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*Storm*

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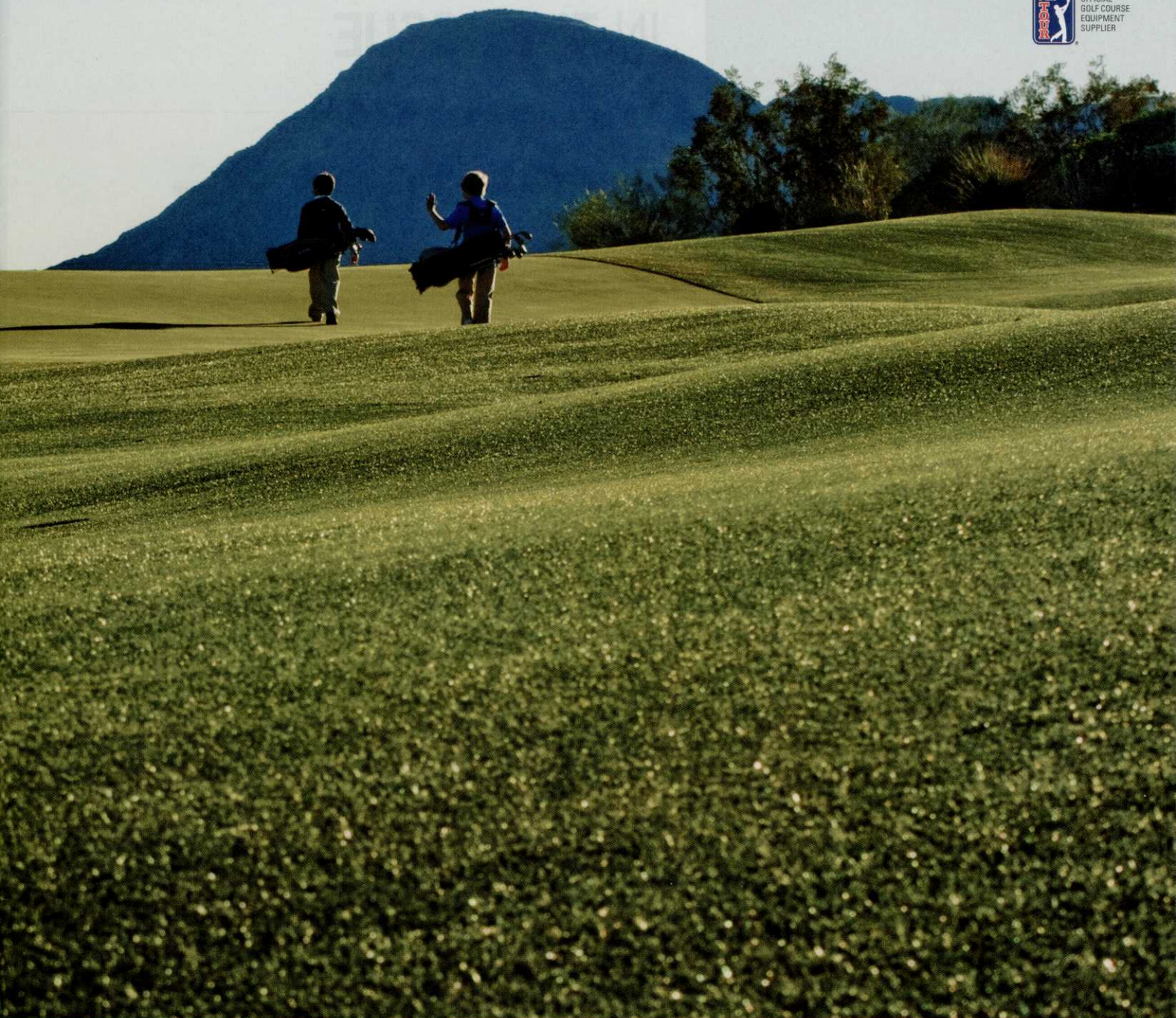
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## BLINK, BLINK, BLINK...

Over the holidays, I enjoyed an all-too-brief respite from what I like to call the tyranny of the blinking red light.

If you own a mobile phone or a smart phone, you know what I mean. No matter how you mute the ringtone or suppress whatever wacky sounds your device makes when you get a new email or text, that %\$#@! blinking red light still appears and demands your attention.

The blinking light is an equal opportunity annoyer. It doesn't care if you've received an important call from the boss or spam from that Nigerian prince... it blinks the same and cries out for you to stop and check.

I tend to keep my phone on "silent" or "vibrate" most of the time, so the blinking red light is a nearly constant companion. It tells me when a friend has called – or a telemarketer or, God forbid, a PR guy with a great story idea about a revolutionary new wind-powered beverage cart that also mows greens and makes killer blended margaritas.

It also tells me when I have new messages in any one of my four email inboxes (all of them flow into the same place on my BlackBerry). I get about 100 emails a day. Most are crap (thank you PGA of America media relations department!) but many are from readers or advertisers and I truly like to be able to respond right away. When I'm traveling or away from my laptop or iPad, I spend mucho time finding my glasses and figuring out how to get my thumbs to connect with those tiny keys.

Last year, I added Facebook to the mix. Now, every time someone posts something on my wall, the tiny red signal is ignited. I use Facebook to keep in touch with more than 800 friends, acquaintances and young, attractive LPGA players (who all seem to be very interested in being friends with middle-aged turf editors).

Yes, there's a lot of junk on Facebook. Pictures of grandkids, posts about how badly someone's college basketball team sucks and various time-wasting games. But, a good chunk of it is serious and useful. I pick up story ideas and trends from Facebook posts made by superintendents in the U.S. and around the

planet. Last year, during the "summer from hell," it was remarkable how you could track the worst of the weather moving eastward. A guy in Kansas City would post, "Greens are fried," and the next day a guy in St. Louis would say the same thing, then Indianapolis and so on until it hit Baltimore.

I added yet more blinks to my phone recently by reinitiating our Twitter feed (@gcimagazine). I resisted Twitter – Lord, I tried – but I finally became convinced it's the best way to keep up on news and to check out the various industry blogs and e-zines that are Tweeted out. I'm now using it to feed out breaking news, retweet interesting stuff from others and send the occasional sneak preview of an article or column out to the 500 or so who follow us to date. During the GIS, we'll use Twitter to send updates, reports and photos out to attendees and those of you at home. If you're going to the show (or not) and you're a Twitter type, make sure to follow us.

I fear that I'll eventually burn out the blinking red light. If that happens, I'd be lost. The blinking red light may be a tyrant that demands my attention, but it's also a beacon to the new world of communications that brings global information – stuff you

want and you choose to receive – into your hands nearly instantaneously. In a way, that little red winking eye is telling me, "It's time to learn something new."

Speaking of which, we're delivering something else new besides our Twitter, Facebook and news feeds. We relaunched our e-newsletter earlier this month and renamed it, "Fast & Firm." The goal is to give you news, perspective, analysis and original ideas (not just junk from Google searches) plus video, podcasts and links to the best blogs out there. Look for Fast & Firm every other Monday and our new Video Plus! multimedia e-news and our new product showcase e-news in alternating weeks.

In the meantime, if you simply can't stand that blinking red light, here's a tip: black electrician's tape. Covers the damn thing right up and you can blissfully ignore the outside world if you so choose. It's a wonderful low-tech solution for the tyranny of high-technology. GCI



**Pat Jones**

Editorial director and publisher

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with your thoughts  
and opinions.

## FEEDBACK

### Old school

I loved Pat Jones' "iCRACK" comments (November 2010, page 6).

Being old, I don't have to succumb to the pressures of having to have a smart phone or, in fact, even a cell phone. I admit I do have a truck phone for emergencies. It amazes me the time people spend staring at a 4-inch screen. It is impossible now to ride an elevator, eat breakfast or lunch without someone talking very loud into their device.

We have even lost contact with our teenage granddaughters because we don't text, Twitter or Facebook. Email is soooo old fashioned and being caught talking on a phone would be devastating.

I will at least go down being able to spend a day doing what I want without one interruption by a ridiculous ring tone.

Keep up the good work.

**Corey Eastwood**  
 Owner  
 Eastwood Golf  
 Stockton, Calif.

To read "iCRACK" enter <http://tinyurl.com/3xs65vu> into your Web browser.

### Question about rolling

While reading "Fix your crown" in the November issue (page 38) I found a major mistake and I am sure you would want me to point it out to you.

They are using a Salsco Greens Roller to repair the course and they referred to it as a "Sidewinder-style greens roller, 1-ton asphalt roller." I know that's wrong because a Sidewinder-style roller was designed to do bowling greens, very flat and very hard. This type of unit would never be able to move in the very soft wet turf with its one drive roll. It would be spinning and stuck in no time.

A 1-ton asphalt roller belongs on the driveway, not on the green. It, too, would be stuck.

**Sal Rizzo**  
 President  
 Salsco

*Author's response:*

*Most superintendents refer to the non-wheel*

driven rollers, which travel sideways as "sidewinder rollers." My only experience with sidewinder-style rollers is with the Salsco. I have no reason to think that the other brands could not accomplish the same result.

Mr. Rizzo commented that a unit would spin or get stuck in very soft, wet turf. I haven't observed this situation. Remember that the target area is a result of a buildup of sand and can only hold so much water.

Personally, I have used, and have heard other superintendents using, 1-ton asphalt rollers to roll putting green surfaces following aeration, especially on sand-based greens when significant rutting occurs following aeration.

Mr. Rizzo is much more familiar with the various roller specs and I am not disagreeing with his concern. However, in my experience we did not suffer any adverse conditions or damage as a result of the procedure described.

Each golf course and condition is unique and it is the superintendent's responsibility to analyze the potential impact of any management practice. Even though I described a specific procedure, it cannot be viewed as a cookie-cutter application that will fit every scenario.

**Dustin Riley, CGCS**  
 Oconomowoc Golf Club  
 Oconomowoc, Wis.

To read "Fix your crown" enter <http://tinyurl.com/23zmo8q> into your Web browser.

### Daydream believer

I enjoyed Monroe Miller's November column ("Who would you like to have met?" page 35). No doubt I have daydreamed about the same things before.

My grandfather passed away when I was just 3 years old. Being a fifth-generation American, and my brother being the a fifth-generation farmer on the same homestead, how wonderful would it be to have time with my brother, father, grandfather, great and great, great grandfathers, enjoying a dinner on the farm and hearing their stories and seeing their reaction to how much farming has changed.

I would also like to meet with Charlie Erickson, "The General" as he was lovingly called by the membership. He was the head greenkeeper here at The Minikahda Club



for 40 years – 1900-1940. He was a real innovator here in the Minneapolis area and helped Toro get its start in the turf business. It would be a real treat to meet a leader of his generation.

You have a great list of individuals and I know I could add to the list Jim Arthur, agronomist from Great Britain, and legendary greenkeeper at Royal Melbourne Golf Club, Claude Crockford.

This is a great time of year for daydreaming. Thanks for getting my mind off of things for a few moments.

**Jeff Johnson**  
Superintendent  
The Minikahda Club  
Minneapolis

To read this article type <http://tinyurl.com/2cfwqze> into your Web browser.

### WE'D LIKE TO HEAR FROM YOU

E-mail us at [gci@gie.net](mailto:gci@gie.net) with your thoughts and opinions.

## ONLINE FEEDBACK



### Syngenta interviews

Good interviews, Pat ("Syngenta Business Institute 2011, online video). Where was this type of program 20 and 30 years ago?! Man those fellows were young.

**John Cummings, CGCS**  
[retired]  
Charleston, W.Va.

To view this video type <http://tinyurl.com/2c76336> into your Web browser.

### Government and golf

The (online) article on the subject ("Government's role in golf courses," Dec. 4, 2010) was very hard to take. I do not understand how this community's argument garnered national spotlight. I know you guys think anything about golf is newsworthy. However, such an article is a bunch of golf course owners who cannot compete.

They bought a course. Paid too much. Now they want the competition eliminated. Man, must be nice if you can get an organization such as yours to give the article front page breaking news headlines. Wow. Is there nothing we can do to tell these whinny cry babies that a good stiff round of competition is good for any game.

I'm surprised that a rag like yours would publish such dribble. These guys are crying and you guys give them a sympathetic shoulder to cry on. Wow, I thought it was all about the game and making it better. How many of these namby-pamby cry babies

have ever hosted the First Tee or offered free golf to the local high school golfers.

Just like all news articles, there was no mention of the municipal utility companies providing water and sewer. Government-owned power companies are a staple of life in many areas. But those that purchased the flawed feasibility study now want the competition eliminated.

Wow!

**Wendell Nealon, CGCS**  
Swan Lake Golf Course  
Clarksville, TN,

GCI responds:

Without a doubt, this is a hot-button issue for the golf industry. As such, we offered GCI readers this article, authored by the Jackson (Mich.) Citizen Patriot, for consideration online, as we do with other articles of interest published by other media outlets. In addition, we provided a hyperlink to GCI's May Cover story, which we believe provides GCI readers with a more balanced approach to this topic.

To read the Jackson (Mich.) Citizen Patriot article "Government's role in golf courses" enter <http://tinyurl.com/26wftc7> into your Web browser.

To read GCI's May Cover story "In munis we trust" enter <http://tinyurl.com/2d2gcyp> into your Web browser.



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Chickasaw Pointe Golf Club – Kingston, OK	Northdale Golf & Tennis Club – Tampa, FL
Chicora Country Club – Dunn, NC	Northwood Country Club – Meridian, MS
Choctaw Country Club – Poteau, OK	Ozona Country Club – Ozona, TX
Cliffs @ Keowee Vineyards, The - Sunset, SC	Page Belcher Golf Course – Tulsa, OK
Cobblestone Golf Course – Acworth, GA	Pelican's Nest – Hurricane Course - Bonita Springs, FL
Colonial Country Club - South Course – Cordova, TN	Pine Forest Country Club – Houston, TX
Contraband Bayou Golf Club - Lake Charles, LA	Plantation Golf Club - Olive Branch, MS
Conway Country Club – Conway, AR	Raintree Country Club – Thomaston, GA
Coral Ridge Country Club - Fort Lauderdale, FL	Rayburn Country Club – Brookeland, TX
Country Club of Sebring – Sebring, FL	Reserve Golf Club, The - Pawleys Island, SC
Crown Colony Country Club – Lufkin, TX	River Hills Country Club – Valrico, FL
Dancing Rabbit Golf Club - Oaks Course – Philadelphia, MS	River Landing Golf Course – Wallace, NC
Eagle Hill Golf & Athletic Club – Little Rock, AR	Santa Fe Park Golf Course – San Angelo, TX
Emerald Bay Club – Bullard, TX	Sarasota Golf Club – Sarasota, FL
Great Outdoors Golf Resort – Titusville, FL	Sequoyah State Park Golf Course - Hulbert, OK
Green Island Country Club – Columbus, GA	Sherwood Golf Club – Titusville, FL
Irene Golf & Country Club – Memphis, TN	Silverado Golf Course – Durant, OK
Jackson Country Club – Jackson, TN	Southern Dunes Golf & Country Club – Haines City, FL
Joseph Bartholomew Golf Course – New Orleans, LA	Tennessean Golf Club – Springville, TN
Lane Tree Golf Club – Goldsboro, NC	Tusawilla Country Club - Winter Springs, FL
Legacy Golf Links – Smyrna, GA	Woods at Jacksonville, The – Jacksonville, TX
Links at Audubon, The – Memphis, TN	Stoneybrook Golf Club – Estero, FL
Little Creek Recreation Club – Ratcliff, AR	Sugar Tree Golf Club Executive Course – Lipan, TX
Lochinvar Golf Club – Houston, TX	Sweetwater Country Club – Sweetwater, TX
Mirimichi Lakes Golf Course - Millington, TN	Vasari Country Club - Bonita Springs, FL

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# UNVEILING THE NEW GCI Website

**We've made some significant changes to the GCI Website that we think you're going to like.**

As you'll soon see, many of the changes will allow you to more easily navigate all of the news, original content and multimedia options available to you. Check out some of the new features below, then log on and take the site for a test drive. Let us know ([gci@gie.net](mailto:gci@gie.net)) what you think, what you like about the new design and how we could improve your online experience in the future.

**— The Editors**

Easy-to-read typeface and layout that loads faster

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# E-Newsletter


**Fast & Firm**  
News and Analysis from Golf Course Industry

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INDUSTRY

CURRENT ISSUE | MULTIMEDIA | PRODUCTS | SUBSCRIBE | January 20, 2011

**TOP STORY**

**Jacobsen marks milestone**  
Charlotte, NC-based company celebrates 50th anniversary.



**INDUSTRY NEWS**

**Landscapes Golf Group partners with Oak Hills Country Club**  
LGG will provide management services, including golf operations, accounting and finance, agronomy, marketing and food and beverage.

**Keeping the greens, green**  
NMSU researchers find solution for yellow patches.

**Group files legal challenge to EPA's Partial Ethanol waiver**  
EPG: Partial waiver sets a bad precedent for the introduction of new fuels in the marketplace.


**Keeping the greens, green**  
NMSU researchers find solution for yellow patches.

**PACE Turf explain frost delays to golfers**  
Free video available via YouTube.

**Carolinas Golf Industry funds turfgrass research**  
Group gives close to \$100,000.

**Turflogger.com interviews Pat Jones**  
With the tables turned, Pat Jones sits in the hot seat and answers some questions.

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**SUPPLIER NEWS**

**Toro names recipients of James R. Watson scholarships**  
Winners plan to pursue career in sports turf industry.

**Dispatch receives Canadian patent, registration**  
Aquatic's soil surfactant is now in full compliance with CFIA regulations.

**International Club Suppliers announces promotion**  
Steve Troutman to serve as vice president of sales and marketing.


**Primeraturf announces CEO's retirement**  
Frans Jager's departure from the company effective Sept. 30, 2011.

**Bayer Environmental Science announces new sales rep**  
Jason Frank brings experiences as an assistant superintendent as

**ONLINE POLL**

**What do you look forward to most at GIE+EXPO?**  
Click here to take our online poll.

**MULTIMEDIA**



**DIY or send out to bid?**  
How do you know when to do a construction project by yourself or hire a professional builder? Pat Jones interviews the experts at the recent Golf Course Builders Association of America meeting to find out. [MORE MEDIA](#)

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## LINKS ACROSS AMERICA

**M**any of you might not know this, but in the fall of 2008, the Wadsworth Golf Charities Foundation launched its Links Across America (LAA) initiative to develop feeder short golf courses – three, six or nine-hole – across the country to provide affordable golf for youth, families, adult beginners and individuals with injuries and disabilities.

Last year, two LAA short course facilities were completed: The Dundee Park District west of Chicago, a five-hole par 3 short course & short game area; and The First Tee of Savannah, Georgia, a three-hole short course and driving range. Likewise, the list of corporate partners has grown to 46.

And during the last six months, interest in the LAA initiative has gained momentum. Early spring of 2011 construction will commence on a three-hole short course (two par 4's and a par 3), driving range, and short game area for The First Tee of NW Arkansas near Bentonville. Then in May, a unique six-hole par 3 short course located at the Rockwood 18-hole golf course owned by the City of Ft. Worth, Texas, will be underway. By late spring major re-grassing and irrigation will be completed enabling The First Tee

of Harrisonburg, Va., to reopen their three-hole par 3 short course.

With 13 other short course projects currently in the planning/design stage, the Wadsworth Foundation tells GCI the next two years will be very busy. In 2012, a minimum of six to seven LAA projects will be under construction followed in 2013 by about that same number.

Prior to launching the LAA initiative in the fall of 2008, the Wadsworth Foundation spent several years researching the reasons why the growth of the game is stagnant; what needs to change and whether there is a need for short course development. Here's what they found:

- "Affordable golf, especially for youth is a major problem throughout the country. According to the National Golf Foundation report, from 2006 thru 2008, we lost 900,000 young golfers from the ages of 6 thru 17."

- "Each year the industry is losing a significant number of the short 'value' courses where golfers learn to play. The NGF reported from 2004 – 2008 there were 530 golf course closures and of this total 200 were the short courses, the stand alone 9-hole, par 3's and executives."



- "New players to the game need the option and opportunity to play golf in less time because today individuals and families are faced with many time constraints. Three, six or nine-holes facilities provide that advantage."

