he shoots oil on himself.”

When it comes to electronics, Laurita sees a tendency for operators to blame the electric controllers or computer system on the machine because it’s a “big black mystery box they don’t understand.” Very rarely, though, is that the cause of the problem.

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One might think that, because aerators are simpler than mowers, they can be fixed by nearly anyone. But Ron Laurita, product and technical manager for Jacobsen, disagrees.

“Even though aerators are slightly simpler without sophisticated electronics, there are a lot of moving parts – chains, sprockets and belts – to get all that reciprocating motion,” he says. “It’s important to keep the contamination out of that, too. If you take care of the little things, the big things will take care of themselves.”
Playing the sleuth

Getting operator feedback is one of the most critical steps in determining what exactly is wrong with a piece of equipment.

“You must ask the right questions, because a lot of times you don’t want just yes or no answers,” says Sides. “You have to have some questions you’re asking specifically to get answers to find out what happened. For example, if the operators just says, ‘It doesn’t work,’ I don’t know anything and I go out there blind. But, to get to the root of the problem, I can ask, ‘Did it shut off on you?’ ‘Where were you when it happened?’ ‘How long have you been out mowing?’ ‘Does it happen when it’s hot or is it happening when it first starts up?’”

John Deere’s Tracy Lanier agrees some issues may require the operator to explain what they were doing or attempting to do when the problem occurred.

“This, along with your understanding of what’s normal with the operation, can help you quickly determine the issue,” she says.

Adds Toro’s Greg Hollahan, technical service systems manager, interviewing the operator is “absolutely vital to the troubleshooting process. The operator should be able to describe sounds, smells and even the mowing environment like hillsides or obstacles at the time of the issue. A step-by-step narrative of the incident can help piece together what might have been the contributing factors to the breakdown.”

can be quickly checked to solve these issues. The information to help with the troubleshooting is located in the operator’s manual.”

The Toro Company stresses that customers should not try to “wing it” when addressing and remedying equipment issues in the field.

“With any mower problem, large or small, if the on-site mechanic is unavailable, it’s very important for the superintendent to contact the distributor as the next course of action,” says Greg Hollahan, technical service systems manager at Toro. “We recommend using caution in allowing just anyone except for authorized mechanics to service the equipment. They may not be familiar with a product’s safety systems and could inadvertently disable it; that could lead to dreadful results.”

But when it comes to preventative maintenance, a key to avoiding potential equipment malfunctions in the field, Hollahan believes those responsibilities can be handled by other staffers as well.

“The first step would be to locate the golf course’s preventative maintenance procedures manual,” he says. “It’s crucial to continue to perform preventative maintenance in the absence of a mechanic. The manuals are typically centrally located and easily accessible to all golf course personnel so that anyone can see what machines need maintenance on any given day. The mechanic would look at that and evaluate what needs to be done that day. However, this process can be managed by other course staff members as well.”

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

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THE MONROE DOCTRINE

MOVING FORWARD
Coping when you realize you have more past than future in life?

Autumn has always been my favorite season. Fall color is beautiful, even stunning in some quarters. It is harvest time in the country. From corn and bean fields to apple orchards and pumpkin patches, the rush to get the crop out is everywhere. Late-season baseball, football and early-season basketball games keep us well-entertained.

But late autumn can also be melancholy. Here in the north, the landscape becomes very stark, the days are often gray and noticeably shorter, and we know before long the tough days of winter will be here.

It is an especially sad time this year for turfgrass people in our state. We are a pretty close group – golf course superintendents, sod producers, sport turf managers and lawn care providers. Many of us have worked in more than one area of turfgrass management, something that adds to our familiarity with each other. Our Wisconsin Turfgrass Association, the Wisconsin Green Industry Federation, and the UW – Madison Turf Team do a lot to tie us altogether.

We grieved for one of our colleagues who was overwhelmed by circumstances at his golf course and his life in general and ended it all with the tough days of winter will be here.

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We grieved for one of our colleagues who was overwhelmed by circumstances at his golf course and his life in general and ended it all with his own hand earlier this summer.

Another of our friends, who has been a strong and longtime leader in golf course and turf organizations, succumbed to pancreatic cancer in October. A celebration of his productive life was held at the club he worked. The large crowd assembled there when the mournful sound of a bagpiper brought home our loss. We looked on as a maple tree was planted near the clubhouse in his honor.

A past president of one of our state turfgrass associations is struggling with his wife’s malignant brain tumor. And one of my good friends of almost 50 years – we were turfgrass undergraduates together – is battling the same. Each of us worked at a private club in our town, golf courses about 15 minutes apart. Two of his sons worked at our course and we helped each other many times over the years.

It was during the Christmas season last year that he invited me for lunch and laid out the details of his illness. He was frank and realistic. The chances for complete recovery weren’t the best, but he was going full-speed ahead, undergoing the maximum treatments to push the tumor into remission and give him as much time as possible. His attitude, as he declared so clearly to me, was “moving forward positively.” And he repeated it to me when we last got together.

He is a courageous man. I think of all the years that he and any other golf course superintendent worry almost to a fault about what now seem rather small matters. We spend years trying to meet what are sometimes unreasonable expectations of what often is a small cadre of complainers. I know – it has to be done; it is part of the profession that we love. A serious illness like his puts a different perspective on at least part of the job we have to do.

This man left the golf course somewhat sooner than I did and established himself as a turfgrass entrepreneur. His career shift gave him more time to do the things he enjoyed and things he needed to do. For these last years, he has been in control of his life. Until now.

These days he finds solace in the here and now, but he also is planning for the unknown future. A trust has been established; the house was readied for sale if it comes to that; frivolous accumulations from years past have gone to charity. His courage is matched by reality. He is moving forward positively.