- "Golf must become 'fun' again."
- "After the golf lessons there needs to be a Step #2. The lessons, clinics, junior programs, Play Golf America, etc., have been successful teaching beginners of all ages how to swing the club and hit the ball. Then the new golfer asks 'What is the next step so I can get out there and learn to actually play golf?' Around the country the majority of lesson programs do not provide this second step and therefore, there is minimal expansion of new golfers into the game."

- "In society today, there is not a better sport than golf that teaches the lessons by which to live life, but that can only happen, by having the opportunity to tee it up and play the game."

- "The short courses must be accessible for individuals with injuries and disabilities."

## KANGAROO Roundup

**H**ere at GCI Galactic Headquarters we've documented some pretty strange invaders destroying golf course greens. We've chronicled everything from the norm – deer and geese – to the more unusual, such as wild hogs, skunks and the occasional drunk driver.

Heck, we've even reported an invasion of pirates (see October's Whiteboard) on one English course!

But according to the Australian newspaper, Joondalup Times, kangaroos have become a major irritant at the Joondalup Resort Golf Course. Apparently, Australian Department of Environment and Conservation officials were called in last year to cull kangaroos that were damaging the course. CRIKEY!!!

Originally, kangaroos were not suspected for leaving 60 to 70 holes per night on the course's greens. It was only after course staff staged an overnight sting operation to monitor the greens that the roos' ruse was revealed.

Several alternatives were tried, such as using different fertilizers and other materials on the greens to deter the hoppers, but nothing worked. So, in August and September, licensed DEC officers shot 13 kangaroos that were seen damaging the course.

Shooting kangaroos on the Joondalup Resort golf course was the last option, according to course superintendent Ashley Watson. Since the cull, the damage has ceased.





## ROLL CALL

WCI Communities named **Tom Skotzke** golf course superintendent at Pelican Preserve, Ft. Myers, Fla.

**Mark Wilson**, CGCS, joined The Hill Co. to serve as its lead agronomic advisor and as a member of its Midwest sales team.

Wadsworth Golf Construction Co. appointed **Patrick Karnick** as president. Former president, Tom Shapland, will focus on business development.

Sebring (Fla.) City Council hired **Mark A. Hopkins** to run the city's municipal golf course.

Bayer Environmental Science (BES) announced **Jason Frank** joined the company as a field sales representative for the southern region on the golf and lawncare sales market in southwest Florida, Mississippi, and Alabama.

The GCSAA selected **P.J. McGuire**, director of golf course maintenance for Par 4 Golf Management Co., Las Vegas, to receive its 2011 Excellence in Government Relations Award.

PrimeraTurf Inc. CEO **Frans Jager** announced his retirement from the company effective Sept. 30, 2011.

The Mesquite Golf Club (**Travis Sales**, manager of parks services and golf course superintendent) was chosen by the Texas Turfgrass Association for Golf Course Renovation Project of the Year.

**Aaron Thomas**, a member of the original staff that unveiled The Ritz-Carlton Golf Club, Dove Mountain in 2009, has returned to the award-winning golf course as director of grounds.

The Golf Course Superintendents Association of America (GCSAA) selected **Richard Pavlasek**, CGCS, director of golf course maintenance at Gainey Ranch Golf Club in Scottsdale, Ariz., as the its field staff representative for the Southwest region of the country (California, Hawaii, Nevada and Arizona).



## Get a *life*

### GCI's quest to spotlight peoples' lives outside of turf

**WHO:** Carmen Magro, CGCS, vice president of agronomy for Advanced Sensor Technologies, a Philadelphia-based maker of wireless soil-monitoring systems.

#### HIS LIFE OUTSIDE OF TURF:

In his spare time, which he admits there is not enough of, Carmen is pursuing his passion for music. This piano man has self recorded a number of original works, and he's currently working with a producer on his first album. "For me, music is more than a hobby. It's really an extension of who I am."

**SOUNDS LIKE:** "I'd say my songs are piano-oriented upbeat rock tunes with a strong ballad feel. I've been told by some people that I remind them of a young Neil Diamond."

#### WHAT INSPIRES HIS MUSIC:

"I'm inspired by meaningful music, songs that have stories behind them. Springsteen is a master of the art of storytelling through his songs."

#### ARTIST HE'D LOVE TO OPEN FOR:

"Definitely U2. I think U2 is one of the best performing bands on the planet."

**SAMPLE HIS MUSIC:** Check out Carmen's "America" on YouTube. Just enter "Carmen Magro-America" into the YouTube browser.

#### WHERE YOU CAN SEE HIM NEXT:

Don't be surprised to find Carmen in front of a mic at an Orlando piano bar or karaoke joint during GIS.

*If you have a passion you'd like to share, email us at [gci@gie.net](mailto:gci@gie.net).*







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**Stephen Tucker** is the equipment manager at the Ritz-Carlton Members Golf Club in Bradenton, Fla., and past president of the International Golf Course Equipment Managers Association. He can be reached at 941-309-2913 or [stephen.tucker@ritzcarlton.com](mailto:stephen.tucker@ritzcarlton.com).

## EQUIPMENT TECHNICIANS PREP FOR 2011 GIS

**A**s we all prepare for the 2011 Golf Industry Show in Orlando there are a lot of new changes taking place. The biggest change affecting technicians this year is the fact that now The International Golf Course Equipment Manager's Association is a partner with the Golf Industry Show, and later in the year it will be launching their second annual Virtual Trade Show.

However, I received a few phone calls this year from superintendents saying they were planning to send their technicians to Orlando this year but they didn't see a lot of education that pertained to them. So they wanted my advice on what classes to put their technicians in. I have attended the Golf Industry Show since 1999 and have always approached it in the same way: Anything I can learn that creates value for my club and myself is worth taking.

Technicians not only need to attend classes that focus on changing oil, grinding reels and the latest EPA standards, they also need to take classes pertaining to turf, tournament prep, aerification, leadership, sprayer calibration, Spanish... I could go on and on.

Technicians need these classes so they can become another set of trained eyes on your team. With reduced staff numbers, lower budgets and the increasing demand to make pennies stretch into dollars, the more help you can get from well-rounded individuals the better. Technicians must have an appreciation for why things are done a certain way or why it's so important to have a good quality of cut or why you aerify? Most of the time I am told, "Well, if there aren't classes specific for techs, then I can't justify sending them."

The best justification for sending them is to teach them skills – such as how to better communicate or be better organized – that help you avoid having to hire another staff member. "Well, my technician barely has time to get his/her own work done. How will this help with what I need done?" Techni-

cians who are properly trained to organize themselves and their equipment will provide you with better results. And guess what, there is a class on it this year. So sign them up.

Show preparation, from a technician's point of view, consists of first mapping out what the club's needs are over the next year or two. Technicians who have the ability to speak to engineers on the show floor are going to make sure that, in the event you do purchase a piece of equipment, he/she is completely comfortable and has asked all the pertinent questions to the people who can answer them.

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"I have attended the Golf Industry Show since 1999 and have always approached it in the same way: **Anything that I can learn** that creates value for my club and myself is worth taking."

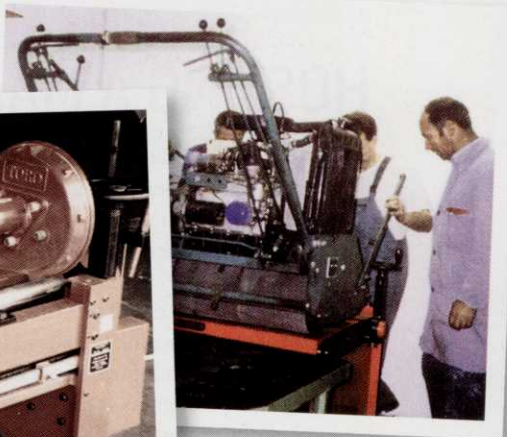
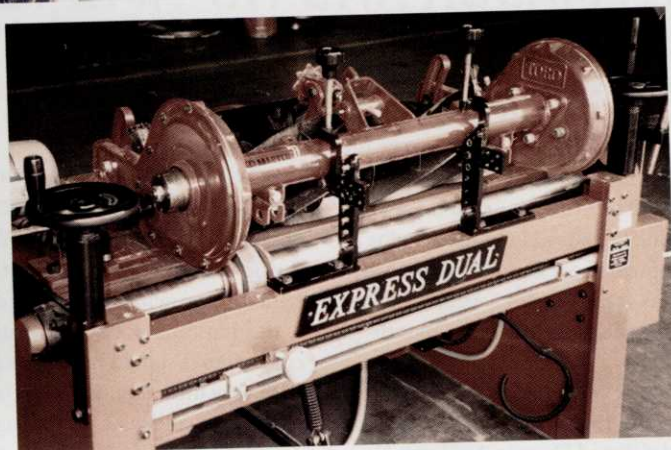
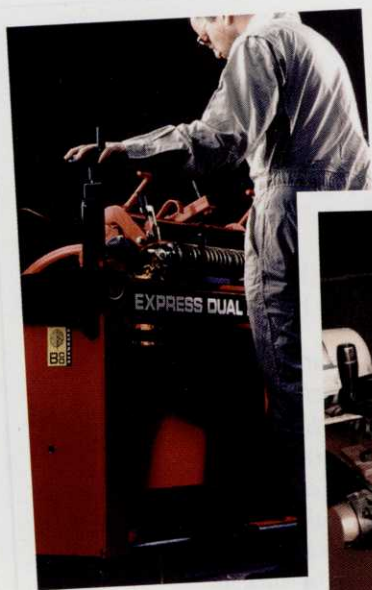
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The second thing a technician will do is map out what is new. What are the things we have not seen before? What are the new innovations? This is the best way to take a look at what training they need to obtain over the next few years to prepare. Lastly, they need to socialize. Technicians talking with engineers, other technicians and superintendents are important not only to the growth of the profession, but it helps get us focused and to the point of all working together for the good of the game.

We need to be more educated, more professional and better communicators so we can get through this tough time. And for right now, the best we can do is take those small steps to improve ourselves in preparation for when everything eventually begins to turn around for this industry. **GCI**



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## HOSTING A MAJOR AND NO TIME TO SPARE

“It came as a little bit of a surprise,” says Tom Alex of the December 2010 LPGA Tour Championship contested at Grand Cypress Golf Club in Orlando, Fla., where he has been director of golf maintenance for 25 years.

I wondered how it could be disruptive to someone who has prepared for nine previous LPGA events plus a World Cup until Tom informed me Grand Cypress was “awarded” the prestigious season-ending event in early September of this year – giving him just three months to prepare.

As a destination golf resort, Grand Cypress features 45 holes of Jack Nicklaus Signature golf, plus three teaching holes within the Grand Cypress Academy of Golf and two huge practice ranges.

The playing features are all hybrid Bermudagrass and – with the exception of The New Course – are overseeded with perennial ryegrass each fall.

Sitting with Tom in the grandstand behind the 17th green he outlined his concerns with readying a golf course for major event on such short notice.

### Q: WHERE DO YOU START WITH ONLY 90 DAYS TO PREPARE?

**A:** After the meetings with the LPGA, sponsors and ownership we established a master list of things to do and which items would pose the biggest hurdles.

Like most golf courses over the past few years the sluggish economy has necessitated budget cutbacks. Labor reductions caused numerous key tasks to be tabled or not conducted as regularly as we would have liked.

So, in preparation for the LPGA Tour Championship, we needed to organize and prioritize a master list, increase staff hours, and review equipment and supplies to reach the preparation goals.

This included:

- Reviewing the needs for each playing feature to meet LPGA set-up standards. Our biggest concern was bunker preparation. Many bunkers needed sand, bank work and drainage;
- Re-budgeting to allow an increase in work hours and special projects both on and off the golf course;
- Sub-surface cultivation practices had to be rescheduled so as not to impact event play, especially work on the putting greens;
- Re-scheduling herbicide applications; and
- Organizing all off-course, set-up operations.

Most important, we had to properly time ryegrass overseeding to provide proper playing conditions on

short notice.

Previously, we hosted events between January and March, so the overseeding was fully established.

### Q: HOW DID YOU RE-ORGANIZE THE OVER SEEDING AND WHAT PLANNING WENT INTO THIS PROCESS?

**A:** This was the toughest part. We had to move over seeding up a month, which meant the ryegrass competes with fully growing Bermudagrass.

In addition, the Florida weather was unpredictable – cold when it should have been hot; warm recently and with very little rain. Early overseeding meant ryegrass had to compete with Bermudagrass. Our ryegrass density was not there initially so we reseeded. This presented the problem of saturated fairways and roughs from excessive irrigation to germinate seed, leading to soggy and muddy conditions.

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“These big events are a **wonderful challenge** and re-energize your career and attitudes. Even a short-notice project like this one gets the juices flowing again.”

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– Tom Alex, Grand Cypress Golf Club, Orlando, Fla.

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Course conditions were worsened by daily traffic from member/guest play, as we had to constantly repair damage.

Weed control for both pre-emergent and post-emergent herbicide applications were affected by the early over seed timing. We fought broad leafs, goose and crab grass, sedges and *Poa annua*.

Putting green overseeding was another challenge due to the Mini Verde Bermudagrass growing at rapid rates and impacting the *Poa trivialis* used for the putting green seed.

We increased our Primo use and closed the timing of the applications to slow the Bermudagrass growth. Much of our *Poa trivialis* either didn't catch quickly or was removed by mowing as we worked on height-of-cut, green speed and firmness issues.

A sparse overseeding affects ball roll and if the weather turned cold the Bermudagrass enters dormancy



"I would recommend to anyone who has an opportunity to prepare for a large event to do so. It will involve so many different aspects of your job – from large scale renovations to making sure the gas cap is tightened until it clicks." – Tom Alex, Grand Cypress Golf Club, Orlando, Fla.

and we could lose surface smoothness.

**Q: WHAT WERE THE CONCERNS OF THE LPGA ON SUCH SHORT NOTICE?**

**A:** Having worked with the Rules field staff before, there were some minor concerns.

John Miller, the LPGA agronomist, had concerns about adding sand to the bunkers so close to the event. His worry was playing consistency as it related to depth, firmness and playing quality.

In addition, I reviewed with John a plan to reach tournament green speeds of 12 feet and surface firmness as the event approached. We took extra care with green speed due to the recent Nicklaus renovation.

Our crew worked closely with the LPGA field staff as our putting surfaces are full of undulations. If we weren't careful with speed and firmness, ball roll became unpredictable. Putting green irrigation applications were a top priority. Our Rain Bird moisture sensors, installed in many of our green soil profiles, helped our hand watering tremendously.

Finally, the over seeding density for fairways and primary rough grass were a concern in that we did not want a thin or cupped ball lie on the fairways or too thick a stand of ryegrass in the roughs.

Overall, it was good in the roughs and thin in the heavily trafficked fairway areas.

**Q: AT THIS STAGE IN YOUR CAREER IS IT WORTH ALL THIS EFFORT AND WHAT ADVICE WOULD YOU GIVE THOSE LOOKING TO BECOME INVOLVED IN TOURNAMENT GOLF?**

**A:** Yes, most definitely I would do it again. These big events are a wonderful challenge and re-energize your career and attitudes. Even a short-notice project like this one gets the juices flowing again.

Although it has been nine years since my last event, not much has changed. The grind is still there. I would recommend to anyone who has an opportunity to prepare for a large event to do so. It will involve so many different aspects of your job – from large scale renovations to making sure the gas cap is tightened until it clicks. **GCI**

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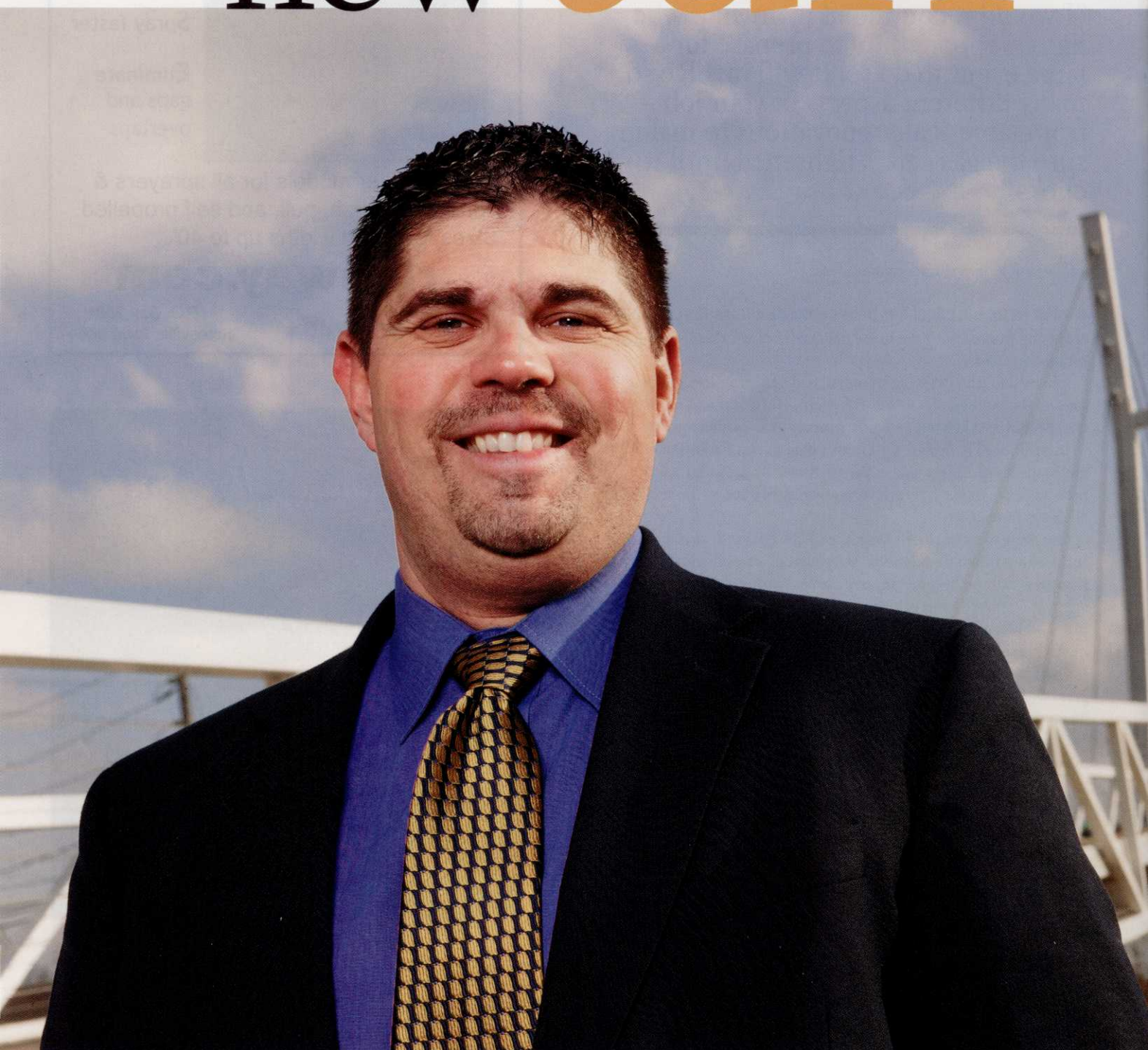


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# Treading new turf





By Monroe S. Miller

## Brian Zimmerman makes the journey from golf course superintendent to head one of the country's premier park systems.

**B**rian Zimmerman never imagined he'd one day be doing work similar to what he did as a kid.

Brian grew up on a family grain-and-beef operation in southern Wisconsin, between Basco and Paoli. Like nearly every other farm kid, he helped with the chores necessary in keeping beef cattle healthy. Each season saw him involved with crop production – cultivation, planting and harvest.

And these days, he is doing nearly same work as the executive director of Cleveland Metroparks, a job he started March 15. He is coming up on his first anniversary as only the sixth director in the park system's 94-year history and is the youngest to ever fill that position. These days, the animal issues he faces don't involve Angus or Herford cattle, but more unique animals like those found in Cleveland's premier zoo. When I spoke to him recently he had just returned from checking progress on the zoo's new elephant exhibit.

And those field crops he grew up around have been replaced by turf and trees, shrubs and flowers and a lot of other plants that require planting, cultivation and harvest, just like corn and soybeans.

Brian's responsibilities at Metroparks are formidable. The park system, Ohio's oldest, covers 22,000 acres, includes a zoo, seven golf courses, requires a \$100 million annual budget and employs 600 people. He is, however, well prepared for the job, and the roots of that preparation are deep in golf turf. In fact, he is a former superintendent.