Life is changing rapidly for him, and I am amazed how he alters and revises the important issues at hand. He is open to what is actually happening to him and his family. He is spending as much time as he can with his wife and sons and their spouses and his grandchildren. They enjoyed a beautiful cruise together, cementing bonds that will last a couple of generations. He owns a piece of property in northern Wisconsin that is used primarily for hunting and logging. They are making plans for the deer season, which is rapidly approaching. Every day he is moving forward positively.

Circumstances that would depress and discourage most of us seem not to have done that to him. I believe a lot of this is due to his religious faith. What else could it be? He seems not obsessed by the worst case because he isn’t afraid of it. He is tranquil and serene; faith will do that for you.

I think a lot about how I would handle a fate like his. Clearly, it helps if you realize that life is more precious than anything. On that day when you recognize you have more past than future you push hard for the most you can get from life.

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GET PUMPED

Recent innovations make upgrading your irrigation pump station an attractive option.

By Rob Thomas
Obsolete can be a bit of an overstatement when describing a 10-year-old pump station. After all, if it’s still doing its job and the turf is healthy, is there really a need to replace?

With today’s advances, the market is flush with new, improved features that may make trading up a very attractive option.

The latest technology includes the ability to connect to the pumping station touch screen with Virtual Network Computing capabilities, says Paul Roche, national sales manager at Rain Bird.

“Essentially this takes your smart phone or iPad/tablet and turns it into your pump station touch screen no matter where you are, providing you have a wireless connection,” Roche says. “Superintendents and irrigation technicians use this to access and control their pump station from anywhere. Having the same look and feel as the touch screen on the pump station makes it simple and easy to use.”

On the topic of easy, what could be easier than having your system complete checks and balances for you? Smart Pump, a software module for Rain Bird central controls, compares actual water flow to expected flow.

“Rain Bird Smart Pump technology is a cutting-edge technology that is new and innovative,” Roche says. “With a communication link to the pump station, Smart Pump shares actual pump station operational data from the pump station so the irrigation control system and the pump station are working together to maximize efficiency and to act as a ‘watch dog’ for any unmanaged flow activity. Smart Pump can dramatically increase operational efficiency while acting as a full-time flow management attendant on the golf course.”

Both Smart Pump and Virtual Network Computing capabilities increase efficiency that earlier pump stations lack.

“Having tools that allow remote system access to view pump station operation or make changes to pump station settings saves time, while allowing for on-the-fly setting changes that otherwise would require someone to be on-site and at the pump station,” Roche says.

“Smart Pump is a tool that allows the pump station and irrigation central controls to work together to maximize system operational efficiency,” he adds. “During an irrigation cycle, if flow is available, the Rain Bird central control system will automatically select sprinklers to turn on to maximize station flow and reduce the water window – the time it takes to complete an irrigation cycle. At the same time, if there is any unmanaged flow – perhaps a broken pipe or leaking valve - the central control system will recognize this and respond accordingly, which may include sending out a text message to the system manager or simply shut off the pump.”

Bob Sylvester, golf market manager at Watertronics, takes a less-tangible view.

“The newest technology today is not an individual piece of technology, but the intelligence to design and integrate available technology to provide solutions to problems facing golf course superintendents,” Sylvester says.

His example: An increasing number of superintendents are forced to irrigate with tertiary, effluent or poor-quality well water. To help manage these challenges, Watertronics stations are equipped with advanced technology to monitor, trend and even blend multiple water sources to help the superintendent manage and mitigate the effects of poor water quality.

“In the most recent application, the golf course superintendent had very poor quality groundwater high in TDS levels (total dissolved salts) and very expensive city water,” Sylvester explains. “He needed an integrated solution to manage the water quality and reduce the club’s annual water budget. What resulted was a pump station designed to blend the poor quality well water with good – but expensive – city water.”

At the click of a mouse, that superintendent could choose a daily water blend to meet his objectives of mitigating the effects of poor water quality, while reducing the cost of expensive city water.

Hans Stewart, director of global marketing for Xylem’s Applied Water Systems unit, says the newest technology available includes advanced variable frequency drive (VFD) control logic, Internet connectivity, browser interface and the ability for remote diagnostics. All increase efficiency, leading directly to cost-cutting benefits.

“The VFD control logic allows the pump to operate at the Best Efficiency Point (BEP),” Stewart says. “By operating at BEP, there is a reduction in energy consumption, which not only reduces electricity use, but [also] extends the life of the equipment.”

The age-old adage “time is money” fits with Roche’s thoughts on justifying the cost of new pump station technology.

“Managing irrigation system operational costs is an objective for almost all golf courses,” Roche says. “Reducing time to make system changes while having access to operational activity is an important feature.
WATER MANAGEMENT

of any pump station. Running on actual flow – as monitored at the pump station flow meter – maximizes pump station efficiency and reduces the time it takes to complete an irrigation event and reduces the electrical costs to run the station while reducing wear on the pumps.”

Efficiency doesn’t begin and end with the equipment, Sylvester says. “Our pump station solutions provide efficiencies beyond what is seen as standard in a pump station design – i.e. high-efficient motor, most efficient pumps and central software integration,” he says. “Our solutions add the efficient use of water, labor and time. All of which result in increased productivity and savings.”

With dollars tight, seeing a viable return on investment is critical. “A superintendent might have a functioning pump station, but that doesn’t necessarily mean that it is efficient,” Roche says. “Many older stations do not have variable frequency drive (VFD) technology that helps match pump output with demand. A complete pump station assessment is necessary to evaluate the efficiency of the pump station and to see if modifications can be made to increase the operational efficiency of the station.