Whispering Pines farm is only a half hour from the University of Wisconsin – Madison, and it was an

obvious choice for college for Brian. His career choice – turf management – was influenced by a couple of things – pleasant times on a golf course with his grandfather and the fact that his godfather (Randy Smith) was a golf course superintendent. Add to that the similarities between golf turf management and production agriculture, and the decision was easier for Brian than it is for most incoming freshmen.

Like most undergraduate turf students, Brian spent summers as an intern; the Nakoma Golf Club and Maple Bluff Country Club, both private courses, got him started on his career. Graduation led to a career launch in Milwaukee at the Brynwood Country Club, another private golf club where he was the assistant superintendent for three years.

An opportunity in public golf opened at the Washington County Golf Club north of Milwaukee, a new Arthur Hills course. Brian stayed there for about 18 months.

His next stop was the chance to become a golf course superintendent, at the Chikaming Country Club in Lakeside, Mich. It was at this job Brian fine-tuned his renovation and organizational skills as the club embarked on some significant changes and improvements. When Brian, wife Jill and son Carter left Wisconsin for Michigan, they thought that they would someday return to be near family.

They called Michigan home for three years. In 2002 Brian applied for the superintendent position at Brown Deer Golf Course, one of Milwaukee County's 16 golf courses and the site of the US Bank PGA Tour event. After interviews and phone calls, Brian was



ROGER MASTROPIETRI



asked if he would be interested in a regional manager position, making him responsible for all 16 golf courses. The position also included managing all turf areas in the park system. He took the job and was on his way to learning about running a big park system.

Brian's work was noticed, and in 2007 he was named operations manager for the Milwaukee County Parks, Recreation and Culture System. It's a large system – 15,000 acres, more than 400 employees and a \$51 million budget. The park system received a national gold medal award during Brian's tenure and that drew the attention of the Cleveland Metroparks as it began a search for a new executive director. The rest is, as they say, history.

Despite being separated by a generation, Brian and I have a lot in common. We are both former farm kids (and proud of it!) and

we are both grads of Wisconsin's turf program. Our golf course experiences in college were at the same two golf courses, and these courses have been managed for years by my colleagues and contemporaries Randy Smith and Tom Harrison. We were members of the same fraternity while we were undergraduates, and as a result I have known him since his late teen years. I caught up with Brian for a couple of hours one cold December afternoon and talked with him about the challenges of his new position.

**Now that you've been working as executive director for almost a year, what kind of shape is Cleveland Metroparks in?**

"I was really fortunate to follow in Vern Hartenburg's footsteps. He directed Metroparks for 22 years and in his career won three national golf medal awards for

excellence. This is an award a system can only apply for once every five years. Vern was an outstanding leader. Metroparks is known for its financial integrity and its reputation is second to none. Our branded logo is highly recognizable. We've had three clean audits with no negatives, usually unheard of. Vern changed the face and the dynamics of Metroparks and retired with our three main missions – conservation, recreation and education – well positioned for the future.

**Was Vern Hartenburg available to help you transition into the position?**

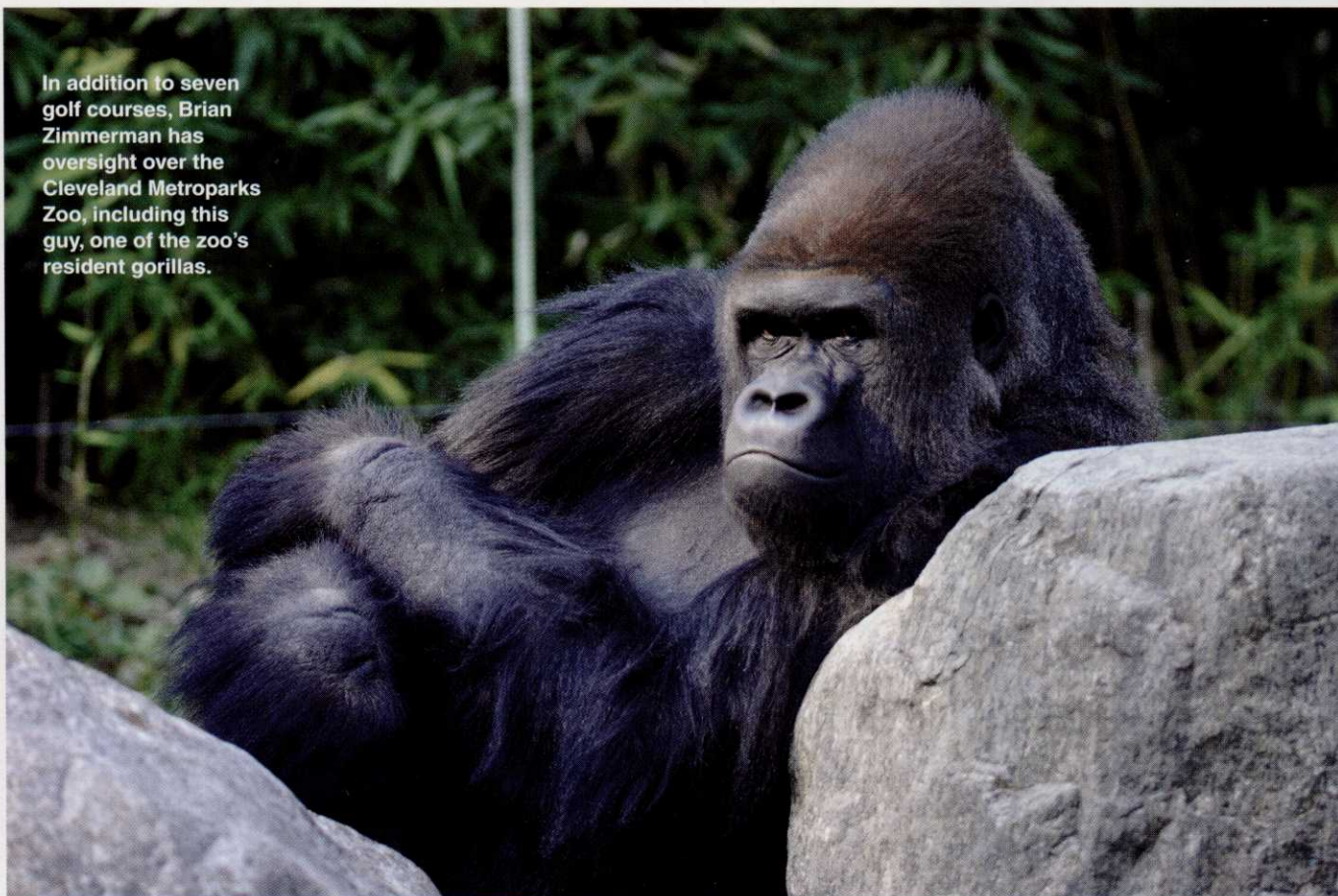
He was. And I was very happy about that. Vern was a Pugsley Award winner, an indication of his peers' respect. I embraced the opportunity of learn from him. Anytime he spoke, I recalled advice I heard years ago – "You have two ears and one mouth for

a reason." Metroparks is a big operation and I valued his help after I arrived.

**How is golf doing in Cleveland and the courses under your wing?**

I just finished working through the budget process for golf and turf, our marketing program and the clubhouse operations. Our revenue and expense projections are such that a little subsidy will have to be provided. I guess we're like the national situation – we've struggled. But we are on par with everyone else. We're constantly looking to retool any aspect of the golf operation to improve it. We are planning to get people in their 50s and 60s more involved with golf since they have raised their families and may have a little more time. We are also talking about golf as a way to treat the "nature deficit disorder."

**In addition to seven golf courses, Brian Zimmerman has oversight over the Cleveland Metroparks Zoo, including this guy, one of the zoo's resident gorillas.**





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As executive director of Cleveland Metroparks, Brian Zimmerman is responsible for 22,000 acres, including a zoo, seven golf courses, a \$100 million annual budget and 600 employees.



**Do you miss any of the day-to-day activities of being a golf course superintendent?**

To be honest, I have the chance to participate in many diverse activities, from work with the zoo to working with a golf course architect like Bruce Mathews, to ranger details and labor bargaining. Variety is one of the appealing aspects of a superintendent's career, and as the park director, I have even more. It's much different, however, than dealing with day-to-day activities on a course. It might be that my job is actually less stressful!

**What is your biggest challenge in operating such a large and diverse operation?**

I have nine direct department reports coming to me. I look to helping bring out the best in all of them. We want our residents to be clear about the direction of Metroparks and have confidence in the way we run the different aspect of the park district. I focus on youth programs, our users of

the future. Great staff is key to a successful organization.

**You were elected president of the Wisconsin Golf Course Superintendents Association before you were selected for the Cleveland job, and you continued to lead the chapter through to the end of your first term. How much of a challenge was that?**

I remember, as an undergraduate, helping Randy Smith assemble our chapter directory and I was impressed by his dedication to the chapter. As I moved along I saw that same loyalty in many superintendents in other projects. Watching colleagues banding together for a common cause was an inspiration. I wanted to give back to the Wisconsin chapter in the same way. I spent years on the board and as an officer, preparing myself to be president.

The other officers and directors were very happy for me to have this opportunity in Cleveland. Previous presidents had put

our chapter in a position to hire a chapter manager, and that made it possible for me to preside from a distance. Technology made it easy to communicate – email, cell phones and Skype.

My goal was to highlight the importance superintendents have in golf, not just turf. I believe I helped in that regard.

**Has your farm upbringing influenced your career?**

First of all, seeing the struggles of farming up close made it clear to me farming wasn't anything I was interested in. There was always so much uncertainty, but there were lots of good lessons to learn. A farm is a small business and there is a lot to be learned from that. The job at hand had to get done. Farming teaches a stick-with-it attitude, which is always helpful. And I do believe in the old saw "You can take the boy off the farm but you can't take the farm out of the boy."

It is interesting that of the six of us who have served as execu-

tive director of Metroparks, three of us were raised on a farm.

**Where do you see yourself in five years? Ten? At career's end?**

Right here in Cleveland. The opportunity I've been given is one I take very seriously. I look forward to renewing a number of levy campaigns. I'd be lucky to finish my career with Metroparks.

**What advice do you have for a superintendent who may want to move beyond a golf course career?**

Always put yourself in a position to learn and be successful. Don't be afraid to try something out of your comfort zone. Think out of the box. Be willing to volunteer because the experience could be helpful in your future. Don't limit yourself; always expand your experiences. **GCI**

Monroe Miller authors "The Monroe Doctrine" and is a frequent contributor to GCI.





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# AFTER A PERFECT

# Storm

**Bloggers from around  
the nation share their  
frontline stories  
from the summer of 2010**

## Trust your training

Grant Huffman relied on his instincts to persevere through one of the most challenging summers in recent memory.

I was excited about the opportunity when I asked to submit an article about the summer of 2010. This summer was my toughest mental test in a decade within the industry. However I managed to get through without any noticeable turf loss, and as the summer went along the turf became healthier. Nothing I am about to say is going to be “earth shattering” but I hope the key points to my success this past year can help others in this business succeed in the future.

**Fertilizers:** When it comes to granular fertilizer I kept applications closer together with slightly less than typical half pound of N rates. Fairways and rough applications were organic and spaced out every month and a half and tees were on a monthly cycle. On greens and tees I used organic fertilizer and sulfate of potash during aerification in the spring, with a gypsum application before the summer stress hit, followed by a standard dormant feeding in the fall. Liquid fertilizer was applied every two weeks and incorporated into the spray program on tees and fairways with weekly applications on greens. I added standard liquid fertilizer in every spray with a rotation of molasses, manganese, processed fish meal, iron, kelp, and calcium. This rotation was performed every month during the growing season. This allowed for keeping away from the “peaks and valleys” and made for a consistent N and micronutrient feeding all season long.

**Regulators:** When the dry and hot weather hit a lot of people backed off on the amount of regulators being used. I use rates that have been termed “suicidal” by some but didn’t back off. I think this plus the use of multiple

“ This was definitely a summer for uninformed players to ask questions such as, ‘Why don’t you just run the water at night?’ or ‘How come the rough is turning brown?’ or ‘Don’t you guys put any water out here?’ ”

## Preparing for combat

Justin Ruiz says his region’s annual “monsoons” are a double-edged sword.

Imagine you are working at a club taking care of the course for an elite and affluent membership. You wake up on a nice morning at the start of summer knowing that you have one less day of water to use this summer. Welcome to The Rim Golf Club.

At the start of every summer we have a total of about 60 to 65 days of storage. We rely on the summer monsoon season to come at the end of June or the early part of July to give us relief from the hot dry summer. The arrival of the monsoon weather is a double edge sword. It may relieve us from the hot dry conditions but it also brings the pressure of hot humid conditions.

What we have done to combat such a difficult season is two-fold. First, we combat the hot dry conditions and limited water storage with efficient and creative water use. We have done extensive programming changes to our central control and physical adjustments in the field to become more efficient on our nightly water applications. To continue to extend our efficiency we have created portable irrigation. We can effectively target smaller, localized areas that large rotors would be in-effective at watering. We have also started to bring the perimeter of the course back to the irrigation heads so that we don’t waste water out in the native areas. All these techniques are enhanced with the use of a quality wetting agent to ensure adequate infiltration.

Second, we have created a successful IPM program to defend ourselves from

“ Using a few simple procedures we have been able to continue to keep our water usage reduced and our problematic pests at bay.”



regulators in the program had a huge impact on the performance of the turf.

**Cultural Practices:** REMEMBER THE BASICS! Most everyone pulls cores but who remembered to verticut, spike, groom, top-dress, and deep-tine tees, greens, and fairways this past season? How many of you think your turf would have performed better if you did? Tees and greens were verticut three times and fairways once. Top-dressing and spiking greens was performed every two weeks. I got more from my spiking unit by taking the turf guards off which allowed for deeper penetration with little more disruption than with the guards on. Find a good large area spiking unit and your fairways will be thanking you all season long. Greens were groomed once a month with a deep-tine aerification in the fall.

**Soil and Water Testing:** When is the last time you had a soil/ water test done? Do you guess as to what the soil and turf is lacking and do you just assume your water supply is free from pollutants? I have two separate soil/ water tests done each year. The spring and fall soil tests came back with everything in acceptable ranges. I believe this is another major reason the turf not only survived but thrived this season. The spring water test came back with high sodium levels and the fall test was perfect. I could address the sodium issues before even charging the irrigation system because this simple test was performed. If soil and water chemistry is in balance success will generally follow.

**Employee Training:** How many of you took the time to properly train your employees on how to hand water or mow properly? Do you notice your employees take the same route across the turf day in and day out? Are you confident your assistant(s) could keep the course alive and thriving if an emergency were to arrive? Too much water is a recipe for disaster but just the right amount is priceless. Showing a crew member the proper way to turn a mower around and training them to take different routes across the course can save your turf from stress. I check myself a few times a year by showing up 30 minutes late when everyone is out the door and then observe what is taking place. The only thing this year I would have changed was a crew member taking a triplex with groomers instead of one with verticutting units. I didn't blame him... I blamed myself!

**Water Management:** Knowing how much water to apply is by far the most stressful part of my job. I went to school to study agronomy... not predict the weather! Use a thermometer. Take a pocket knife and cut a piece of turf and tug on the roots. Use a soil probe. Never guess. It will only lead to disaster. One water management technique that works well is making paper copies of your greens, tees, and fairways, and highlighting the areas that seem to burn out and get "hot" the quickest. Use the newer wetting agent/ surfactant technologies to your fullest advantage.

**Get Rid of the Poa:** Another reason I survived this year is that I have been on an aggressive Poa eradication program and letting desirable grasses take over. Poa is almost nonexistent in tees and fairways and the greens are up to 75-85 percent bentgrass. There are few sweeter sights than seeing Poa being encircled by bentgrass! Use herbicide and regulator advancements and verticut to promote lateral growth in bentgrass. Also, is it really going to break your budget to purchase a little more bentgrass seed? It is worth the investment.

Maybe the best advice I can give is trust your instincts... what is your gut telling you? Nothing is wrong with seeking advice, but most likely you know your facility and turf needs better than anyone else. Don't be afraid to experiment and think outside the box. If some of you think that everything discussed in this article seems expensive I oversee the maintenance for a thirty-six hole property with a maintenance budget under \$750,000. If anyone has questions or would like to know more detail on something particular that is summarized in this article I can be reached through my Website at [www.onparwithgranthuffman.com](http://www.onparwithgranthuffman.com). Here's to better weather and fewer sleepless nights in 2011.



Justin Ruiz: "This past summer has been another year that validates our efforts toward water conservation and effective plant management."

the hot humid weather that partners with the monsoon season. Counting degree days, scouting and trapping insects are some of the techniques we have been successful at over the past three years. Ensuring that pesticides are used at the correct timing, we avoid over applying chemicals or even worse missing the correct timing. The IPM program has gone hand in hand with our efforts toward water conservation. If we can keep the root feeding insects at bay it is inevitable that less water is needed to keep quality conditions.

Each summer has been more difficult in one way or another. If the monsoons are late then we are counting down the days that we have left of our storage and are challenged by getting more and more creative on how we can keep the course playable. If the monsoons are plentiful, we await the onslaught of turfgrass disease to challenge the accuracy of our knowledge and foresight.

This past summer has been another year that validates our efforts toward water conservation and effective plant management. Using a few simple procedures we have been able to continue to keep our water usage reduced and our problematic pests at bay. As the weather seems to get more extreme each year it just makes us strive to get a little more creative and a lot more humble.

**JUSTIN C RUIZ**, CGCS, The Rim Golf Club, Payson, Ariz.

[www.therimgolfclub.blogspot.com](http://www.therimgolfclub.blogspot.com)



# Overcoming adversity

For Tom Shephard, his crisis wasn't weather related. Instead, over seeding presented its own unique hell.

“After everything was finally seeded and we just needed to keep the new seed wet until it germinated, we encountered a major problem. On Sunday afternoon around 1 p.m., our irrigation computer crashed – ever experience that wonderful feeling?”

We encountered more adversity over seeding process this year than we ever have. Hat's off to my staff for not only overcoming it, but for keeping on schedule as well. It all started when our Turf Vacuum – used for picking up the scalped clippings – blew its engine a week before we closed for overseeding. We ended up having to borrow a disabled Sweeper from another nearby club and between the two, got one working. Next, our fairway mower broke its frame in four different places. Then our spring rake broke down three separate times. That was followed by our top-dresser blowing one of its four rear tires. Of course, it was an inside

tire and it was fully loaded with sand at the time. Add into the mix that we had nine separate 2-inch lateral waterline breaks and four 6-inch mainline breaks during the process, and you can understand the challenges.

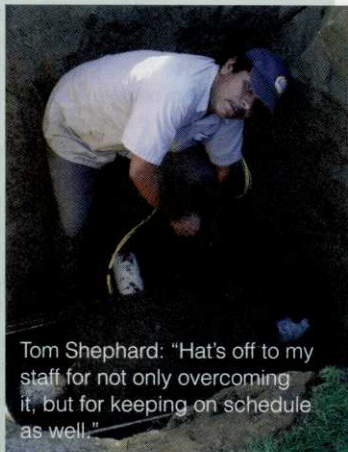
Compounding the problem, the day we finished seeding the front nine fairways and roughs, we discovered that we had a communication wire broken between our irrigation computer and the field controllers that operate the front nine watering. We had to call in a specialist who took two days to track the underground wires and find the break, which was between No. 2 green and No. 3 tee.

After everything was finally seeded and we just needed to keep the new seed wet until it germinated, we encountered a major problem. On Sunday afternoon around 1 p.m., our irrigation computer crashed – ever experience that wonderful feeling? That left us with no way to water our new seed. We contacted Rain Bird Irrigation Support and were told that the only thing that could be done was for them to build us another computer on Monday and ship it to us from Tucson, Ariz. They said we should have it sometime on Tuesday. However, we had already been watering the seed for three and a half days and it was starting to swell up, indicating that it was about ready to germinate. At this critical time we could not afford to go two or three days without water. Once the seed starts to swell, it must be kept wet or it will dry out and die.

Anyway, to make a long story short, I rushed home and got my laptop computer. Then I spent the next seven hours loading up the software and drivers to operate the system and figuring out how I could connect the laptop to the irrigation communication wires running to the controllers. This was after contacting Rain Bird again and getting permission to install and use their software on a non-Rain Bird computer. There is a key code needed to load the software.

It was a good thing we got the laptop going, because the FedEx plane had a mechanical problem and we didn't get our replacement computer until Wednesday afternoon.

Well, everything was going great for the next three days, until one of our 100-hp irrigation pumps went down. Fortunately, we were able to adjust the irrigation computer software to operate with fewer gallons per minute and we were able to get by temporarily with one pump less. I really have to hand it to my staff because they really put forth an extraordinary effort to overcome this unique sequence of adversities.



Tom Shephard: "Hat's off to my staff for not only overcoming it, but for keeping on schedule as well."

## Ten minutes from disaster

Summer was very challenging, and Ken Thompson reminded his crew of that fact every day.



It is no secret that the summer of 2010 was one of the warmest and challenging years that I have faced in over 20 years as a golf course superintendent. Between March and September, we recorded 14 record daytime highs, 44 days over 90 degrees, and received less than 6 inches of rain from June thru August – all of it totally unprecedented! There was not a day that did not, in some new way, challenge our staff. But when it was finally over, our course had survived and was still in great shape.

I credit our success first and foremost to our staff of men and women who endured the tortuous heat to "hold" the course through hand watering. Most work days lasted over 10 hours, and were mostly spent moving from green to green, tee to tee, fairway to fairway, and rough to rough dragging 100-foot hoses.

Our staff began each day performing the basic duties of mowing and course set up. As these tasks were finished, they would then switch over to hand watering. By mid morning, our full-time staff of 10 was "on a hose" watering hot spots or syringing. As we have done since I arrived here in 2003, we only used the irrigation system when hand watering and syringing was not enough to hold the course. By the summer's end, we had hand watered for a total of 1,175 person hours.

We were most careful to not over water the greens and tees. For the greens we normally had three persons syringing – applying a very fine mist over the green with a specialized nozzle which was done to keep the surface temperatures from climbing too high. These persons were instructed to raise the nozzle up in the air instead of downwards, and to get on and off the green within the count of "7." This team was followed by my assistant or me to check each green for hot spots. In this way, only what needed water received it, while the entire green was evenly cooled down. We did a very similar program on the tees.

Our program of syringing fairways was to run a two-minute cycle during the early and mid afternoons. At the same time, a team walked each fairway and rough with hoses watering hot spots.

This program of syringing and hand watering prevented the soils from becoming wet, balanced the evapotranspiration rates, and controlled surface temperatures. It also helped with disease suppression and prevented any significant turfgrass root loss.

Some other things we did to reduce plant stress was to use solid rollers on all our mowing equipment, do our mowing in the early morning, roll greens in place of cutting them on the hottest days, raise cutting heights (by only a few 1000ths), and needle tine the greens and tees to keep the soils breathing. Over the past years we had held to an aggressive aeration program which had reduced our thatch and increased our soils pore space, contributing to having a healthy plant going into the summer.

It was a very challenging summer – and I told the staff every day that if we let our guard down we were "only ten minutes away from a disaster!" Our staff responded to the task ahead and never gave up to the heat. To them I give all the credit.

**KEN THOMPSON**, superintendent,  
Greate Bay Country Club, Somers Point N.J.

<http://greatebaycc.blogspot.com/>

**TOM SHEPHARD**, superintendent, Desert Falls Country Club, Palm Desert, Calif.

<http://tomsturfalk.blogspot.com/>





# Dustin's inferno

When it comes to defining the "Summer from Hell," Dustin Riley asks just what is your definition of "hell?"

Many are referring to Summer 2010 as the "Summer from Hell". But how do turf managers define "hell?" Too hot, too cold, too wet, too dry, high disease pressure, reduced fungicide budget etc., etc., etc.

As we reflect back on the Summer of 2010, we may have varying criteria for the "hell" each of us remember. But in the end, we are all referring to the environmental stress that was applied to our golf course turf.

The summer of 2010 was not the typical summer. If you proceeded with the same old programs, you probably encountered some issues. The weather stress was just too great on the turf and adjustments in management needed to be made. Surviving such a difficult summer requires implementing stress relieving practices before the onset of those stresses. I know, easier said than done. The one key change I expanded into my turf management program is practice of rotational venting of the putting surfaces.

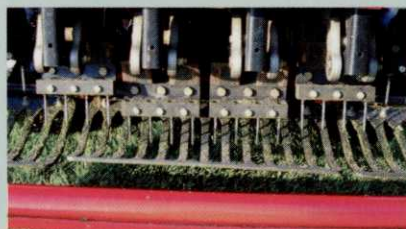
Rotational venting? Yes, rotational venting. Many of us were reminded that high nighttime temperatures can be more stressful to the turf than a 90-degree day. The soil relies on the nighttime temperatures to cool down and drawn in fresh air. When soils are wet from repeated rainfalls and continually absorbs solar heat each day, but cannot cool down at night, the turf becomes stressed.

Venting is the practice of poking very small holes on the putting surface.

Millions of vent holes allow warm soils to cool and allow fresh air to penetrate the soil. Creating these vent holes will help keep a fresh supply of oxygen to the turf roots. In a sense, the venting process allows the greens and soil to breathe easier. The fresh air promotes healthier and more expansive root systems. The stronger the root system, the stronger the plant and the better it'll handle summer stresses. In addition, the small vent holes will also provide wonderful mini-channels for irrigation and rain water to enter the soil profile during dry conditions.

The venting process can be performed frequently through the summer if a scheduled rotation can be coordinated. For me, I utilize three

“Surviving such a difficult summer requires implementing stress relieving practices before the onset of those stresses.”



walking greens mowers with separate mowing route assignments. Each week, a different mowing route is targeted for venting. The actual venting process per green requires the same amount of time to complete as mowing (15-20 minutes) By targeting only six to seven greens per event, the venting process can be completed ahead of a greens mower and any early morning golfers. My venting program runs from late-May through mid-August

(core-aeration). As a result, each green is vented on a three-week rotation and four times throughout the summer.

This rotational venting program provided a valuable agronomic benefit to my putting surfaces and helped me survive the stressful Summer of 2010.

## Summer replay

Chris Lecour considers Summer 2010 the "best ever."

While many Superintendents across the country are wishing the summer of 2010 never happened, I look back and wish I could relive much of it all over again. 2010 was the year I stopped being a superintendent. Let me tell you how I spent my summer vacation.

Like many golf clubs in North America, my club was struggling. Designed as a golf and residential community, the golf course was the centerpiece for the entire development. When the recession hit in 2008 everything, everywhere, just seemed to stop. With the arrival this past winter of a new majority partner to rescue the development, who also owns a neighboring golf course just minutes away, my position soon became obsolete. One superintendent would manage both golf courses and by the end of July, I was gone.

The truth is I enjoyed my best summer ever. I spent more time with my kids than I can remember, more time with my wife than she'd care to remember and I loved every minute of it. I slept in late, stayed up late, rode my bike, enjoyed weekends (full weekends mind you, not half a weekend after working a full day on Saturday) at the cottage with friends, and saw New York and Chicago for the first time. Essentially, I did many of the things I wish I had done over the past five years; things I could have easily done in the past five years if I had kept my job and my responsibilities in perspective. Too often I put my job ahead of my family. The last few years saw a shift away from that attitude, but still it became too easy to come up with an excuse to go back to the course in the evening "just in case something went wrong." Let me share some wisdom gained over the past few months: If you're responsible and doing a good job, as most of us are, things just "don't go wrong." When you leave the course for the night, don't come back until morning. It will still be there upon your return.

I'd be lying if I said I'd been living carefree since my departure. There have been a few anxious moments, usually when I'm reminded of the reality of a shrinking job market in a very slowly recovering economy. Really, I was no better or no worse than any number of good superintendents faced with a similar life crisis; I simply came out on the wrong side of the numbers game. Almost anybody could find themselves on the wrong side over the next 5 years. However, a good friend reminded me, "The cream always rises to the top." I may not come out of this lull with the highest paying job in the area, but I know where the top is now and I intend to be there, enjoying it with the people who are most important to me.

The life of a superintendent moves pretty quick. To go from zero to 60 back to zero again in the middle of the season is not easy. I'm

grateful for all the support I received since I left the club and I'm reminded of a chance encounter and conversation I had with a local superintendent at the end of September. When I told him how I had been spending my time he replied, "Man, I really envy you." That comment helped put things in perspective, and I couldn't have agreed with him more.



**CHRIS LECOUR**, former superintendent.

The Raven Golf Club at Lora Bay, Collingwood, Ontario, Canada.

<http://chrilecour.blogspot.com/>

Lecour's final post was dated July 30, 2010



# EXPANDING THE

## OUR GROWING TEAM OF COMPANY PARTNERS

The following is our growing list of *Links* Company Partners that have committed to join our team in this endeavor. **This means that when they become involved in a *Links* project, the team partners will contribute profit, goods or services to assist in achieving the development of the *Links* short courses at a significantly lower cost.**

### GOLF COURSE CONTRACTORS

Bruce Company of Wisconsin – Dave Weber /  
Eagle View Golf, LLC – Ronald Matthews / Glase Golf, Inc. – James Glase /  
Golf Creations – Jim Lohmann / Golf Works – Frank Hutchinson /  
Landscapes Unlimited – Bill Kubly / MacCurrach Golf Construction /  
Mid-America Golf & Landscape – Rick Boylan / NMP Golf Construction Corp. – Yves Brousseau /  
Turf Solutions Group LLC / Wadsworth Golf Construction – Patrick Karnick

### GOLF COURSE ARCHITECTS

Michael Benkusky, Inc. / Thomas E. Clark / John Colligan /  
Dye Designs Group – O'Brien McGarey / Ed Gerlach / Art Hills/Steve Forrest /  
Hurdzan-Fry - Dave Whelchel / Jemsek Golf Design / Paul Loague Golf Design /  
Lohmann Golf Designs / Greg Martin Golf Design /  
Mungeam Cornish Golf Design – Tim Gerrish / Kipp Schulties Golf Design /  
Watermark Golf - Nathan Crace Design / Weibring/Wolfard Golf Design

### GOLF INDUSTRY PARTNERS

Ace Golf Netting / Club Car / CGL of Savannah – Golf Management /  
Dan Nicholas – Clubhouse Design / Davey Tree Company / Eagle Sign & Design /  
Fore Reservations / Golf Core / Golf Visions Management Company /  
Irrigation Designs – Larry Rodgers / John Deere Golf /  
Schoppe Design Associates, Inc. – Land Planning & Recreational Complexes / Signature Bridge /  
Sprung Instant Structures – Small Clubhouse Structures / Synthetic Turf International /  
Thompson, Dyke & Associates – Recreation/Sports Complex Design / The Toro Company /  
Tour Edge Golf / Turf Solutions Group LLC / Wilson Golf / Wittek Golf

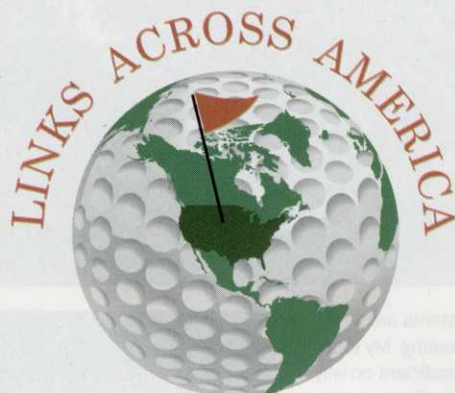
For further details contact Leon McNair at [leonm@wadsworthgolf.com](mailto:leonm@wadsworthgolf.com)





# GAME OF GOLF

The Wadsworth Golf Charities Foundation and its **growing list of Company Partners from the Golf Industry**, that have committed to join this important endeavor, partner with park districts, YMCA's municipalities, existing golf courses First Tee Chapters, school districts,



hospitals & forest preserve districts to develop "feeder short courses" (three, six or nine-hole) across the country to provide affordable golf for youth, families, adult beginners and individuals with injuries & disabilities from all ethnic backgrounds.

## **Short Course Projects That Opened in 2010**

### **Dundee Township Park District**

Five-hole par 3 course with putting, chipping & pitching greens.

The Wadsworth Foundation wishes to recognize **The Bruce Company of Wisconsin and Lohmann Golf Design** for their significant contributions to this *Links* short course project.

### **The First Tee of Savannah**

Added forward tees to create a three-hole short course & new driving range at the Mary Calder GC.

The Wadsworth foundation wishes to recognize **MacCurrach Golf Construction, Paul Loague Golf Design, Ace Golf Netting, Wittek Golf, Club Car, Wilson Golf, International Paper Co., CGL of Savannah and The First Tee of Savannah** for their collaboration and contributions to make this *Links* short course project a reality.

## **Projects Scheduled for 2011**

### **The First Tee of NW Arkansas**

Three-hole short course, driving range & short game practice area in Lowell, AR.

Construction is scheduled to begin in early spring and the Wadsworth Foundation wishes to recognize **David Whelchel**, who is providing the design services for this *Links* short course project.

### **The City of Fort Worth, Texas**

Six-hole par 3 short course at the City owned Rockwood 18-hole golf course.

Construction will begin in late spring and the Wadsworth Foundation wishes to recognize **John Colligan**, who is the golf course architect for this *Links* project.

### **The First Tee of Harrisonburg, VA**

This project involves regrassing & renovation work to restore their three-hole par 3 short course.

The renovation work will begin this spring and the Wadsworth Foundation wishes to recognize the **McDonald Design Group** for their assistance on this *Links* short course project.

## **Projects in the Planning/Design Stage Scheduled for 2012**

- **The YMCA & First Tee of Rapid City, SD.**, nine-hole short course.
- **Alameda Junior Golf Assoc., Alameda, CA.**, nine-hole par 3.
- **The First Tee of Green Bay, WI. & Brown County Forest Preserve**, three-hole & range.
- **The First Tee of San Jose, CA.**, renovation of the driving range & new putting/chipping green.
- **Rockford Illinois Park District**, new nine-hole short course and driving range.
- **Peoria Illinois Park District**, adding forward tees to create a short course at their Madison GC.
- **The First Tee of Charlottesville, VA.**, nine-hole short course and driving range.
- **University at Alaska Fairbanks, Fairbanks, Alaska**, nine-hole par 3



## Just do it

**Under the most trying of circumstances, Paul Sabino and his team persevered by paying attention to the fundamentals.**

**W**hat "Summer from Hell"? The season that included more than 33 days of temperatures breaking 90 degrees, consistently extreme levels of humidity, intense downpours or contrasting drought? How did we keep predominately Poa Annua, push up style greens alive with a reduced operational budget which included a labor budget that equaled our actual from the year 2000? Smoke and mirrors baby!

In my honest review of this season's success, under the most trying of circumstances, we did it by paying attention to the

**“We truly did have some of the best playing conditions in one of the worst weather years in my 20 years as superintendent at The Farms CC.”**

fundamentals. We focused on planning, prioritizing, experience, solid agronomics, adaptability, execution and communication.

I went into the season with a good plan. The key to the plan was managing budget reductions while still maintaining course conditions at a high level. I focused on what I thought course conditions should be and compared it to member expectations. I found that some conditions I considered noticeably sub-par were not as apparent to our members. I reduced expenses in their "non-priority" areas and channeled the funding into the higher priorities.

The veteran maintenance staff was an integral component

to the plan. My assistants are proficient at pest scouting. My top five employees are proficient on wilt patrol. Every single staff member knows and is required to pay attention. If it doesn't look right, say something! This management style afforded us the flexibility to adapt to everything that was thrown at us all year. In addition, we kept the bodies fresh with rotating vacation time. We always had staff coverage and overtime was almost nonexistent. I couldn't be more proud of them. They were the preverbal glue.

2010 started with a good agronomic foundation. We had aerified aggressively in the fall of 2009. Half inch tines on the Pro-Core and three quarter inch tines on the Verti-Drain. The members were not thrilled with putting conditions in late 2009, but I think it really made a difference. Ground conditions were firm in March, 2010 and I was able to aerify early with quarter inch tines.

Balanced and consistent water soluble fertilization, in conjunction with growth regulator applications, was key to the consistent quality of the putting surfaces. The greens received an average of .15 pounds of nitrogen per thousand and Primo Maxx at six ounces per acre every ten days. We did not apply any bio-stimulant products at all but did supplement with iron and micronutrient products. When we backed off on fertility levels to prepare for an important event we would time our next application so it would be "kicking in" immediately following. This was important to



Paul Sabino: "In my honest review of this season's success, under the most trying of circumstances, we did it by paying attention to the fundamentals."

relieving stress following repetitive days of double cutting and rolling.

The triplex mowers were set at .115 inches, with Wiehle rollers, for the entire season and we skipped the cleanup passes three times per week. We rolled the greens three to four times per week on average. Mowing and rolling frequency was dictated primarily by the golf schedule. We pushed it too. When we had gaps in the schedule we reduced mowing and rolling and performed needle-tining and hydrojecting. These practices helped to offset the severe environmental and mechanical induced stresses.

Our fungicide program went seven percent over budget. I was pleased with that considering the duration of the intense disease pressure. The constant rotation of chemistry classes and preventative treatments were successful.

Ahhh, irrigation! We had one employee scouting for wilt almost every day, from eleven to five, for nearly four

months. If he got overwhelmed, we immediately pulled people off other jobs, regardless of their importance. Our primary focus was hand syringing instead of automatic irrigation. Hand watering and vigilant scouting was everything! The extensive use of a variety of wetting agents applied by injection, sprayer and proportioner aided tremendously.

Finally, and I can't stress this enough, communication with the membership was huge. Whether I used my new blog (best tool ever!), mass emails, personal contact, or planes flying overhead toting banners, our members knew everything that was going on every step of the way!

We truly did have some of the best playing conditions in one of the worst weather years in my 20 years as superintendent at The Farms CC. We lost some grass but it was very minimal. Heck, that happens every year and that's why they sell white paint. If turf dies, and it will, no matter how good you are, know how to fix it and communicate that too.

How did we get through the Summer from Hell? We just did what we do.

**PAUL SABINO**, superintendent, The Farms Country Club, Wallingford, Conn.

<http://farmsccsuperintendent.blogspot.com/Sabino> is also a part-time blogger for CTGolfer.com: [www.ctgolfer.com/blogs/paul\\_sabino/](http://www.ctgolfer.com/blogs/paul_sabino/)





# SUMMER 2010: A weather expert's recap

In 2010 weather became a crucial factor for the survival of the golf course industry. The industry had hoped for an upswing in the rounds played following the previous year's economic downturn.

Warmer than normal sea surface temperatures in the far equatorial regions of the Pacific Ocean – known as El Niño – influenced atmospheric patterns and cold, stormy winter weather across the U.S. in January and February. Blustery and, in some cases, near-record cold kicked off the New Year. Winter golfers from the Carolinas to Florida encountered the coldest January in 17 years and the wettest in the last four. Most notable was the persistent cold air that penetrated deep into Florida. Southern Florida courses refused to warm up during the second week of January. On nine mornings the temperature cooled to morning lows in the 30's in Palm Beach County and during one seven-day stretch the mercury briefly topped 60. On January 9 the high in Melbourne on Florida's central Atlantic Coast peaked at 40 degrees after an early morning low in the 20s.

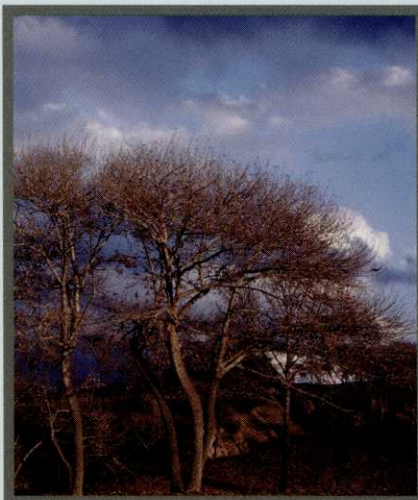
**February** brought stubbornly cold and windy weather. In the transitional states of Texas and Oklahoma to the Carolinas, Georgia and even Florida was some of the coldest in the last 100 winters. Each experienced one of the top ten coldest Februaries ever with morning temps in the 20s and 30s.