In regions of the country where utility costs are high and where pump stations accumulate a lot of run time, updating an inefficient pump station can have an immediate reduction in the operational costs, and can even provide some significant payback that helps pay for the investment over time. According to Stuart, additional features superintendents are asking for include: Remote access to the pump station, real-time integration with the central irrigation control system, surge and lightning protection, power savings data, accurate flow meter technology, and responsive service capabilities.

“Water quality and water scarcity continue to be challenges for golf course irrigation,” Stuart says. “Newer, more creative and sustainable solutions are needed for keeping the fairways green, including ways to reduce the water needed, alternate ways for sourcing water and treating the water the course already has access to. Courses are looking at closed-loop systems where the water is recycled and used again, therefore never leaving the course. When brackish water is the only source available, reverse osmosis is available for treatment.”

While new construction continues to lag, courses looking to replace their pump stations not only need a simple replacement, but also have challenges in mind when they retrofit. “These challenges include reducing water usage, increasing efficiency and creating a more sustainable golf course experience,” Stuart says. “Additionally, the courses must appeal to the new standards for luxury, including being green from an environmentally friendly standpoint.”

Because superintendents have increased requirements to report water and electrical use to local agencies and municipalities, Roche says heightened efficiency will be a continued focus.

“For golf course pump station manufactures, the challenge will continue to be to increase operational efficiency and to reduce the cost to apply water,” Roche says. “Pump stations will start to directly monitor electrical consumption and make adjustments to operation based on electrical consumption.”

Considering “you get what you pay for” proves true more times than not, both Roche and Stewart advise superintendents to consider the quality of any equipment brought onto the course.

“A pump station is a long-term investment,” Roche says. “Look for a pump station that is made of quality materials and has a durable finish that will protect it from the elements over time. You don’t want it to rust out before it wears out. Also be sure that a new pump station incorporates the latest control technology that provides remote system access and the ability to truly integrate with the irrigation central control system to maximize operational efficiencies.”

“The lowest price isn’t always the best value,” Stewart says. “When the economy was lagging, everyone was looking to cut costs and find the least expensive option available, but in the long run, these may not have been good investments. Quality, advanced technology and outstanding aftermarket service will add value for years to come.”

A supplier should sit down with the superintendent to learn their needs and challenges before developing the best fit. “Talk to a pump station professional,” Sylvester says. “There are many innovative solutions available to consider.” GCI

Breakdown
Based upon a 1500 GPM @ 120 PSI pump station with two 75 HP turbines, Hans Stewart says the return on investment can be seen in three to five years. He breaks it down as such:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor repair for two motors</td>
<td>$7,000</td>
</tr>
<tr>
<td>Preventative maintenance</td>
<td>$2,250</td>
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<tr>
<td>Drive replacement</td>
<td>$8,000</td>
</tr>
<tr>
<td>Pump replacement</td>
<td>$9,000</td>
</tr>
<tr>
<td>Filter replacement</td>
<td>$15,000</td>
</tr>
<tr>
<td>New controls</td>
<td>$26,000</td>
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<tr>
<td>Personnel labor to maintain</td>
<td>$23,400</td>
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<tr>
<td>(1 person at 10 hours/week at $15/hour)</td>
<td></td>
</tr>
<tr>
<td>Emergency repairs</td>
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</tr>
<tr>
<td>Total</td>
<td>$90,650+ or $2,520 a month</td>
</tr>
</tbody>
</table>

**Monthly cost to own a new pump station**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay as low as</td>
<td>$85,000 - $2,360 a month</td>
</tr>
<tr>
<td>Preventative maintenance</td>
<td>$0</td>
</tr>
<tr>
<td>Energy cost savings</td>
<td>$6,480 or $180 a month</td>
</tr>
<tr>
<td>Total</td>
<td>$2,180 a month</td>
</tr>
</tbody>
</table>

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PUMPING IN A BOX?
Scheduling your pump system operation reduces energy and maintenance costs.

If you have been involved in a new irrigation system installation this century, you were probably committed to making sure that the irrigation system was customized to your golf course and management style. You would have paid particular attention to how the greens, tees and fairways as well as bunkers and surrounds were irrigated. You also would have hopefully been concerned with the location and type of the controllers and maybe how the system was piped. You will have managed the irrigation system and set the schedule on a regular basis, daily or at least every few days.

After all the irrigation system parameters were decided upon the designer would have told you that you needed a pump system at a specific flow and pressure; for example 2,400 gpm at 120 psi. The pump system would have most likely been prefabricated from a major manufacturer and it would have had little customization. After all, it was only supposed to pump a set flow at a set pressure and be reliable. As VFDs came along, the pump system would reduce flows as required while maintaining the designed pressure in lieu of a pressure regulating valve. Once the pump system was set up and programmed during its installation you pretty much left it alone. Rarely did anyone alter the set points or programming.

Pump systems have changed considerably over the last decade. They are more sophisticated, smarter, more expensive and in many respects more electronic in nature than mechanical. VFDs are standard and customization is more the norm than the exception. The pump system operating software has become very elaborate with the ability to monitor not just the flow and pressure, but wet well levels, power to each motor and other items such as pH, turbidity and salts. Today’s pump system controls can interact with most manufacturers’ irrigation system hardware/software allowing you to have an interactive irrigation/pump system that operates both the pump and irrigation systems more efficiently. All this increased knowledge allows the pump system to be more interactive with you the operator, and when taken advantage of, can provide a more energy efficient and longer lasting pump system.

As discussed, you are used to scheduling your irrigation system, but have you ever thought about scheduling your pump system? There are a number parameters that can be scheduled including discharge pressure, energy use and flow availability. For example, your irrigation system has a water window – time required to irrigate through a cycle – that may be anywhere from 4 to 12 hours depending on your system. For that water window, the pump system needs to operate at its design flow and discharge pressure, say 2,400 gpm at 120 psi as discussed above. At that flow, let’s say your water window is 7 hours. For the remaining 17 hours of the day, you are probably not irrigating unless watering in an application. You are probably doing some hose syringing depending on the weather. Hose syringing doesn’t require 120 psi though, so for the 17 hours you are not irrigating you could set the discharge pressure from the pump system to say 75 psi or even less instead of 120 psi for those 17 hours. This will provide more flow from the same pump and use less energy. It will also make it safer to connect and disconnect the syringing hoses. Another example is power company demand charges. Depending on the primary electrical service you have, you may be paying demand charges if you use over a certain amount of energy during different times of the day. You can schedule your pump system to make sure that you never have an electrical load that triggers the demand charges. This can save lots of dollars. If your course is in an area where you irrigate all year long your pump system is designed for the maximum capacity needed in
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Superintendents provide case studies in how irrigation nozzle replacement was the solution for stubborn turf problems.

by Helen Stone

It's showtime!
Playing Arnold Palmer's Bay Hill Club is on many golfer's "bucket list." The course was certainly good luck for Tiger Woods, who won the Arnold Palmer Invitational in March, 2013, starting a comeback that led to his being named this year's PGA Tour Player of the Year.

Bay Hill was built in 1961, nesting on the shores of the Butler Chain of Lakes in Orlando, Fla. In 1965, Arnold Palmer played the then-unknown course and was enamored with its natural beauty. Five years later, he made the course his own and it has been his family's winter home ever since.

Superintendent Matt Beaver came on board more than 10 years ago with high expectations to fulfill. Although Orlando enjoys more than 50 inches of rain a year, winters can be relatively dry and irrigation is a must.

In spring of 2009, Beaver was busy prepping the course for Palmer's annual tournament in March and was plagued by brown spots and "donuts" on four holes. He tried hand watering and longer sprinkler run times, but that resulted in soggy turf. Distribution uniformity (DU) was the problem.

Although the Toro 670 heads and Toro Network VP and Lynx Control System were state-of-the-art when they were installed, that was 20 years ago, and technology has taken leaps and bounds since then. However, the club wasn't ready for a renovation yet.

"By replacing existing nozzles with third-party metal nozzles, the life of the sprinkler can be extended," says Brian Vinchesi, president of Irrigation Consulting Inc., Pepperell, Mass. "Just changing the nozzles as opposed to the whole sprinkler is much less expensive, which is attractive in today's golf economy."

Beaver consulted with colleagues and area turf specialists and decided to try Profile solid metal nozzles on the problem holes. As the tournament drew near, he was impressed with the results. Donuts disappeared and the course shined during the tournament.

As renovations commenced over the next two years on the tees, greens and bunkers, Beaver also switched out 600 nozzles in the fairways and roughs. By 2011, the course was in "showtime condition."

In addition to improved course conditions, Beaver was also able to cut back on his irrigation scheduling, with run times reduced by as much as a whopping 50 percent. "By improving DU, you inherently reduce water use, as the improved DU should result in shorter overall runtimes," Vinchesi explains.

"We found a practical and reliable solution at Bay Hill," says Beaver. "Wherever we have switched to solid metal Profile nozzles, the donuts have disappeared along with the soggy turf. It's been a workable solution for us."

NETWORKING IMPROVES DU. When Southern California golf comes to mind, many might think about cool coastal settings such as Pelican Hill Golf Club in Newport Coast or...
Torrey Pines in La Jolla. Others immediately visualize spectacular desert settings at PGA West in Palm Springs or in La Quinta in the Coachella Valley. But tucked in the rolling hills between the two is a pair of immaculately maintained golf courses that serve everyone from hundreds of enthusiastic amateurs each week to PGA Championship luminaries.

The Morongo Golf Club at Tukwet Canyon in Beaumont, Calif., offers two challenging courses that host numerous tournaments including the Champions Tour National Qualifying Finals, PGA Tour Canada Qualifying, Southern California PGA Professional Championships and NCAA Division III National Championships.

Architects Lee Schmidt and Brian Curley worked to give each course its own defining persona. The Champions layout features gently rolling terrain and is distinguished by its open, native feel and rugged natural bunkering. The Legends boasts riparian streams and is flush with oak woodlands. It features a more classic style of bunkering.

Paul Mayes, CGCS, found Profile nozzles improved irrigation coverage.

Paul Mayes, CGCS, director of agronomy for the courses, has a rich history as a Southern California golf course superintendent. He served as president of the prestigious Hi-Lo Desert Superintendents Association and overseeing at top-rated clubs such as Industry Hills Golf Club.

With his eye for detail and high standards, Mayes noticed patchy areas and “donuts” around many heads. The course is irrigated with Toro 730 heads and a Toro control system, but after running distribution uniformity (DU) tests early in the year, he found the DU was only 65 percent, well below the optimum 85 percent or better.

Mayes has an extensive networking history, so he researched and asked colleagues and turf advisors for recommendations. “We heard about Profile nozzles from other superintendents and found they improve irrigation coverage overall,” he recalls.

In spring of 2013, Mayes switched out nearly 2,000 plastic nozzles on the fairways and greens with Profile solid metal nozzles.

“These type nozzles are more customized than the mass-produced plastic nozzles,” says Vinchesi. “They are designed for specific sprinkler models and spacings, which allows them to have improved DU.”

Mayes saw results right away, with the DU improving to 75 percent. “It was a worthwhile investment in time and resources,” he says. GC

Helen Stone is a West Coast-based freelance writer and frequent GC contributor.


WOMEN IN TURF

Andrea Li looks to inspire the industry’s next generation of female superintendents.