**March** rolled in those warm Pacific Ocean temperatures began to cool. The resulting La Niña – cooler oscillation phase of the tropical Pacific surface temps – brought a rather abrupt end to the long-lasting cold that plagued much of the U.S. From the Pacific Northwest through the Midwest and Northeast temperatures warmed to above normal. Rhode Island had its warmest March ever and Maine is second warmest. The Deep South remained slightly cooler than normal, but saw some recovery with relatively mild weather. South Carolina and Georgia courses warmed above 60 most of the time with at least 10 days above 70. However, January-March remained the coldest ever in Florida and second coldest ever in Louisiana.

Despite the arrival of warmer weather in the Northeast, the change in weather patterns delivered one of the wettest months ever to much of the area. March's signature storm on the 13th hit courses hard from southern and coastal sections of New Jersey through Massachusetts, littering fairways and greens with trees and branches. The storm, one of the most intense Nor'easters in a dozen years, knocked out power and dumped rainfall amounts from six to ten inches in Massachusetts, Maine, New Hampshire and New Jersey with wind gusts to near Hurricane (70-75 mph) force. Unfortunately, many flooded courses were hit hard again just two weeks later with another

deluge which brought rainfall totals for the month to their highest ever, with nearly 10 inches in the New York City area, up to 15 inches in the Boston region and almost 17 inches in parts of Rhode Island. Fairways that succumbed to the inundation of rain took the entire month and even longer to dry out and return to normal.

At the start of **April**, the rest of the country was beginning to experience more typical spring conditions. Southern California courses were warming up nicely with near perfect conditions for much of the month, and the Deep South – although still cooler than normal – was delivering a high number of playable days. By the end of the month, even the northeast began drying out. Precipitation was light for most areas east of the Mississippi and only the Pacific Northwest



experienced above normal rainfall. Golf courses across parts of the Great Lakes and Midwest, which had seen mostly light precipitation for much of 2010, needed irrigation more often than not during the spring. Little did we know this would be a harbinger of the more severe heat and drought conditions that would prevail across most of the east during the summer?

As **May** and **June** arrived the combination of a strengthening La Niña, lingering heat from El Niño and some of the warmest Atlantic surface temperatures ever produced continued warmer than normal atmospheric conditions from the leeward slopes of the Rockies to the East Coast. Wet conditions returned to the Midwest and Great Lakes with flooding in the upper Mississippi. It was the wettest ever in Michigan and among the wettest in Iowa and Illinois, as well. May brought the first of many hot days to the Northeast. The Washington DC area saw its first 3 days of 90 degree heat, followed by another nineteen 90 degree plus days in June and one topping 100. The heat intensified during the period from Maine to Florida. In June, Myrtle

Beach courses hit the 90s on all but five days.

**July** and **August** continued to bake many East Coast courses. The four-month period from May to **August** became either the hottest ever or in the Top 3 hottest for every contiguous state from Maine to Florida. The heat intensity was so great that afternoon temperatures topped 100 on more than one occasion as far north as New England. The mercury soared above 90 on about 50 days in the Philadelphia area and an unbelievable 70 days in the District of Columbia, Northern Virginia area. This shattered previous records. Unfortunately, while air temperature reported by weather stations is measured at about 6 feet above the ground, turf surfaces exposed to full sunshine likely reached 110 to 120 degrees or more during the hottest of the summer days. In some cases, 20 consecutive days or more of 90 degree-plus heat prevailed with little or no rain.

In contrast, La Niña's cooling effects on the West Coast continued to produce near ideal conditions from California to Oregon during much of the summer. It was perhaps a bit too cool in Washington State at times, but a great deal more comfortable than what the east was dealing with.

As **autumn** arrived the hottest heat of the summer came to an end but still remained above normal. Overall, the fall weather was the most favorably and forgiving to both courses and players across the U.S. Florida, however, was exceptionally arid for much of the fall, recording a record dry **October** with only an average .39 inches state-wide. The hurricane season was quieter than normal with only minimal affects along the Atlantic and Gulf coasts. Most storms veered out to sea before hitting the mainland.

As 2010 closed, atmospheric steering currents in the northern Pacific again shifted southward, bringing a series of large long-lasting storms to the Pacific coast states and record rains from Oregon to southern California. After escaping the extreme weather most of the year, December brought the "Great California Flood." Although Northern California fared the best, some courses in San Diego County became almost entirely consumed by flooded waters.

The Climate Extreme Index (CEI) is a value that accounts for extreme variation in weather from year to year and has been measured by the National Oceanic and Atmospheric Administration since 1996. In 2010, the index value was 9 percent above normal, a confirmation that yes, the weather during the year did produce more extremes. The good news is that CEI values have been as high as 20 percent above normal back as recently as the late 90s and have been in a decline since. **GCI**

*Frank P. Lombardo is a certified consulting meteorologist and president of WeatherWorks in Hackettstown, N.J.*



# Taking

Whether a facility restores the course to its former state, or renovates using new ideas, problem solving

# issue



NUZZO COURSE DESIGN



By Peter Blais

**W**hen Bobby Weed Golf Design signed on to renovate and manage Palatka, Fla.'s Donald Ross-designed municipal golf course earlier this year, the firm's goal was to address a marriage of interests.

Weed's vision for the course included design, agronomic, infrastructure and operational improvements, as well as a sympathetic adherence to the original intent of the Donald Ross design, one of just 20 municipal layouts left in the country bearing the classic designer's imprint.

"We have long advocated that golf course designers need to be aware of and influence the business aspects of any course's operation, more so today than ever before," says Bobby Weed, noting the difficult economic climate in which today's course operators toil.

But at the same time, Weed appreciated the significance of this historic landmark – which has been in continuous operation since 1925 – which the city commissioners had entrusted to his care.

"The irreversible impact of losing such a vital, historical resource was not lost on the community," says Weed, addressing the support he sought from the city, Putnam County, residents that golf, and residents that do not in this remodeling project. "Our responsibility is to protect and enhance this partnership as we invest in improving the golf course."

#### REMODELING'S VALUE IN TOUGH TIMES

As Chicago-area architect Bob Lohmann points out on his Web site, renovation has become an enormous priority for private clubs and public facilities because golf courses are living things – they wear out – but also because the building boom that characterized the late 1990s placed enormous competitive pressures on existing courses. As a result, top-tier clubs feel the need to renovate to maintain their elite status, and more-modest

operations feel the need to renovate to survive and compete.

Whether an owner decides to "restore" the course to its former state, or "renovate" using new ideas, the one unifying issue among all reconstructions is this: They address an issue or issues that clients want solved.

While historic preservation and course strategy may have been the main reason his phone rang with remodeling requests during the boom times of the late 1990s and early 2000s, in these tougher economic times club managers' main remodeling concerns involve maintenance or playability issues.

The impetus to action, he says, is usually something like poor drainage that results in loss of play or conditions that leave the course just looking ugly. Operators are more likely to spend money during this penny-pinching era on repairing ditches, holes, or the like.

Speed of play is another reason they might want to remodel, the Illinois designer says. Courses that have too many blind shots, tricky hazards or difficult greens with poor grasses that are difficult to putt – such as Westmoor CC in Brookfield, Wis., where LGD recently oversaw the replacement of 18 *Poa annua* greens with A4 bentgrass – are simply too tough to play for the average golfer. The threshold for most players is about four hours. If it takes more than that they might choose not to play.

"If we could ever get the time to play 18 holes down to three hours that might do more to help the game grow than anything else we could do," says the head of Lohmann Golf Designs.

Lohmann believes course operators are beginning to understand that the reason most people play golf is very simple – to have fun. That's tough to do if average players are losing balls all the time because the course is too hard to play. Unfortunately, courses are often designed for the top 5 percent of players

How can private and public clubs measure ROI from a remodeling project? The best measure should be increases in golf-related revenue compared to the cost of capital improvement.



who speak up about what they want. They are the ones who want the courses Stimping at 13 with tricky runoff areas near the putting surfaces. Rather than spending time and money there, courses should focus on maintenance issues and perhaps adding a forward set of senior/junior tees that would help folks get around the course quicker.

Installing high-tech irrigation systems with

multiple rows of irrigation heads that cost a million dollars or more – the rage during the course-building boom – can be course-budget killers today. “You don’t need an irrigation head everywhere there is grass,” Lohmann says. “Focus on the important areas – greens, tees and fairways – in that order.”

It is the same for intricate bunkers with flashed-up faces, often neck-and-neck with

greens when it comes to ongoing maintenance costs. Such costly hazards make little sense for most public courses, Lohmann says. “They look good but most wash out in five to seven years, the sand gets contaminated and you have to rebuild them. Bunker consistency is much more important than appearance. I occasionally wake up in the middle of the night and watch some of the old Major tournament highlights on television. The bunkers they played from back then were much less fancy than those built at many courses today.”

Tees are one area that do need attention occasionally, Lohmann says. They wear out in time. They even lose elevation from continual divots taken on the par 3s. He is also a proponent of wide fairways, where golfers can easily find their balls and enjoy friendly lies.

“The goal should be good greens, tees and fairways,” he adds. If players stray from those areas, well, they basically deserve what they get. You don’t need a perfect lie in the rough.”

#### PRIVATE CLUBS SLIGHTLY DIFFERENT

With their larger pocketbooks and different motivations, private clubs’ motivations to remodel differ from their public-facility cousins, noted Colorado architect Rick Phelps of Phelps-Atkinson Golf Design.

Phelps sees three reasons for private clubs to remodel. The first is to change the position of the club in the marketplace. The second is to maintain the course/club and keep it current with modern agronomic practices and aesthetic expectations. Third, a club may consider remodeling to reduce annual maintenance costs if existing conditions are creating extensive hand labor that could be significantly reduced by rebuilding some or all of the golf course features. The last option could include items as simple as reducing irrigated and maintained turf to something as extensive as rebuilding bunkers and tee complexes.

Changing the position of the club in the marketplace most often involves a relatively extensive remodel project, Phelps says. The overriding intent is to give the course and club an entirely new image. Often, this includes major renovation or reconstruction of a clubhouse.

The second option, maintaining the course while keeping it current with agronomic and aesthetic expectations, he continued, is most often a case of completing “deferred mainte-

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nance" all at once. For example, bunkers need to be rebuilt periodically due simply to the nature of their use. Sand is blasted out onto the play-side lips, which then get dry and lose their shape over a period of time, typically 10 to 20 years depending on frequency of play. The sand also becomes contaminated, causing it to lose its ability to drain freely. Contamination occurs from the sub-soil, the

irrigation water and even from atmospheric pollutants.

Bunker reconstruction is not usually part of the typical annual maintenance budget or program, but is something that still needs to be planned and budgeted periodically to keep the golf course in "competitive" condition, Phelps says.

Other aesthetic and playability items also

fall into the category of deferred maintenance such as cart path repairs/replacement, drainage improvements, tree removal/pruning/replacement and others. All of these items are not annual maintenance practices, but are essential parts of long-term upkeep. "They can be seen as maintaining the investment as much as changing it," Phelps says.

The final option, remodeling to reduce maintenance costs, can be highly variable in terms of the extent of necessary work and potential effects. At some courses, very little work can result in significant savings of maintenance dollars. Reducing irrigated turf is a great way to save maintenance costs with very little up-front input. On the other hand, completely rebuilding bunkers to change to a more easily maintainable style can be relatively costly to implement and may take many years to pay back in cost savings.

For a facility struggling to survive in this economy, the value of added capital investment is a "golfer flight to value," says Michael Vogt, head of the golf division at McMahon Group, a private club-consulting firm.

"Prices continue to decline for golf across most venues," he says. "Members and daily-fee players will seek value in the courses they play. New or renovated components on golf courses will enhance value. Unfortunately, as courses go out of business due to a less-value scenario the business left in a micro-economic environment will capture the play in the community or at least in the specific geographic area. Clubs need to understand – a correction benefits the best clubs."

With both public and private facilities looking for more ways to attract the family's recreation dollar, golf courses are seeking to diversify their offerings via remodeling.

Lohmann says his firm is starting to see some remodels emphasizing multiple uses for a golf course: adding or repairing ponds so they can be used for fishing and skating; fairways that can host cross-country skiing; driving ranges that can be an additional revenue source; redesigning routings so players can take advantage of three-, six-, nine- or 12-hole loops as time allows.

On the home front, Weed is involved in what he terms a "repositioning" at Selva Marina Country Club in Atlantic Beach, Fla. Repurposing projects, he says, involve entitling alternative land-uses within existing golf course envelopes. The value provided by these new land uses is leveraged to fund comprehensive course upgrades. At Selva Marina, his firm planned a 30-acre, neo-traditional

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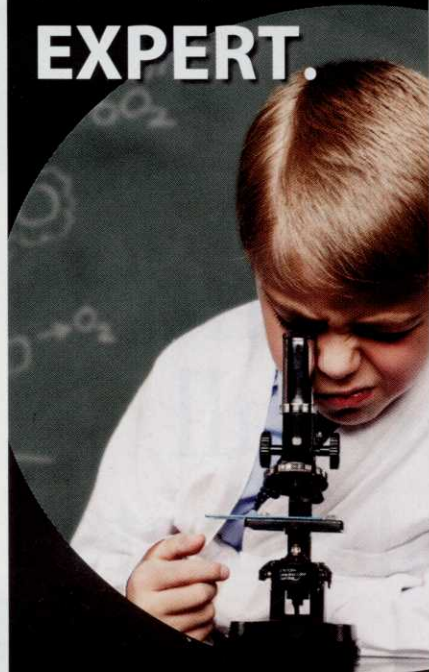
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## COURSE CONSTRUCTION



Despite a down economy, if a restoration or renovation project makes sense, all parties involved will know it.

neighborhood adjacent to the clubhouse and obtained entitlements for 114 units. The revenue from residential sales will fund a new golf course, clubhouse, tennis facility, pools, parking and maintenance building.

### WHAT IS THE ROI?

What is a remodeling's return on investment (ROI)? Is it existing member/customer retention or new member/customer attraction? "It's really both," Weed says. "Retained members and customers will start spending more. It is important to remain competitive and most clubs are struggling to retain players. Members are more apt to ask business-like questions about the vitality of a club today before joining."

Both retention and attraction are important for private clubs, Vogt says. "We have found in survey after survey that members who are 'Very Satisfied' are much more likely to remain loyal and support club activities," he says. "New and enhanced components that membership supports are important for the vitality of any club. Worn or non-functional assets often cost more to keep in service and diminish the pride and value in membership."

"Most club members are intuitive business people that understand investments in assets should be scheduled and accomplished to keep recurring operating expenses to a minimum and keep important assets fresh," he adds.

The new practice range at Houston's Champions Club – developed by former 1956

Masters and PGA Championship winner Jack Burke – is an excellent example. Architect Mike Nuzzo designed the range and some new tees a couple of years ago.

"The club has one of the largest numbers of single-digit handicap players in the country," Nuzzo says. "Ranges were not as popular when the original one was built back in the 1960s. The new Champions range helped the club keep many of its members and hopefully attract some new ones."

How can private and public clubs measure ROI? The best measure, Weed says, should be increases in golf-related revenue compared to the cost of capital improvement.

For public courses with the potential for healthy tee sheets, remodeling areas so golfers can get around the course quicker should translate to a larger bottom line, Lohmann says.

Most private clubs value assets the same way a business would view them and accept the cost of maintenance and upkeep, Vogt says. "However, savvy managers and superintendents assemble an asset-replacement plan and fund the plan throughout the life of the new asset," he adds. "When the asset begins to approach its useful life a replacement is fully funded. ROI at clubs can be difficult to quantify. However, a full and active membership is always the sign of a club that's being managed successfully."

When selling the idea of a remodel to a board or owner, Vogt says, managers and superintendents should focus on the plan as a





business decision that should be treated as such. The club's financial package needs to make sense. The club's architect should have demonstrated an ability to build projects that are successful both commercially and creatively.

"A project or capital expense is often a weighty decision for a board to consider especially if a membership vote is required," Vogt says. "A full survey probing the membership is always a great first step and should be at the core. A complete study of the proposed plan should be in hand to communicate a thorough knowledge of outcomes, savings and membership benefits. If membership, board and management at a club have mutual trust in the process and ability to accomplish a large-scale project or renovation, the project is more likely to be approved with appropriate funding.

"In regards to an ownership course, the basic premise is the same, but unfortunately owners in most cases need to fund capital out of operation revenue, a difficult proposition in this economy," he adds. "Commercial loans are difficult to acquire for golf at this time."

Despite a down economy, if a project makes sense, all parties will know it. Weed says the best projects are not "sales jobs" at all. "You present objective facts about the course's problems first, the design team's track record second, and the expected benefits third. The answer falls out the bottom." **GCI**

*Peter Blais is a North Yarmouth, Maine-based freelance writer.*

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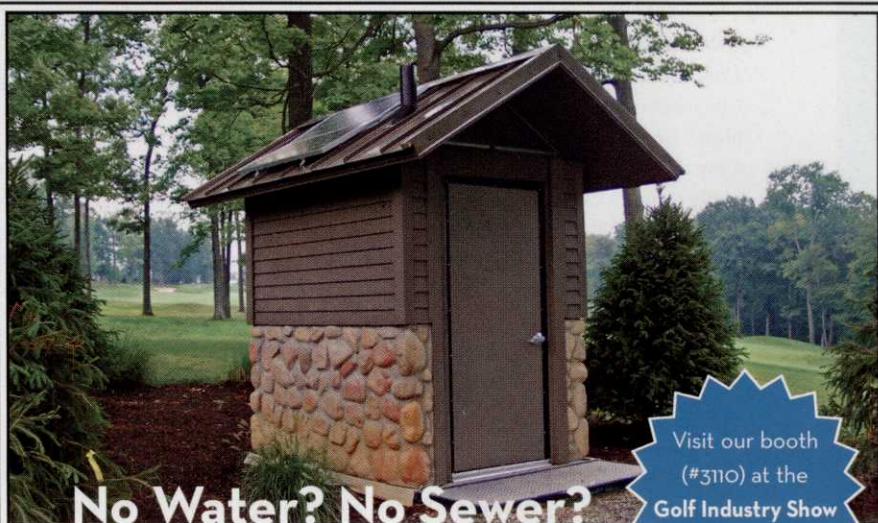


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## BUNKER...R...R TUNING

In school, the three “R’s” were reading, righting and ‘rithmetic.

In 2010, for courses in the survival mode, and considering bunker renovations, the three “R’s” mean remove, reduce and redesign for maintenance.

Until the early 2000’s, the business model for new courses was one of high aesthetics to attract golfers. Even “practical” designers who usually considered maintenance aspects of design followed the trend, especially in creating numerous and highly sloping flash bunkers. I always believed that eventually, impossible-to-maintain features would be modified. “Eventually” came earlier than expected. As Bob Dylan sang, “The times, they are a changing,” and I have been involved in several bunker re-designs to improve maintenance, including some of my own courses.

In some cases, I’m asked only to “bless” already planned changes, to save money. I get more involved deeply in most cases, and a golf course architect’s input provides real value in looking at play, design, aesthetic and maintenance aspects of bunkers characteristics – which helps every bunker renovated – and the overall bunker scheme – to turn out the best it can be.

If your original architect is available, I recommend using them. They are more than willing to help you adapt to current needs. Both your needs and their ideas on bunker design have changed over time, and they may welcome the chance for a design mulligan!”

Typically, courses are looking at removing bunkers, size reductions to remaining bunkers, and tuning bunkers shapes and slopes for easier maintenance.

### BUNKER REMOVAL

Most courses can remove several

bunkers without grave effect. This varies from course to course, but there are often obsolete, with difficult maintenance or extended travel time, serving the same function as adjacent bunkers, or that slow play, that quickly become likely candidates. Bunkers that are multifunctional, providing hazard, framing, visual effect, or safety tend to be kept.

### SIZE REDUCTIONS

Smaller bunkers obviously reduce construction cost and future maintenance. I often recommend building

small lips across narrow points of sand bunkers and converting the first lobe – or two – to grass. This can help speed up play, and very often, golfers only see the higher, back portions of the bunker anyway, so the visual effect isn’t compromised.

Where liners are used, I look to reduce overall bunker size to reduce hand raking. For power raked bunkers, I redesign sand lobes to their minimum turning diameter, usually about 16 to 18 feet depending on the slope. *(While intended to reduce maintenance, I find that many modern bunkers are “oversized” visually and the downsizing helps the visual appeal of many greens.)*

Similarly, I “tune” the size and shape of the grass noses. Current mowers can handle 18-foot diameter noses.

Some superintendents prefer to mow “down and back up” without turning, and there, I reduce noses to just under two mower widths.