In 1971 the first email was sent and nearly 22 years later the first instant message over AOL was delivered by Ted Leonsis to his wife. “Don’t be scared … it is me. Love you and miss you.” These technologies opened a new way to communicate and network, and we could now exchange information with a simple click of the “send” button.

In 2006, Jack Dorsey sent the first tweet “just setting up my twttr.” and a new revolution was born through social media. It has changed political and consumer marketing landscapes. News delivery is no longer dependent upon major broadcasting networks. Education and networking opportunities are now in your pockets.

Over the last several years social media has brought the turf industry closer, allowing us to communicate faster and grow our professional network all over the world. It has brought the industry closer in times of difficult challenges. Who could forget #whosgotmyhose? The pressure to consistently perform at the highest level demands long hours away from families and personal time. Not only have those managing the turf, but educators and industry.

I first met Andrea a year ago as she turned to social media after attending Bayer and John Deere. Upon her return, feeling rejuvenated and inspired, Andrea began with a simple Twitter handle, @womeninturf. The community has grown to a Facebook page and was one of the first to communicate on the Turf Republic platform. I’m excited to see her group grow and the doors it will open for so many. But to really do this story justice, I’ll let Andrea share with you her passion for this endeavor in her own words.

“Over the years I have attended conferences and schools, and the one thing I noticed it lacked were females. I have only met a handful of talented women in my industry and I feel like I fail at connecting with more. I created Women in Turf to provide a community for women to get connected and talk turf. This has opened up a whole different dimension of connection, not only do I get to meet new female turf managers, but finally finding a way to motivate and encourage personal and professional development with these ladies in hopes to inspire more women to grow in the turf industry is such an awesome idea! A few goals that I would love to see with this group are to eventually have leadership sessions available geared towards the Women in Turf at conferences, at schools and host leadership development workshops. Empowering Women to become future Superintendents is going to be a challenge as there aren’t many, but in time I hope to see the numbers change. I also want to take this group to a new level of networking because social media opens up more channels and chances to network which I hope to eventually effectively impact the turf industry by promoting more women in the turf industry. There are many women who are a part of turfgrass management, from management of sports fields to soil scientist, we are all interconnected through turgrass. Women in Turf is a community to interact with women worldwide and share each other’s passion.

“I created a Facebook page – Women in Turf and a Twitter account @WomeninTurf to create conversations. It’s really simple, all you need to get connected is your own Twitter or Facebook account, hit LIKE and chime in conversation when you want to share. It’s a great way to get interactive on these social media sites. I enjoy doing it. I hope to connect with you there and in the future in person. Many people still prefer face-to-face interaction, but with these social media sites we can connect with others globally instantly. The awesome part of that is I can talk to a female superintendent in the UK and at the same time one in South Africa: Both turf managers but one for a golf course and the other for a cricket pitch.

Women in Turf is Dedicated to INSPIRE Women to pursue their dreams in the turf world.”

Assistant superintendent Andrea Li began a movement with a simple Twitter handle, @womeninturf.

![Assistant superintendent Andrea Li began a movement with a simple Twitter handle, @womeninturf.](image)

Bill Brown, CGCS, is CEO of Turf Republic and founder of iTurf Apps. Bill has spent 20 years on golf courses, including the last 5 years at Hartefeld National Golf Club. He's served as an officer and board of director for the Philadelphia Association of Golf Course Superintendents, as well as served on national committees. Contact him at billbrown@turfrepublic.com.
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A new era for overseeding preparation strategies

Strategies to prepare bermudagrass fairways for overseeding in the Desert Southwest have changed dramatically over the past five years.

O

verseeding bermudagrass fairways

and primary playing areas remains an important part of business in operating a golf facility in the southwestern U.S. Only a decade ago, many facilities designed their business model around a seven-month cycle from November through May. By far, this seven-month period was the most important window for facilities to generate revenue for the entire year. The absence of golfers during the remaining four or five months was common, as “snowbirds” fled north to escape the heat. Recognizing the importance of the overseeding season and conversely the relative insignificance of the summer season, golf facilities would very aggressively verticut, scalp, and generally mangle the bermudagrass in October to prepare a seedbed for establishment of a ryegrass cover turf. The following summer, the agronomic staff would spend four or five months reviving the bermudagrass to a level that would provide a suitable surface for the next overseeding period. The bottom line was that the quality of the bermudagrass playing surface during the summer was not a priority.

Oh, how times have changed. The term “snowbirds” is no longer appropriate, as it seems that most golfers live and play golf year-round in the Desert Southwest, or only leave for short periods of time. To meet the demands and expectations of summer golfers, facilities have had to modify their practices to provide good playing conditions throughout the year, not just during the winter season when the golf course is overseeded. Gone are the days when the bermudagrass was verticut and scalped to the ground. Turf practitioners have learned that seeding into a healthy bermudagrass canopy yields similar overseeding quality without the need to damage the bermudagrass prior to winter dormancy.

What are the benefits of less aggressive preparation strategies for overseeding?

• Less-aggressive verticutting and scalping will yield a more robust bermudagrass plant that will enter the winter dormancy period with greater carbohydrate reserves that will serve as food and energy for the plant when it greens up the following summer.
• The wear and tear on equipment required to verticut, scalp, and even line-trim the bermudagrass down to the ground is costly. It is also tough on the staff. Less aggressive strategies preserve the equipment and are easier on the staff while producing quality overseeding conditions.
• Overseed preparation time is reduced. Therefore, seed can be sown sooner after closing the course, which provides more time for ryegrass to germinate and mature prior.
• The reduction in labor allows facilities to shift those resources towards completing other projects.
• Air quality improves significantly when facilities perform minimal overseeding preparations. Moreover, neighboring homeowners with backyard swimming pools will be very pleased.