### RENOVATIONS

Slopes and drainage are integral to bunkers. I make sure that no drainage runs into bunker slopes. Some bunkers have that problem designed in, and others “acquire it” as mowers wear down their top edges, which allows water in, and a few inches of fill is all it takes to help the bunker. I also recommend a complete herringbone system as most bunkers have far too little tile in them.

Rains wash sand down steep slopes, and the trend is to flatten internal bunker slopes, while keeping enough

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“I always believed that eventually, **impossible-to-maintain features would be modified**. ‘Eventually’ came earlier than expected.”

---

upslope to make the bunker visible. Maximum slope varies with sand characteristics and climate – in dry climates and with angular sands, 25 percent slopes may be appropriate, while in rainy areas, bunker slopes may be flattened to 10-15 percent maximum.

I also make sure green side bunkers are 6 to 8 feet from the green edge to be in play while allowing riding mowers to turn. It’s common for them to separate from the green over time, while others migrate inward.

ASGCA member Daniel J. Schlegel, did all of the above when one of his clients proposed a simple sand replacement for the bunker on their first hole.

He recognized that the existing bunker could be reduced in size, and the frontal opening widened, making it more suitable for an opening hole. His resulting re-designs reduced flash and washing, total size, and improved sand and drainage. **GCI**



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# Tim Moraghan previews the 2011 GIS

## What to expect from this year's GIS?

There will still be an air of caution among all GCS's. This will be a combination of poor budgets, lousy weather and an industry which continues to slide in the economic arena we are currently in. Though the market is finishing on an upward trend clubs are still failing and the daily grind of trying to cut back and still provide a high level of conditioning will frustrate the GCS. Many will be deciding on whether or not to continue in this profession which those outside the ropes do not understand. Plus the older the GCS becomes the harder it is to compete whether due to age or cost of employment.



Moraghan

## What are the top topics of conversation among the attendees when they enter?

Weather. No GCSAA CEO. Loss of turfgrass, budgets and the scarcity of quality jobs. Throw into this mix the reduction and lack of quality water sources. Maybe even Tiger Woods and how Élin was player of the year based on her wedge game, or at least the leader on the money list.

## Top topics of conversation when the attendees leave?

A renewed sense of camaraderie based on the fact that we are all in the same boat and a unified attempt to make golf affordable through stable conditioning, better on-course management and the newest, cost-saving pieces of equipment. Also, I expect there will be some buzz about the improved weather forecasting equipment for the golf course and more education opportunities for the non-agronomic members of the club.

## What attendees will be expecting to accomplish from this year's GIS?

- Exploration of new job opportunities overseas
- Reasons for a shrinking job market within the US
- Opportunities to grow the game for young, old men and women
- Increase networking opportunities
- Improve your abilities to meet the challenge of an ever decreasing quality job market
- As always, new and improved agronomics for better turfgrass

## GIS trends – good or bad?

The loss of the CMAA and its membership. For years the GCSAA toted the joining of forces between themselves, the PGA and now the CMAA. By losing the CMAA in the midst of a general decline in golf participation will eventually hurt and set back the team aspect among golf's professional bodies to assist in rejuvenating this game. – Tim Moraghan is the author of GCI's "Outside The Ropes" column.

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# Looking Ahead to 2011 GIS

Over the years, I have observed golf course superintendents are pretty much an optimistic group with a low tolerance of gloom and doom; I would put myself in that group, too.

Nonetheless, I suspect 2011 GIS attendance will be lower again. Golf courses are still struggling, and younger families are, too. What in past years has been a great opportunity for a pre- or post-conference family vacation will be less so this year. The Disney theme parks are a huge draw, but economic considerations will prevail.

And many companies are experiencing tough times; leading to what could be a somewhat reduced roster of exhibitors. Those with only a tangential application to golf turf will be completely gone.

Even though the show may be smaller, attendees will leave delighted with the experience and grateful for the opportunity to be there. The seminars will be well attended and the overall educational opportunities simply cannot be found in one place anywhere else.

There is a chance some superintendents will shorten their stay by a day or two to save money; to



Miller

compensate; their schedules will be packed to the maximum. Everyone will be looking for and listening to ways to reduce their costs even more, through conversations with colleagues, manufacturers and suppliers.

Since my first conference and show in 1973 until couple of years ago, the GIS experienced significant growth; it has more or less followed our national economic growth. Since we are a depressed national economy these days, it is no surprise our attendance is also down. No doubt other conferences in other professions have experienced the same. But for those of us who are fortunate enough to attend, it will be an awesome few days, both as a practical matter and as an inspiration. —Monroe S. Miller is a columnist and frequent contributor to GCI.

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# Irrigation and GIS

Irrigation at GIS this year is not expected to have the buzz that happened in 2010 when there was the introduction of new control systems.

There are however some major enhancements to several manufacturers sprinklers that will be showcased. These include a second part/full sprinkler on the market and several variations of "attached decoders."

Since golf irrigation sales are not very brisk in many parts of the country, the research and development has decreased for most manufacturers and they are concentrating on fine tuning and enhancing current product offerings. Look for more companies selling moisture sensing solutions and some talk about their usefulness and effectiveness among attendees. Many superintendents

will be looking at what they can do to upgrade their irrigation systems and to make them more water efficient and versatile without spending lots of dollars. How to get projects such as irrigation off of hold will also be a subject of discussion.

Those superintendents and owners stopping to look at equipment will be more serious than in the past, as they try to do more with less. Expect to see less local distributor personnel in the major manufacturer's booths, but their will still be plenty of sales people to answer your irrigation questions.

– Brian Vinchesi is GCI's irrigation columnist.



Vinchesi

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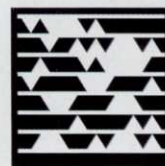
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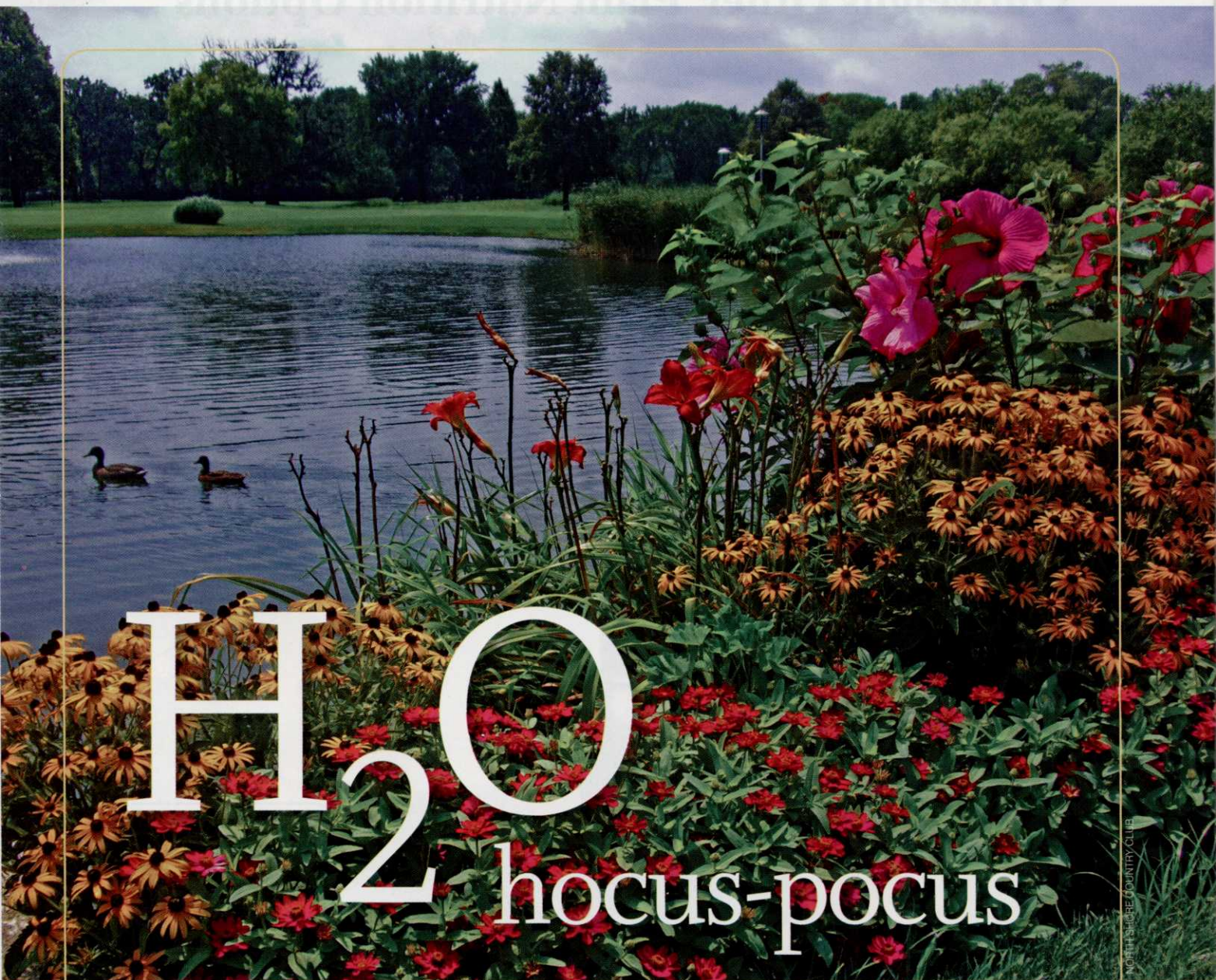


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NORTH SHORE COUNTRY CLUB

by David McPherson

While there's no magical cure to fix bad water, there are tools to tackle water quality issues.

**T**hese days, both politically and economically, water is a hot topic. What is a superintendent to do when the irrigation water source they have available is not so healthy? Besides agronomy, human resources and the myriad of other subjects that are part of a superintendent's job, greenkeepers are also expected to know a little bit about water chemistry. When it comes to serious

H<sub>2</sub>O issues, it's best to seek expert advice. In chatting with several irrigation consultants and superintendents, the message is clear – there is no magical cure.

"It's a complex equation," says Erik Christiansen, a former superintendent, who is president of irrigation consulting firm EC Design Group. "You really have to focus on the 1,000-foot snapshot of where your water is in terms of bicarbonates,

sodium, and things like that, and how they react to one another. There is no magic bullet to cure a lot of things."

Rather than a magic bullet, there are trends and fads. "Ten to 15 years ago, everyone was injecting acid," Christiansen says. "But acid is a corrosive agent and is highly hazardous, so there was a liability aspect to it. Then, there was what I call 'voodoo pipe' where you hooked up elec-



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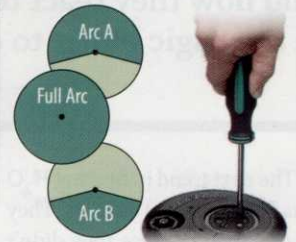
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Superintendents need to find the right balance that takes care of bicarbonates, sodium and other undesirables in your water that your plant material doesn't need.

trodes and magnets to your irrigation pipes. We had claims from people that if they could neutralize bicarbonates they could cure cancer. Superintendents took a flyer on it and said they would try it out for a few hundred bucks, but quickly realized you get what you pay for."

**"You really have to focus on the 1,000-foot snapshot of where your water is in terms of bicarbonates, sodium, and things like that, and how they react to one another. There is no magic bullet to cure a lot of things."**

— Erik Christiansen, EC Design Group

The next trend in treating H<sub>2</sub>O was SO<sub>2</sub> (sulphur) burners. They were handy because they didn't use acid and the by-product is not toxic; that said, they have their own issues. "You can lower the pH of the water too far, killing the vegetation and possibly corroding your equipment," Christiansen says.

Superintendents need to find the right balance that takes care of bicarbonates, sodium and any other undesirables you may have

in your water that your plant material doesn't need. There are many tools out there to choose from, but before choosing the right tools, you first need to understand your soil structure and how it relates to your water. Even within a course, soil types can differ, so you might need to treat

your water differently, depending on what the structure of the soil is at various points on your course. Some are now dealing with this issue by placing soil moisture sensors on their course.

"Multiple sensors that detect salinity and soil temperature are now another tool superintendents can use to program how they disperse their water," says Christiansen. "These sensors give them the information to know how to treat the water in various

areas. Strategically, these soil sensors send signals back to the maintenance shop, indicating soil moisture content and salinity levels, so greenkeepers can make more educated decisions. For example, you may discover you have a certain quality of water that is good for all parts of your course, except for your greens."

#### THE CADILLAC SOLUTION

Christiansen has had clients purchase a Reverse Osmosis (RO) plant, but he cautions this is a multi-million dollar solution that consumes a lot of energy. And it has drawbacks, too. "There are problems with RO," he says. "It makes that water so sweet – with the mineral content it purged and taken out of the water – that as it travels through the facility's irrigation system it looks to pick up some of those minerals and sometimes it gets them from your system's stainless steel components."

#### GET TO THE SOURCE OF THE MATTER

Dan Dinelli, CGCS, superintendent at North Shore Country Club, a private club 20 miles

north of Chicago, agrees. Water quality management begins with examining your source and determining whether there is another option, he says. That's what North Shore Country Club did. The club irrigates using well water. In the early 90s, it was drawing water from a well 2,200 feet below the surface – part of an ancient ocean bed. The salinity levels were acceptable for a time, but then they started to increase in concentration to more than 320 parts per million in sodium alone; bicarbonate levels were high, too.

"Basically, by the Fourth of July, any foliage our sprinkler system hit would result in premature defoliation to the trees and shrubs," he explains. "If we didn't get much rain over a two-week period, we would see a white crust develop on the soil where a divot was taken where the salts had built up. Even though the Chicago area is not known for poor water, unfortunately, we were one of the only facilities tapped into an aquifer that did have poor water."

To convince his board to switch wells, Dinelli documented



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Water quality is the often neglected part of the irrigation equation. Putting bad water in the right places is just as bad as poor irrigation distribution.



through water tests conducted a couple of times per season what the water levels were in terms of quality and how it was changing over time as the water was being pulled from that source. He recalls driving through the golf course one night a few years back when the sprinkler system was on; he put his wipers on and could hardly see through the windshield caused by the salt's white film. Dinelli gathered this sample in a water bottle, along with water from a neighboring course that was on a different well, then took a small quantity of each to the next board meeting – pouring some onto an oval glass table to illustrate the water salinity to the board.

Dinelli also documented the tissue levels in the turf. "Our *Poa annua* was starting to die out about mid summer," he says. "We convinced the club to divorce ourselves from that well and drill a new one to a tune of \$250,000, going into the next aquifer up. This source was much better, although it was still high in bicarbonates."

Once he had a better source from which to draw his irrigation water, Dinelli says it was then time to explore other tools and cultural practices to improve

his water quality further. The veteran superintendent relies on four main tools to manage his H<sub>2</sub>O: organics; sulphur; other cations (positively charged ions that are formed when an atom loses one or more electrons during a chemical reaction) such as potassium and calcium; and wetting agents. The greenkeeper also uses his irrigation system as a delivery method for several of these inputs.

"We inject potassium-nitrate, calcium-nitrate and sulphur, all to address issues that our irrigation water has, but ultimately to improve soil and plant health," Dinelli says. Sulphuric acid buffered with urea is injected into the irrigation water that help bring the pH levels down, acidifying the water source. Humic acid is also injected into the water as well as the use of compost topdressings. These organic materials help build soil structure as well as act as a chelating agent for the other elements injected into the irrigation water.

Finally, Dinelli lauds penetrants and wetting agents as another powerful tool. "They are basically non-ionic soaps," he says. "Much like soap does when washing hands or dishes, these wetting agents break the surface

tension of water, allowing the water to penetrate the soil easier, quicker and better."

These four tools combined allow the course to improve its water quality and keep the water moving through the root zone. "I don't think there is a silver bullet out there," he says. "Depending on how poor the water quality is, you need to rely on several tools to manage turf health."

All these tools are ineffective unless one understands how these treatments react with the soil and the turf. "On a sandy site, for example, you might manage growing grass that cannot tolerate poor water quality with a high salt content," Dinelli says. "If it rains a lot, however, you can get away with poor water quality versus someone who has little rain and tight soil."

Regardless of soil type and what water quality issues, it's essential supers do their homework and rely on water specialists to help determine the sensible solutions vs. the hocus-pocus.

"There is still some snake oil out there," Christiansen says. "Superintendents are very trusting. What we as consultants do is to always try to help people stay focused on real options and real success stories. We are full of examples of projects that used simple tools and the pros and the cons of various methods. Quite frankly, a club's membership, when spending money, hates to hear, 'oh, that just didn't work out.' You need to make sure, you are making good decisions." **GCI**

David McPherson is a Toronto-based freelance writer.

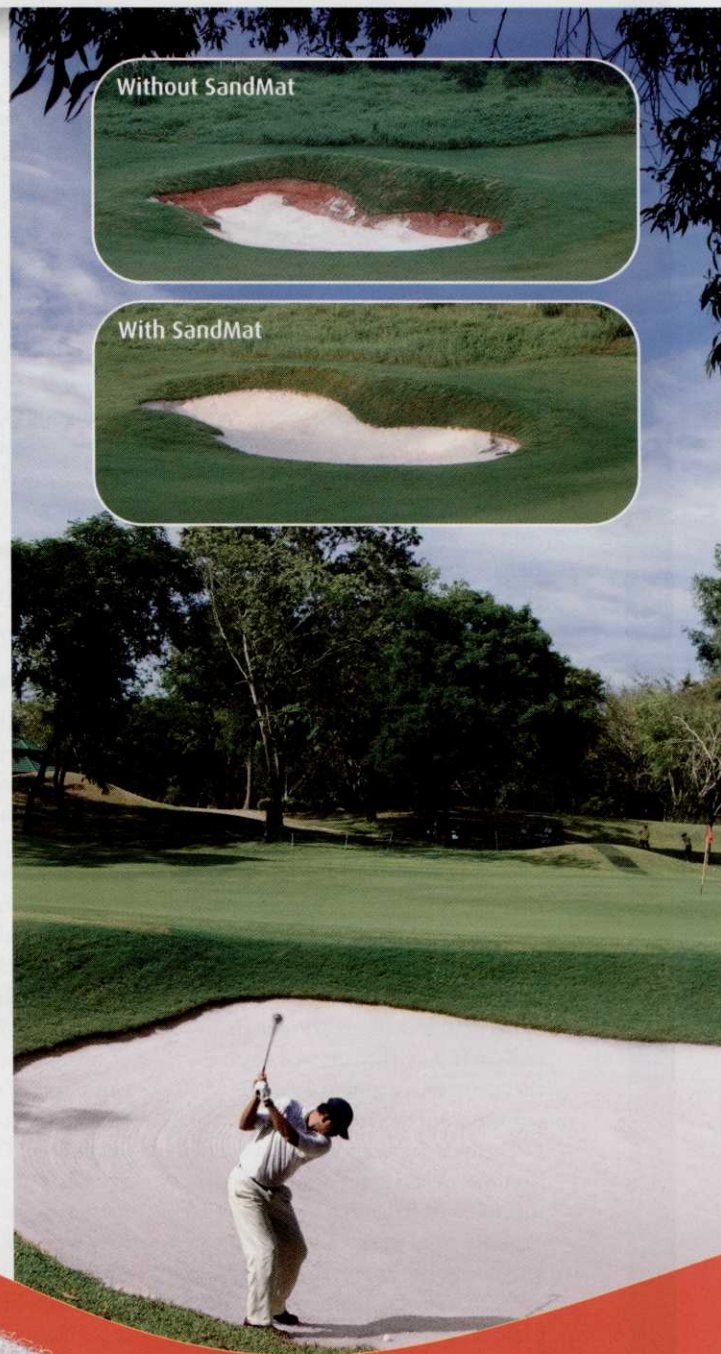


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• **Brian Vinchesi**, the 2009 EPA WaterSense Irrigation Partner of the Year, is President of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at [bvinchesi@irrigationconsulting.com](mailto:bvinchesi@irrigationconsulting.com) or 978/433-8972.

## IRRIGATING GREEN COMPLEXES

**T**here are many options when irrigating a green complex.

Historically, there has been a progression from a few sprinklers to many with specific purposes for each. Progressing from the initial center sod cup, greens were irrigated with 4 to 5 full-circle sprinklers spaced evenly around the green. These sprinklers would be operated all at once with a manual or electric block valve or split into two-block sections of left/right or front/back depending on the slope of the green. Rarely did you see individual controls.

The next step was to maintain the full-circle sprinklers around the green and add additional part-circle sprinklers throwing out from the green. Operationally, you would water the green first with the full-circle sprinklers then supplement the surrounds with the out sprinklers.

Next, individual sprinkler control was used for both to provide more control. At around the same time, some courses changed the full-circle to part-circle so there were parts in and parts out. This allowed courses that overseeded greens to water without watering the surrounds.

The next generation of green irrigation was to add approach sprinklers that allowed irrigating of the approach separate from the greens and fairways. Previously, the approach would be watered with a combination of the first green sprinklers and the first set of single, double or triple row fairway sprinklers, which didn't work well in maintaining approaches, especially when the approach is sloped.

Once the greens and surrounds were covered, you saw improvements and variations on how the sprinklers were placed around the greens. To alleviate the small dry spots caused by the large arc adjustments around the green, some designers went to smaller out sprinklers – 50 or 60 foot throw instead of 70 or 80 – to provide more control around the green. Unless the green is square or round it

in, part-circles out, a minimum of two approach sprinklers, a row of sprinklers outside of the green loop throwing back towards the green and individual bunker sprinkler zones. Today's green system has as many as 30 valve-in-head sprinklers with 15 to 30 separate sprinklers watering the bunkers. This provides more control of the water around the green complex, and is more expensive than

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**“Recently, there has been some backtracking on how green sprinklers are being installed.”**

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was very difficult to perfectly irrigate with four or five in/out sprinklers. With the smaller sprinklers, there are many more units, as in most cases a second group is placed 55 or 60 feet away from the green throwing back to give better coverage of the surrounds. These sprinklers were block controlled, but changed to valve-in-head for better control.

In the last 5 to 6 years the addition of small-spray type, block controlled, sprinklers to specifically water the faces of bunkers have also been introduced. Courses first tried spray nozzles, but with their high-precipitation rate and high maintenance, they were not popular. Today, multiple stream, multiple trajectory nozzles are used, which have a much lower precipitation rate with adjustable arcs and throws so the bunker faces can be watered with less maintenance.

Today, it's not uncommon to see a green complex that has part-circles

the original four or five full-circle sprinklers. Proper watering of the green complex including surrounds, approaches and bunkers is something players notice first, usually within a few weeks of installation, so it is money well spent.

Recently, there has been some backtracking on how green sprinklers are being installed. Some facilities are going back to the full-circles on the greens and part-circles out from the greens because they believe this provides them with enough control and better coverage than the part-circles in and part-circles out.

There are many ways you can irrigate around the green. The system you install should match your management style and your particular budget.

Use your experience to get the right system for your golf course and do not be shy about telling your irrigation designer or installer what you want. **GCI**



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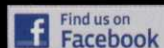


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# Any Quest

A superintendent's GUIDE for  
*crisis communication*  
during these challenging economic times.



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by Bruce Williams

# itions?

Golf course superintendents face many challenges and recent economic conditions have warranted either keeping budgets flat or decreasing them to adjust to decreased rounds, lower revenues and declining membership/participation. As is the mantra around this industry, most are forced to do more with less. This creates an opportunity for superintendents to develop a crisis communication plan.

If a facility had a staff of 16 people in 2007 it is likely that staff, by now, has been reduced. At the very least, their hours have decreased. And depending on the financial condition of the golf course, this staffing reduction could be 10-20 percent. That would mean two to three less people or that equivalent reduction in man-hours. While a few less people may not seem like much it equates to 2,080 hours per person. Take into account a 10-20 percent staffing reduction scenario and the loss could be between 4,160 to 6,240 man-hours per year. This has a significant impact on the ability of the superintendent to provide the conditions that golfers were accustomed to before cutbacks.

Changes must be made to survive in this economy and superintendents are very good at adjusting their operations.

However, with the potential for altering course conditions, it is paramount a message be crafted and communicated effectively to players.

Problems associated with the recession are not just a golf course maintenance problem, but they are a problem of the facility. All of the people in leadership and management should spend the time to face the issues of the facility and develop a plan to get through the tough economic times. These plans can surely include marketing and opportunities for increasing revenues. They would also likely include reducing expenses in golf course maintenance and other areas of the facility. Those facilities that recognize the changing economy will be better positioned after making the appropriate adjustments.

Now, each facility will have its own message, the following guide gives you a general idea of how to develop a clear and concise message during a crisis and how to deliver and communicate it effectively.

## AVOID THE BLAME GAME

Problems arise when the message is not developed properly and communicated properly to all of the stakeholders at a facility. People are more understanding if they know the issues at





hand. When not informed they will come to their own conclusions and the blame game begins.

So how is this avoided?

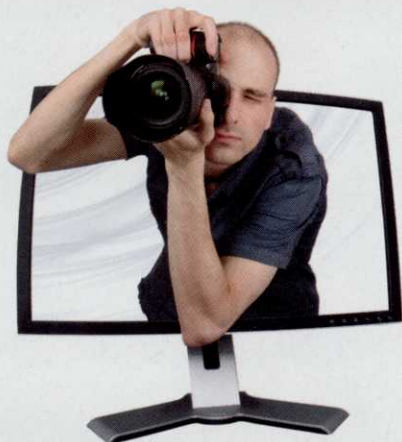
First, define and discuss the challenges that face the golf facility. The entire management and leadership team should be involved these

discussions and their outcomes. Next, as soon as a plan is developed it must be shared with all pertinent individuals – members, customers, staff. This message should address not only golf course maintenance, but all areas impacted by changes in operations.

Next, form a crisis communication team. It

is just as important to share responsibility for the effort as it is to share a unified message. As such, while it's critical for the golf course superintendent be a part of this team, it is imperative that management and ownership be involved, as well.

Given the proper direction the superin-



## Knock, knock... It's a news crew

**H**ave you ever wondered what you would say or do if confronted by the media regarding your golf course? The time to think about that is before they call because now you can develop a strategy and plan to effectively communicate your message.

- Who will be the spokesperson for your facility regarding turf and environmental issues?
- What is the chain of command for releasing information?
- What forms of media and what media outlets and publications do you want to speak to?
- How do you develop a positive relationship before a crisis occurs?

- How do you turn a potential negative into a positive?

Each golf facility should designate the appropriate individual to discuss with the media any questions, concerns, info requests, etc. When it comes to the golf course and environmental issues that person should be the golf course superintendent. It may require approval but the green chairman, GM or club president but that should be known in advance of any crisis. Media requests are usually done directly with the golf course superintendent and the industry publications and outlets. However, when it comes to local and regional newspapers it may require approval at a higher level.

Think about all the possible areas of crisis communication and prepare some bullet point responses. An example may be the use of water for irrigation on a golf course. A good response would be that many golf courses are using effluent water, where available, to be part of a major recycling effort across the country. Additionally, golf courses have a sophisticated irrigation system that monitors weather and uses computer technology to apply water only when and where it is needed. Golf course superintendents have advanced training in irrigation control systems as well as soil physics and chemical properties. Actually, the use of effluent water is environmentally sound as it filters any pharmaceutical contaminants from treated wastewater and allows it to be filtered, through the turf, back to the local aquifers.

Remember to make your remarks brief and targeted. A 30-minute phone call may end up with three sentences of quotes. Additional crisis communication bullet points should be developed for items such as:

- Weather problems such as flooding, tornadoes, hurricanes, ice sheet damage, etc. depending on your susceptibility to these things;
- Today's economy and how it might impact course conditions and I know this is common amongst municipalities;
- Environmental issues including pesticide use and this should include an overall pest management program including IPM and habitat enhancement;
- Overall state of golf, but this should only be dealt with by the golf course superintendent if they have the proper data to share. Otherwise, this is best left to the GM or golf professional.

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tendent can be very creative and develop appropriate strategies to accomplish the goals of the facility. Whether it comes from a finance committee, an owner or management there is usually a request to reduce expenses for golf course maintenance by a certain amount or percentage.

Most superintendents are charged with the responsibility of prioritizing the areas that will be affected. Any significant adjustments in labor or materials will have a definite impact on course conditioning.

The ability to attain the standards that were formerly achieved will be impacted, as well. This will require an in depth analysis of written standards and programs for golf course maintenance.

#### COMMUNICATING THE PLAN

Superintendents have implemented a variety of different labor-saving items that will allow them to cut back on their staffing. These could include raking bunkers three days a week instead of seven, mowing greens with riding greensmowers rather than walking mowers and decreasing mowing frequency. As stated earlier, any and all adjustments will have an impact on the course condition and the perception of the quality of the product the golf course superintendent is producing.

A golf course can still be maintained in a very playable condition "down the middle" even with reductions in your budget. It will take a creative superintendent that has a plan in place. The plan needs to be shared with all of the stakeholders and a part of that plan should include the impact on the golfer.

Once the golfers understand what is happening, why it is happening and what the impact will be they should be much more sympathetic to the challenges the facility is facing.

There are some steps to follow when communicating this plan.

- Explain the state of the facility;
- Describe the short-term plan and adjustments to protect the facility;
- Lay out the long-term plan and overall impact on the golf course;
- Outline what golfers can expect as a result of the changes ; and
- Detail the cost considerations and fiscal responsibility that will keep the golf course profitable.

It's important this new plan is agreed upon by management and owners alike and everyone is supportive of the direction needed to operate effectively.



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## PROFESSIONAL DEVELOPMENT

### GETTING THE WORD OUT

It's vital to communicate the message in a variety of methods. A special letter from the club president, municipality or owner should be sent out addressing the facility issues including the golf course.

Additional notifications should be placed in newsletters, bulletin boards and signage in the facility's pro shop or first tee. Brief all staff on the situation and make sure they understand who represents the facility as spokespersons. It's also a good idea to convene a meeting of interested parties to allow for questions and answers.

Here's an example of how a typical communication effectively outlines the pertinent issues.

1. Golf rounds have been on an annual 5 percent decline for the last three years.
2. Revenues of the facility are down 18 percent annually and adjustments are necessary to balance our finances.
3. Services will be reduced in areas including our pro shop, dining areas and locker rooms.
4. Hours of service will be affected to best cover the time periods of greatest usage while minimizing or eliminating service in low-use periods.
5. Staffing levels will reflect the current economy and will affect course conditions.
6. Everything is being done to develop new marketing plans to attract business and/or members.
7. While we are addressing cutbacks that are cosmetic it is our intent to protect our greatest asset, the golf course, for the long-term.
8. Effective immediately, we will no longer oversee the entire golf course.
9. We will oversee the tees and fairways only to reduce costs on mowing, water and fertilizer.
10. Greens will be mowed with riding mowers on weekdays and walking mowers on weekends.
11. Fairways will be mowed twice per week rather than three times per week.
12. Rough will be mowed weekly rather than two times per week.
13. Hole locations will be changed five days per week rather than seven.
14. Bunkers will be fully raked on Friday through Sunday and touched up on weekdays.
15. Tree pruning will only be done as needed for safety.
16. Tolerance for disease, insects and weeds will be softened as we are now on a curative program rather than a preventive program.
17. By making the above adjustments we are able to trim our golf course maintenance budget by 18 percent.
18. We will continue to look at ways that will keep our costs in line with minimal impact on our golfers.

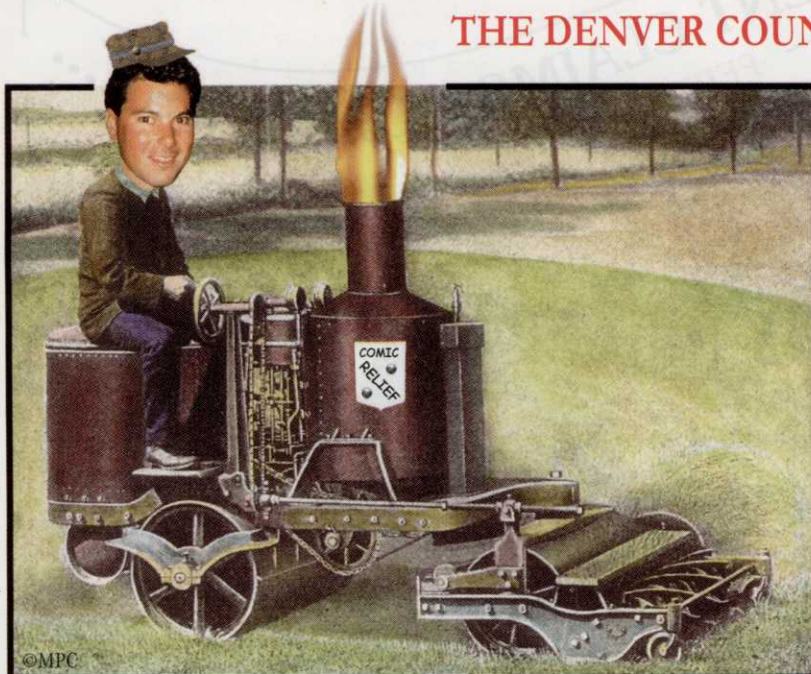
### MAKING ADJUSTMENTS

Normally, the communication plan would not include a set of the written standards for the golf course. The standards will be different with the changes mentioned. It is very important to collectively adjust the written standards that the facility has for the golf course. The standards are the measuring tool by which the golf course superintendent is judged. If the standards are not changed then it would be unfair for management or ownership to judge the superintendent based on standards that were produced with a greater set of resources. Be sure the standards are approved by management and ownership.



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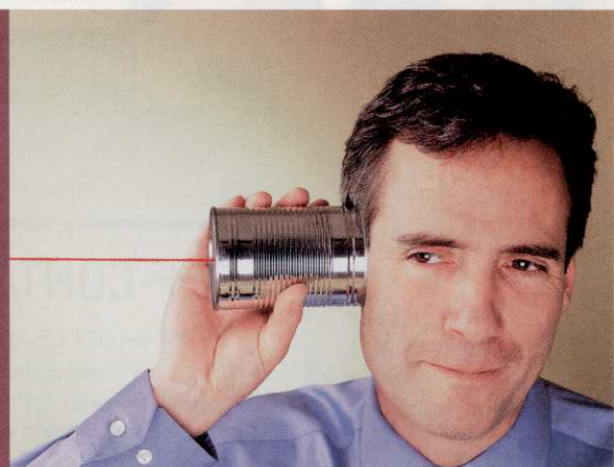


There are any number of strategic mistakes a golf course facility can make in this economy. Some of the more "major" snafus include failing to recognize that adjustments have to be made, not communicating the adjustments, not assessing the long-term impact on cutbacks, not adjusting the course's Golf Course Standards and failing to create a unified message.

I have spoken to a numerous superintendents who say their budgets have been cut dramatically resulting in changes in golf course conditioning. Some of those individuals have stated that their facilities did not share those cutbacks with golfers/memberships. In addition, player expectations for course conditions were not reduced and adjustments were not made to Golf Course Standards. This is a recipe for disaster for the golf course superintendent.

Even if your golf course is holding its own in this economy, it is prudent to develop a plan to deal with our economic downturn. I

**"Even if your golf course is holding its own in this economy, it is prudent to develop a plan to deal with our economic downturn."**



have worked with facilities to develop cost reductions from 5 percent to 20 percent. Plans do not always need to be implemented, but solid, effective managers need to prepare for worse case scenarios. Like with most plans, there are three phases that include development, implementation and communication.

Tough times call for tough decisions and golfers will understand you are looking out for their facility. Superintendents must play

an active role in developing solutions for the problems our industry is facing, and that includes developing and communicating a clear and effective message of what is being done.

Tell your story well because it may mean your perceived success or failure. **GCI**

*Bruce Williams, CGCS, is the head of Williams Golf Consulting and a frequent contributor to GCI.*

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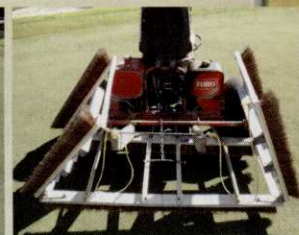
Globetrotting consulting agronomist Terry Buchen visits many golf courses annually with his digital camera in hand. He shares helpful ideas relating to maintenance equipment from the golf course superintendents he visits – as well as a few ideas of his own – with timely photos and captions that explore the changing world of golf course management.



**Terry Buchen**, CGCS, MG, is president of Golf Agronomy International. He's a 41-year, life member of the GCSSA. He can be reached at 757-561-7777 or [terrybuchen@earthlink.net](mailto:terrybuchen@earthlink.net).

## SELF-CONTAINED TOPDRESSING BRUSH

**K**en Williams, CGCS, at the Stanford University Golf Course and Seibel Varsity Golf Training Complex in Stanford, Calif., enjoys using the Standard Golf Model #52000 topdressing brush, with two Model #52050 wing brushes, mounted on the back of a 1985 Toro Model #8880 Sand Pro. Tom Thatcher, the former superintendent who is enjoying retirement, developed the idea for the brackets that are two pieces of 2-inch angle iron welded to the lift bar, with two pieces of 1-inch-wide by 1/8-inch-thick flat steel that is screwed to the two 2x4x24-inch boards along with a flat-steel cross brace of the same dimensions. There are three 1 1/2-inch chains attached to the lift arm that lift the main topdressing brush. The boards have two pieces of 1/4-inch diameter yellow nylon rope tied to it and to both of the wing brushes,



with eye hooks, so when the lift arm raises the main brush it raises the wing brushes at the same time. The two wing brushes fold up efficiently and easily for transport. The Toro Sand Pro was outfitted with 21x12x8-inch slick tires available from [www.Tires-Easy.com](http://www.Tires-Easy.com). It took roughly two hours total to design, and about four hours to build and the materials were already in stock.

## THE WINDMEISTER

**B**rad Chutz, co-owner/superintendent of the Pine Grove Golf Course in Grove City, Pa., challenged his crew to find a better and faster method for removing leaves from the greens and tees. The method they always used was a backpack blower and a three-wheeled, push-type blower which would take hours. To speed up the process, they took an old Toro Sand-Pro with Carlisle 22/1100/8 four-ply turf tires, left the two lifting arms for the rakes in place and drilled two holes 1/2 inch in diameter in each lifting arm. They then took a piece of 1/4-inch-thick, 10x26-inch steel plate and drilled four 1/2-inch-diameter holes to match the holes in the lifting arms, then bolted the 1/4-inch plate to the lifting arms. Next, they took a three-wheeled 1997 Giant Vac walk-behind push blower (\$900 new) and removed the rear wheels leaving the axle in place and the handle bars were removed. The blower was set on the plate, two pieces of 1 1/2-inch angle iron 2 inches long were welded to the plate to set the axles onto and using the engine mounting bolt holes that were used to hold the handle bars in place, and four holes were drilled through the steel plate on that location. With the axles setting in the "V" formed by the angle



iron, the bottom of the engine for the blower was 4 inches above the plate. Using 1/2-inch-diameter pipe, four spacers 4 inches long were cut and the spacers were used to mount the blower to the plate with four 3/8x16x5 bolts. The throttle for the engine was mounted on a bracket under the seat so the operator could control the throttle of the blower without having to get off the unit. The third wheel was left in place on the blower to prevent lowering the blower too far and damaging the turf. With the assembly mounted to the Sand-Pro lift bars, the height of the blower can now be controlled with the hydraulics to be raised or lowered for transport and blowing. This modification has turned a two-person job that would take up to four hours into a one-person job that takes about an hour. The cost was about \$60 and it took about three hours to complete.



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## Studies say that when it comes to maintaining greens, an equal combination of mowing and rolling works best.

By Jason Stahl

**R**ollin', rollin', rollin'... If the song "Rawhide" doesn't play helplessly and mercilessly over and over in your head when you're rolling greens, you're lucky. But if it does, somewhere between the whip cracks and the guitar riffs should be the thought that you're doing your turfgrass good because you've decided to give the mower a rest that day.

Recent studies have shown that a combination of mowing and rolling greens during the summer months is the best strategy for keeping turfgrass healthy. Plus, there are large economic gains, too – depending on if you triplex mow or hand mow.

The studies, according to Dr. John Sorochoan of the University of Tennessee, were done to provide hard data behind the USGA and GCSAA's annual recommendations to reduce mowing frequency and raise mower heights to minimize summer stress. "There had never been studies before; this information was always opinion," Sorochoan says. "And the USGA says people just know to do this, but we wanted to quantify how, how much and how significant."