The new era of overseeding preparation was forged by a few pioneers in the industry and has continued to evolve in recent years. The remainder of this article will summarize the three most successful strategies golf course superintendents have used over the past five years to prepare for overseeding in the Desert Southwest.

THE SIMPLEST APPROACH IS OFTEN THE BEST.

It seems that at least 50 percent of the golf courses that overseed have a history of fair to poor bermudagrass recovery in
Overseeded ryegrass quality is excellent at the Desert Highlands Golf Club in Scottsdale, Ariz., where the sand topdressing method is used to prepare for overseeding.

Overseeded ryegrass quality is excellent at the Desert Highlands Golf Club in Scottsdale, Ariz., where the sand topdressing method is used to prepare for overseeding.

the summer. It is these facilities where the simplest overseeding approach makes the most sense. Consider the following simple, effective plan to overseed the golf course while avoiding aggressive practices that will injure the bermudagrass prior to winter dormancy:

- It is not recommended to verticut, but if verticutting is employed, the depth of the blades should be set ¼-inch above zero or higher. Verticutting blades set below this depth may cut stolons and injure the crown of bermudagrass plants.
- Increase mowing heights by 25 to 35 percent two weeks before overseeding preparations begin. For example, if mowing at 0.400 inches, increase the height of cut to a range between 0.500 and 0.550 inches.
- About one week prior to overseeding preparations, consider spraying triclopyr (Turflon Ester Ultra) at 16 ounces per acre to slow bermudagrass growth. An alternative option is to apply trinexapac-ethyl (Primo) at a rate of 10 to 15 ounces per acre. In general, when overseeding preparations begin after Oct. 15, chemical growth regulation is typically not required due to cooler temperatures and less chance of bermudagrass competition.
- Scalp bermudagrass at or just below the summer mowing height. For example, if the summer fairway height of cut is 0.400 inches, and the height of cut increased to 0.500 inches prior to overseeding, the scalping height should be set around 0.375 to 0.400 inches.
- Clipping debris may be left on the surface to be used as mulch for the incoming ryegrass.
- Continue to irrigate with a goal to maintain adequate soil moisture and to avoid soil drying. Dry thatch and organic matter are difficult to rewet and will complicate matters during seed germination.
- At this point, the bermudagrass will still be green, but it is ready for overseeding. Once the seed is applied, some turf managers will use reel mowers set at the same scalping height to mow the seed into the turf canopy. Another option is to use steel drag mats to encourage the seed to feed into the bermudagrass understory.
- Following the first or second mow on the new stand of ryegrass, it is suggested to spray a growth regulator such as Primo to promote ryegrass tillering and increase density.

Although some turf managers have been apprehensive to adopt this new strategy, those who have tried it are pleased and will never go back to the days of scalping the bermudagrass down to near dirt. The necessity for seed-to-soil contact is a myth when overseeding. The bermudagrass canopy will help to protect new ryegrass plants, especially once cart traffic is allowed on overseeded areas. The ryegrass roots eventually find their way into the soil.

**BURN-DOWN HERBICIDES MAKE THEIR MARK.**

This idea has been around for many de-
Close observation of bermudagrass fairway treated with pelargonic acid (Scythe) reveals green stems underlying the burnt leaves. The burn-down process simplifies overseeding preparations without damaging the crown of the bermudagrass plant.

Decades but has seen a resurgence of late. As recently as five or six years ago, it was common for golf facilities to spend more than $10,000 to haul away green waste, or organic debris, generated from aggressive fairway renovation prior to overseeding. However, within the last few years, superintendents in the Palm Springs area began experimenting with chemicals such as pelargonic acid (Scythe) and diquat (Reward) to expedite overseed preparations. Superintendents found that the “burn-down” herbicides reduced the need for aggressive mechanical practices, reduced green waste production and related air quality problems, relieved wear and tear on equipment, saved on fuel, and reduced the labor associated with overseeding preparations.

Recognizing an opportunity for research, Dr. Jim Baird, turfgrass specialist at the University of California at Riverside, evaluated the relative effectiveness of these herbicides when compared to traditional verticutting, flail mowing and scalping in the fall of 2011 and again in 2012. The research, which can be found at bit.ly/185vFoR, revealed the following key points:

- Triclopyr (Turflon Ester Ultra) sprayed prior to any mechanical disruption at 16 ounces per acre enhanced bermudagrass suppression when combined with diquat, pelargonic acid, or glufosinate (Finale).
- Burn-down herbicides resulted in an approximately 75 percent reduction in green waste when compared to a combination of flail mowing and scalping. However, scalping alone at a height of 0.250 inches produced similar green waste and ryegrass establishment when compared to the burn-down herbicides.
- Although Scythe burns turf the fastest, the research suggests that Reward offers the best combination of cost, bermudagrass growth suppression, green waste reduction and speed of activity.
- When applied appropriately, none of the herbicides reduced ryegrass seed germination or growth.
- None of the herbicides tested resulted in delayed bermudagrass recovery the following summer.

The popularity of the burn-down herbicides increased rapidly over the past two overseeding seasons. Through communication with several superintendents in the Palm Springs and Phoenix areas, the following suggestions are offered regarding the use of diquat and pelargonic acid to aid in overseeding preparations:

- It is suggested to apply Turflon Ester Ultra at 16 ounces per acre prior to spraying burn-down herbicides, or pelargonic acid may be tank-mixed with triclopyr (Mahady, 2011) with equal effect.
- Application timing is important. It is suggested to apply diquat 3 to 5 days before seeding or pelargonic acid three days prior to overseeding and to continue with nightly irrigation (excluding the evening of the same day the herbicide is applied). Application timing is critical to avoid any negative effects on ryegrass germination and to maximize bermudagrass suppression.
- In the fall of 2012, superintendents were successful applying diquat at rates ranging from 22 to 32 ounces per acre. Best results from Scythe are found when spraying a 10 percent volume-to-volume (v/v) solution. However, a 7.5 percent v/v solution tank mixed with triclopyr at 16 ounces per acre will achieve similar results (Mahady, 2011). Scythe burns the bermudagrass faster than Reward (brown bermudagrass is typical within 3 to 4 hours of spraying Scythe and within 12 to 24 hours of spraying Reward). However, Reward offers longer bermudagrass suppression and is more cost-effective when compared to Scythe. For this reason, Reward has been the preferred choice for superintendents in the southwestern U.S. when treating large acreages.
- In the Phoenix area, superintendents reported no vertical mowing following herbicide application and scalping heights ranging from 0.325 to 0.425 inches. Scalloping height was reportedly lower in the Palm Springs area at 0.250 to 0.350 inches.
- Most superintendents reported a significant reduction in green waste when compared to historically used methods such as verticutting and scalping.
- Superintendents received significantly less complaints from golfers and neighboring homeowners regarding air quality or debris in their backyard swimming pools.
Superintendents also reported reductions in labor, fuel usage and wear and tear on equipment when using burn-down herbicides.

**SAND TOPDRESSING REPLACES SCALPING AND VERTICUTTING.** This strategy does not involve any aggressive mechanical preparation or herbicide application but does provide the facility with a plan that will continue to improve overseeding, bermudagrass transition and golf course playability for many years to come. Rather than verticutting, scalping or applying a burn-down herbicide, consider sand topdressing to facilitate overseeding preparations. Phil Shoemaker, director of agronomy at the Desert Highlands Golf Club in Scottsdale, Ariz., topdresses overseeded areas with approximately ¼-inch of sand (approximately 40 tons per acre). The topdressing application is completed within two days with the help of an outside contractor. The Desert Highlands GC staff smooths the sand with a Keystone steel drag mat, and they follow with seeding ryegrass at 500 pounds per acre. Shoemaker prefers to mow the seed into the canopy at a height of 0.350 inches, which is the same fairway mowing height used prior to over-seeding preparations. Shoemaker is quick to point out that nightly irrigation continues throughout this process. The goal is to maintain adequate soil moisture and avoid dry conditions that make rewetting the soil profile very difficult. Within 3½ to 4 days after course closure, the sand is applied and the seed is sown and ready for multiple irrigation events throughout the day. Primo is applied prior to sand topdressing at a rate of 11 ounces per acre, and weekly applications at 3 ounces per acre follow once the ryegrass has been mowed several times.

Shoemaker noted that prior to the sand topdressing method, when the facility employed verticutting and scalping, $12,000 to $15,000 was spent on green waste removal. Although the sand topdressing costs about $22,000 to $24,000, the facility is only spending about $10,000 more that it had previously. Eliminating the aggressive mechanical practices has saved more than just fuel, labor, equipment wear and tear, and garbage bin costs. The sand has significantly improved over-seeding quality and the ability of the bermudagrass to recover the following summer. Furthermore, after seven years of this program, the fairways drain better than ever and members enjoy the firmer conditions and additional ball roll.

The three new techniques used by superintendents in this article have proven to produce quality overseeding conditions while minimizing inputs required for overseeding preparations. Furthermore, these new strategies have also proven to reduce or eliminate damage done to bermudagrass prior to winter dormancy. A new era of over-seeding strategies has been ushered in, and the benefits are significant. GCI

Brian Whitlark is an agronomist in the USGA Green Section’s Southwest Region.

**Reference**

TENNIS COURT DRAG MAT

The tennis court nets at The Club at Admirals Cove in Jupiter, Fla., last about 6 months and then they are replaced. Two recycled nets are held together with zip ties. One-half-inch diameter PVC irrigation pipe slips through the slots on both sides where the cable that holds the tennis court nets in place normally goes. The irrigation pipe is then filled with sand for added weight and then caps are installed on both ends. The irrigation pipe flexes masterfully with the ground contours when the fairway mower bermudagrass clippings are scattered and dispersed to perfection. The ¼-inch diameter tennis net cable is used as the tow cable. It took about one hour to assemble the drag mat and it cost less than $25 for the materials. Bill Brousseau is the director of golf course maintenance, Steve Judd, superintendent of the Golf Village, and Blair Kirby, superintendent of the East Course, John Lombardi is the equipment manager, and Clay Bormuth is the assistant technician of this 45-hole venue.
LIGHT EXTENSION

The light that came equipped with this 2013 John Deere 220 E Cut Hybrid Walk Behind Greens Mower light pattern was restricted when the brush was in the up position. John Lombardi, equipment manager, and Clay Bormuth, assistant technician, at The Club at Admirals Cove in Jupiter, Fla, designed and built a higher-elevation light bracket with a better angle for the disbursement of the lighting. A 1-inch x 3/8-inch x 12-inch angle iron was used and painted a glossy black. The light switch was not moved and the existing wiring and insulation was plenty long enough for this application. A cable with loops with snap clips on either end were hooked to two 1-inch-x-3/8-inch eye bolts and were used to hold the brush in the up position when it was not being used. When the brush was used, the cable was held vertically in place with a nut, bolt and washer magnet. It cost about $10 per mower and less than one hour of work per mower. The manufacturer is reportedly modifying the light brackets for future models. Bill Brousseau is the director of golf course maintenance, Steve Judd, superintendent of the Golf Village, and Blair Kirby, superintendent of the East Course of this 45-hole venue.
Today’s new products are so environmentally friendly that we don’t have to worry about how we use them.

VERDICT: False.

Brandenburg believes many view some of the products they put down as water because their toxicity is so low, especially the neonicotinoid insecticides that have been associated with bee kills.

“It’s not necessarily because something was done improperly with them, but these products are still not benign when it comes to off-target effects. Just because they have lower toxicity doesn’t mean they’re absolutely benign.”

MYTH #10

A drainage system under a green has to be vented.

VERDICT: False.

Apparently, some believe that the drainage tile system under a green has to be vented in order to prevent swamp gasses from building up and causing problems with turf growth. Nothing could be further than the truth, White says.

“Nothing in soil can be that air tight where you have to put vents on the ends of your drainage system.”

Jason Stahl is a Cleveland-based writer and a frequent GCI contributor.
the hottest month, usually July. However, in January you do not need the same capacity in the pump system as in July, so during less demand times, limit the flow capacity of the pump system to operate fewer pumps. This will save on power again and also reduce the wear and tear on the pump and motor to last longer. For example, if you are in Las Vegas and have a 5,000 gpm pump system with four pumps (1,250 gpm each), in the winter you could disable two of the pumps and still have 2,500 gpm available.

With all the increased technology in the pump system control panel has come better remote monitoring of the pump systems also. Today's monitoring allows you to look at chart pressure, flow, incoming pressure if applicable, wet well level and energy use. With Internet-based monitoring you can monitor, operate, change and schedule the pump system from any smart device just as if you were standing in front of it. All of the alarms can also be funneled through the smart device so you always have the peace of mind that it is operating well or the constant reminders of how much trouble the pump system is giving you. Today's monitoring systems have much better graphics, more information available and are much more of an interactive tool than just a screen shot to look at what is going on.

In today's economy where budgets are tight and cost containment is a major focus, scheduling your pump system operation is a way to help reduce energy and maintenance costs. Not all pump system control panels have the discussed abilities, but it is something to consider when buying a new pump system or upgrading controls. If you do not have the newer controls though, you can just shut the pumps off at times manually and get some of the same savings. Scheduling pump system operation is somewhat out-of-the-box thinking, but give it some thought and figure out if it is something that is applicable to your irrigation/pump system.
Gary Grigg is retiring but he'll never retire. New Year’s Day will mark his official shift from full-time partner, head agronomist and chief evangelist for Grigg Brothers to part-time speaker and author, part-time go-to guy for all things foliar and more-time family man.

He’s stepping away to devote more time to his wonderful wife Colleen, the woman who’s been his rock for half a century (their 50th anniversary is this April). Now, Gary needs to be there for her as she copes with the early stages of Alzheimer’s. He also has a lot of grandchildren to share his fly fishing secrets with.

If you want to know about Gary’s remarkable career, hit the rewind button and check out the Q&A we did with him a few years back (CFO* (*Chief Fishing Officer), July 2010, bit.ly/1TidYzw). Instead, I want to talk about what he’s meant to us.

Gary has always been at heart an agronomy nerd. He originally planned to apply that science to the potato business that runs in his family the same way catsup flows through the veins of every Heinz. Instead, he turned his curiosity to turf at a time when few supers had advanced degrees. He helped many around him develop a more scientific approach to their programs.

His experience building facilities gave him a rare perspective on the “bones” of golf courses and he was a voice for agronomic reason in the days when we were churning out hundreds of new courses a year with too little concern for the impact of ego-driven design decisions.

He embraced continuing education early on. He attended what may have been the first-ever GCSAA seminar that was taught by Dr. Paul Alexander in 1972. He’s written dozens and dozens of articles and given countless speeches at conferences. He’s been certified forever.

He stepped forward and served on the GCSAA board and stuck with it despite some challenging circumstances. People forget that, on top of everything else, he was a highly effective president of the national.

He’s among a very elite group of supers who’ve successfully created new products. He had lots of help from his team and the PhDs who did basic research, but it was Gary’s insight into the business that shaped those products and his reputation for integrity that made his colleagues try them.

He’s in an even smaller fraternity of turf pros who started successful companies... and maintained their reputations in the process. It’s not easy to transition from product user to product developer to product seller, but Gary did it and kept his good name to boot.

He was a pied piper for research into foliars at a time when many viewed them as snake oil. Gary’s single-minded focus on proving that his products worked (and how they worked) was the rising tide that lifted all boats for many plant nutrition companies. A lot of his competitors have Gary to thank for the acceptance of their products in the market today.

He’s an organizer who embraced social media early on as a way to share his ideas and help others with turf problems. His “Golf Course Maintenance” group on Facebook is a non-commercial place for nearly 850 supers from around the world to discuss turf issues candidly and develop common ground.

He’s always looking to the future and sees the next 15 years as the era of precision turf management. “Efficiency is going to play a much bigger role in the future,” he says over breakfast in Myrtle Beach last month. “Tissue testing will be as important or more important than soil testing (in the future) and new technology is going to come faster than ever.”

And he sees Grigg Brothers continuing to thrive under his entrepreneurial brother Mark’s leadership and the team of regional agronomists they’ve built to truly serve as consultants. “We sat down in 1995 and wrote out our (company’s) core values: integrity, science-based products, no claims without research and data and hire the best people we could afford. That’s worked out pretty well. And oh, by the way, I don’t think we’ve even scratched the surface of foliar feeding yet.”

His only regret? Spending so much time away from his family while he was off building courses and traveling the world on behalf of GCSAA and the company. “I missed a lot of time with my kids and Colleen. I’m trying to give that time back to her now.”

They’ve planned the changeover within the company for some time now so most folks aren’t likely to notice any difference. But, in between time with family and fishing, Gary will still be around. “I’m going to continue on as a backseat driver,” he says.

So, congrats to Gary on yet another evolution in his remarkable life. And, based on nearly 30 years of knowing him, I’d say that - like everything else he’s tried - he’ll take the art of backseat driving to a whole new level. GCI
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