The study Sorochoan participated in also involved Dr. Jason Henderson of the University of Connecticut, Dr. Doug Karcher of the University of Arkansas and Dr. Tom Nikolai of Michigan State University. Greens of *Poa annua*, Ultra Dwarf and bentgrass were subjected to various schedules of mowing and rolling from June through August to determine the ideal frequency.



# ON A ROLL





Recent studies have shown that a combination of mowing and rolling greens during the summer months is the best strategy for keeping turfgrass healthy. Plus, there are large economic gains, too – depending on if you triplex mow or hand mow.



On one green, the researchers did what the average facility in Tennessee does and walk mowed it six days a week. On another green, they mowed on Monday, rolled on Tuesday, mowed Wednesday, rolled Thursday, mowed Saturday and then didn't do anything on Sunday.

The study found the quality of the green that was mowed only three times a week was much better than the green that was mowed six times a week. The reason, Sorochan believes, can be explained through science.

"Golf courses on a daily basis just go out and mow, so first thing in the morning they're removing that leaf surface area, which causes stress in the plant," he says. "The plant then uses energy through photosynthesis to heal the wound. When you look at creeping bentgrass, whether it's in the transition zone, Michigan, upstate New York or Vancouver, the best and most efficient time for that grass to photosynthesize is early morning till noon. So, if you've cut it, even though it's using energy to heal itself, you've removed that much

more leaf area that would be absorbing light. So simply by skipping one day of mowing, less energy will be used to heal a wound and there will also be that much more surface area for light energy or photosynthesis to occur."

The study also went one step beyond science and analyzed the economic impact of alternating mowing with rolling – and the results were eye-opening.

"We determined that if you were a private club and walk-mowed your greens, it freed up \$22,000 a year in your budget, which included the cost of two rollers," Sorochan says. "And that money, of course, could be put toward more topdressing sand, another laborer or whatever."

The average daily fee course saved \$11,000 per year if it walk mowed. However, those daily fee courses that triplex mowed only saved about \$1,600 a year, and triplex mowing cost country clubs that incorporated rolling and mowing practices \$80 per year, which included the purchase of two rollers.

Based on this economic data, Sorochan saw

more superintendents switching to alternating mowing and rolling on a yearly basis more for the benefit of their budgets than the health of their greens.

Dr. Frank Rossi of Cornell University, who recently gave a talk entitled, "Putting Green Mowing...Less Is More," says a lot of people feared there would be a huge downside to rolling if done excessively, but he believes the only downside is created by operator error. Sorochan agrees.

"The problems stem from starting and stopping, spinning out or just stopping," he says. "I recommend to roll as far off the collar as possible or onto the collar. But a lot of people are limited by bunkers or slopes and sometimes end it a foot or two or three or five feet short of the collar, especially if the pin is in the back and you're coming to the front and you've rolled it all the way to that one spot. Don't stop in the same spot every time."

With the lightweight rollers available today, stress from rolling is minimal compared to stress from mowing, Sorochan says. GCI

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When rollers were reintroduced in the early 1990s, there was some concern that they could cause wounding and potentially create entryways for diseases. But that has been disproven, too, says Sorochan.

"In actuality, we found that rolling reduced diseases," he says. "Tom Nikolai showed it could reduce dollar spot by 50 percent. And Bruce Clark found you could reduce anthracnose just by incorporating lightweight rolling with your mowing three times a week."

Cornell University's Rossi did his own study, but unlike Sorochan's, it was primarily focused on mower types. Still, he found that there was virtually no effect in the summer months going to three to four mows a week and rolling every day.

"Superintendents can get the performance they want but at the same time, the evidence from the work we've done shows the less you mow, the healthier the plant is," Rossi says.

Rossi's study examined the variable frequency of clip from Eclipse mowers that allow for ground speed and real speed adjustment.

It also looked at bed knife position and the aggressiveness of cut of different mowers. "We sort of found some hidden stresses you would see in mowers that a lot of guys don't pick up on," he says. "At the end of the day, there are some fine points to our work, but you want to mow as little as you need to get the performance you need. You also need to realize that mowing will only get you so far. If you want to keep a healthy surface and get maximum performance, you have to roll."

For those superintendents who haven't embraced this mowing-rolling concept, Rossi encourages them to at least try some vibratory rollers on a triplex mower because "there is significantly less injury associated with using that piece of equipment and it's much faster than a speed roller."

The performance of speed rollers or side-winders has been compared to triplex rollers, Rossi says, and little difference has been found. So, in his opinion, superintendents should go with speed. "From a time perspective, it's a heck of a lot easier to bum around

with a triplex roller than have to drag a speed roller or side roller," he says.

Yet another study conducted by the University of Arkansas's Jay Richards, Mike Richardson, Aaron Patton and Josh Landreth with Karcher and Nikolai addressed green speed when it comes to rolling.

The objective of the study was to determine the effects of mowing and rolling frequency and mowing height on turf quality and green speed on a sand-based green. The conclusion was that rolling had a greater impact on increasing ball roll distance than reducing mowing height. Also, that mowing frequency could be reduced without a decrease in ball roll distance if turf was rolled on days when mowing was skipped. Therefore, those managing greens may be able to mow less frequently during hot, humid periods to minimize turf stress and produce healthier putting green turf without sacrificing green speed. **GCI**

*Jason Stahl is a freelance writer based in Cleveland.*

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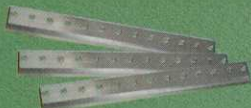


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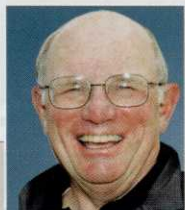
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**Monroe Miller** is a retired golf course superintendent. He spent 36 years as superintendent at Blackhawk Country Club in Madison, Wis. Miller can be reached at [groots@charter.net](mailto:groots@charter.net).

## I STAND CORRECTED!

Foolish me, especially on the downside to my 65th birthday, offering a golf course pop quiz. During my teaching assistant career a student would occasionally challenge a pop quiz question. The course was open to students in other disciplines and they liked to question quiz answers and discuss them. I should have remembered this when I penned my recent "Quiz" column.

Not long after the October issue mailed, I received a wonderful email from a longtime friend, who I'll call "The Professor." He is a veteran superintendent, designer and builder with sterling qualifications as a golf course historian. The Professor wanted to discuss a few of my answers. It seems he took the quiz and failed. Beads of sweat collected on my forehead as I read his message. All I could think about was The Professor and his formidable greenkeeping knowledge.

The Professor challenged the answer to Question #3. The answer I recorded is straight from any number of history books, including USGA sources. But the Prof offer this: *"TO THE GOLF PLAYERS, from the Rivington Gazette, a New York Tory newspaper in 1779 – 'The season for this pleasant and healing exercise is advancing. Gentlemen may be furnished with excellent clubs and suitable Calado balls by enquiring at the printer.'*" I wonder if the historians at the USGA have considered this reference.

Question #5 related to the first woman involved in turfgrass science. I couched the question with the words "likely," and "science" and "major," but the Professor wrote me: *"My first thought went to Georgina Campbell, first female Head Greenkeeper, in 1901*

*at Franklin Park, MA. Then I thought about Elfreda Claukie (sic), Professor Dickenson's assistant at Massachusetts State in the 1930s, but then I thought of Gertrude Farley, National Greenkeepers Association of America Secretary who authored 'Golf Course Commonsense' in 1931, which covered practical and scientific methods.*

*"The development of 2,4-D was done by Dr. E. J. Kraus, University of Chicago, 1941, during WWII under the USDA 'Hormone Project.' A USDA published report by Dr. Mitchell and Dr. Marth indicated that newly labeled 2,4-D 'could have selective weed control in turf.' Ms. Davis then did trials that reconfirmed Dr. Kraus' experiments."*

*Courses' was a compilation of chapters by Hugh Wilson, C.B. Macdonald and Dr. Walter Haban as well as Piper and Oakley. It was published in 1917, then in 1919 and 1929."*

I still get excited thinking about the Jacobsen school for college students I attended in the summer of 1968 and the prototype RIDING triplex greensmower we were introduced to. The Prof responded to the question with *"1927 and the Worthington Overgreen."* His answer is right, of course, to the question I wrote. The Overgreen was a WALKING triplex greensmower!

Finally, the answer I reported for Question #10 came from the first line of "Specification for a Method of

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**"Beads of sweat** collected on my forehead as I read his message. All I could think about was The Professor and his formidable greenkeeping knowledge."

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The Prof's notes here are important additions. I have visited that Franklin Park area of suburban Boston while visiting the park, Frederick Law Olmstead's home, and the Country Club, all-important and historic. But I did not know of Ms. Campbell. Gertrude Farley is well known by many of us, and a friend of mine has a mint copy of her book, which I have read.

It seems a fair answer would include the women noted by the Prof.

Here are the Professor's comments about Question #7: *"Piper and Oakley? These two individuals had the closest ties to greenkeeping in a scientific sense, and became closely entwined with Dr. Walter Harban, USGA vice president who pushed the USDA to devote more time toward golf course turf. Thus the first initiative on scientific turf management came about in 1915 from USDA's Piper and Oakley. The book 'Turf for Golf*

*Putting Green Construction,' a USGA booklet authored by the Green Section Staff: In 1960, after years of scientific research sponsored by the USGA and several universities, the Green Section's 'Specification for a Method of Putting Green Construction' were published. I think I might prevail on this question since The Professor considered it false because of the 1968 publication 'Building Golf Holes for Good Turf Management.'*

The Professor deserves applause for his clarification and corrections. He literally has a lifetime of contributions to our profession and has provided leadership at all levels, including the very top. Many of you would like to know his identity; many have already guessed correctly, I'd bet.

That will be the next quiz's gimme question, which I will run past The Professor before anyone else sees it. GCI

To read Monroe's "Pop Quiz" column, enter <http://tinyurl.com/3ybgvch> into your Web browser.





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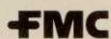
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# WANTED

## *Poa*: Dead or Alive?

There are two schools of thought about our friend *Poa annua* – try our best to help it survive through the summer, or try our best to crowd it out and be done with it.

by Jim Black

**G**lobal warming and climate change? Sunspots? Congress?

Whatever you want to pin the blame on, Summer 2010 went down in the books as a record-breaker. According to the National Oceanic and Atmospheric Administration (NOAA), the summer of 2010 (June-August) was the fourth warmest on record for the contiguous land mass that is these United States. Combined with seasonal rainfall amounts which either caused us to invent new golf course drainage systems, or created new ways to effectively teach employees the art of proper hand watering, turf maintenance was the bane of many superintendents' existence last year.

Either way you experienced it, lots of grass plants met their demise in 2010. And if you had a high percentage of *Poa* on your course, this was all the more evident. All the experts agree, except for the Pacific Northwest, *Poa* didn't really have a chance last year in most of the country.

There are two schools of



Top: Treated *Poa* and clumpy rye. Middle: *Poa* and clumpy ryegrass. Bottom: *Poa* seed head control. White block is the untreated area.



thought about our friend *Poa annua* – try our best to help it survive through the summer, or try our best to crowd it out and be done with it.

### KEEPING POA ALIVE

As much as we may lament the trials and tribulations of co-existing with *Poa* (new name: *Poa trivialis y tribulationes*), some courses – either due to preference, budgetary constraints, sheer *Poa* population, or some other reason – have no other choice but to do their best to keep *Poa annua* alive. Keep in mind that the majority of the US Open Championships for the last 10 years have been played on *Poa annua* greens, so it can't be all bad, right?

Certainly we can plot and plan *Poa* survival tactics for the coming summer of 2011, but on what do we base our strategies? Average? I'm convinced there is no average since summer weather extremes are the norm across the country. "Average" is just a figment of our collective turf management imaginations.

According to Zac Reicher and Roch Gaussoin, professors at the University of Nebraska-Lincoln's department of agronomy and horticulture, the practice of proper cultivation will be the key to your success, just be very mindful of its timing and frequency. For example: to create a really solid stand of *Poa*, aerate in the spring and fall to bring more seeds to the surface to encourage more *Poa* germination. Summer aeration, on the other hand, can expose shallow roots to temperature extremes which can lead to *Poa* failure.

Other cultivation practices that encourage a living stand include:

- **IRRIGATION** – Lighter, more frequent irrigation to keep the shallower roots of *Poa* cool and hydrated. If you have staffing problems, but have proper drainage and a reliable irrigation system, you may be able to get

away with setting up several syringe cycles throughout the day. Keep in mind though – proper hand-watering will always be more efficient and effective.

- **MOWING** – You have to be prudent when summer stress sets in when it comes to your mowing schedule and procedure. If it's possible at your club, skip a day of mowing, only perform a clean up pass every other day, and switch to walking mowers (if you don't already) if time/budget allows. Always collect clippings.

- **DISEASE CONTROL** – Be sure to include in your fungicide program controls for summer

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**"Either way you experienced it, lots of grass plants met their demise in 2010. And if you had a high percentage of *Poa* on your course, this was all the more evident."**

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patch disease and anthracnose, along with your regular dollar spot/brown patch/pythium regimen.

- **VERTICUTTING** – Combined with light topdressing helps to reduce compaction and encourage root production. Healthier roots will be key going in to the summer months. Verticutting also helps to reduce seed head populations, making for smoother putting surfaces.

- **FERTILITY** – Spring and fall nitrogen is critical when annual bluegrass is most aggressive, but it is also a good idea to apply light, liquid applications during the summer months as well to keep the plants active.

- **GROWTH REGULATION and SEED HEAD SUPPRESSION** – Now comes the fun part. If you are going to choose to live with and encourage *annua* l bluegrass, you'll have to have a seed head control plan in place for the annual biotypes. Some of the products in today's market include Embark T&O

(mefluidide), Proxy (ethephon), Trimmit (paclobutrazol), and Primo (trinexapac-ethyl).

Timing of these products in respect to seed head emergence is ultra-critical, and a solid course of action is to consult with your local reps and extension agents to narrow your application dates down based on degree days, historical data and physical observation. A huge upside is the theory that suppression of seed heads creates heartier plants due to the misdirection of energy away from seed production and into plant reserves.

Kevin Hicks, superintendent

process. If you prevent or limit that process, it stands to reason that energy can be used for other processes in the plant."

When Kevin was working at clubs in Arizona and Boise, ID, he was in an anti-*Poa* phase. His strategy was to let the *Poa* go through its seeding process in the spring with the understanding it would be "out of gas" by the time the summer stress rolled in, thereby encouraging its demise. "When you boil it down," he says, "it is a matter of manipulating the plants to perform when and how you want them to."

Doug Obermann, turf and ornamental products manager with PBI-Gordon, explains that Embark T&O is one of the most economical seed head control products on the market with a cost per acre averaging less than \$20.

"At 3.2 percent AI," Obermann says, "there is no label prohibition in regards to greens. But be careful with the Embark 2S. It's seven-times stronger at 28 percent AI and cannot be applied to putting greens."

"Application timing is most critical," he explains. "Watching degree days, or using an 'indicator area' on your course that is a little warmer will help you decide the best time to spray."

Obermann also talks about "bronzing," or the discoloration that comes along with most control products. "It's usually gone in about seven days," he said. "You can mask it by including iron in the tank."

Hicks says of the bronzing effect, "The bronzing is better than the white seed heads, and most golfers don't notice anyway."

### INSECT CONTROL

Be sure to have a preventative insect control program in place as well, especially if there is a history of *Hyperodes* weevils (*annua* l bluegrass weevil), black turfgrass atenius, white grubs, nematodes, and any other insect

of The Coeur d'Alene Resort Golf Club in Coeur d'Alene, Idaho, is very pleased with his Embark program.

"After trying to manage the profuse May/June seeding with other chemical and cultural controls, I made the decision to go back to Embark," he says. "While the application timing takes some diligence, it worked very well, giving us very acceptable control. We were quite cautious with our applications, but after seeing the results, we will expand the program in 2011."

Hicks echoes the theory of healthier plants through seed head suppression. "Most growth regulators in this family and others have a profound effect on energy consumption (I say consumption instead of "storage" because I doubt there is much storage in a plant that is maintained at 0.100") through the course of the spring and early summer. I have read that up to 65 percent of an annual bluegrass' energy is consumed in the seed production



## TURF MAINTENANCE

that may feed on the plant or root structures.

### TRAFFIC CONTROL

If your layout allows, use good traffic control methods to control cart/foot traffic, especially around the greens, encouraging players to alter their access to the putting surfaces from day to day. This will help to eliminate compaction and repetitive stress on the plants.

### THE STRATEGY FOR ELIMINATION

First and foremost, to successfully have a plan for *Poa* elimination, you'll need to be sure it is just that – a well-thought-out, well-funded, well-communicated plan. Depending on which stage of the program you're in, if you miss an herbicide application or an aeration gets off-schedule by a couple weeks, you could have a major setback in your progress.

Control and elimination of annual bluegrass comes mainly in the form of pre-emergence herbicides, post-emergence herbicides, and growth regulators.

Stan Zontek, director of the Mid-Atlantic region of the USGA Green Section, has seen many turf managers achieve great *Poa* control success with long-term growth regulation programs that include a season-long regimen of Cutless or Trimit growth regulation products. "The key," Zontek explains, "is to begin your program in the spring when growth begins and follow through with the program into the fall when the grass stops growing. Patience and persistence, without the use of bio-stimulants, has produced some pretty amazing results."

From Professors Reicher and Gaussoin of UNL: "Preemergence herbicides applied in early fall are highly effective on the annual biotypes of annual bluegrass, as long as they are applied in early September prior to the germination window (Dernoeden, 1998.) The longer



Kevin Hicks (far right), discusses his *Poa* program with regional PBI-Gordon reps Mike Sorenson (left) and Trevor Radford (middle).

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**"Patience and persistence, without the use of bio-stimulants, has produced some pretty amazing results."** – STAN ZONTEK, USGA

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lasting herbicides prodiamine, dithiopyr, or pendimethalin will work for this, and a second application in November, December, or the following March may be required to insure control of spring-germinating annual bluegrass."

For postemergent control, Bayer produces the widely popular Prograss (ethofumesate). Three applications in the fall spaced two weeks apart has been the norm, but there have been reports of inconsistent control at rates safe for Kentucky bluegrass or creeping bentgrass (Dernoeden and Turner, 1988).

Another postemergence product is Velocity (bispyribac-sodium) from Valent. Effective for

control in tee and fairway height creeping bentgrass, Velocity becomes more effective at temperatures over 70F, so know what your percentage of *Poa* coverage is in any treatment area.

Paul O'Leary, golf course superintendent at Walden Country Club in Crofton, Md., shared a story from a previous club. "We decided to try it on a ryegrass championship tee that actually had much more annual bluegrass than I realized," he says.

"Luckily, not too many club members played from the back tees, so when the Velocity took the 70 percent of the tee that was *Poa* out, few people were affected," O'Leary adds. "It actually turned out to be a good thing

because I was able to make that tee a pure stand of ryegrass."

The age-old trick in the south and transition-zone states using warm-season grasses is to use glyphosate products on dormant stands of turf.

But PBI-Gordon's Obermann warns, "Bermuda can be set back a couple weeks if it's not totally dormant, and some superintendents are moving away from this practice due to the risk factor. But spraying on a warm winters day will definitely kill your *Poa*."

Other products effective on *Poa* include PBI-Gordon's new Katana (flazasulfuron) Bayer's Revolver (foramsulfuron), Monument (trifloxysulfuron) from Syngenta, and Tranxit (pyridine-sulfonamide) from DuPont.

Remember to always read and follow label instructions. **GCI**

*Jim Black is a freelance writer and turfgrass manager living in the mid-Atlantic.*





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# Metal mania

To better combat a brutal summer season, some courses opted for a solid metal irrigation retrofit.

By Nancy Hardwick

No question about it. Doug Norwell will remember Summer 2010 as one of the hottest and driest on record. Throw in an unrelenting desert-style wind and it had the makings of a stressful season for the superintendent at The Camargo Club in Cincinnati.

Yet, because of a major retrofit in Spring 2009, Camargo, ranked one of the Top 100 Courses in the U.S., breezed through the heat wave with firm and fast turf that was green and playable until winter blow-out.

Across the country in Idaho, Adam Bagwell, CGCS, was confronted with a similar Sahara-like summer at the Crane Creek Country Club, a Certified Audubon Cooperative Sanctuary Course in Boise.

But in his high desert environment, Bagwell expects blistering summers with temps in the 80s and 90s and humidity less than 10 percent. That's why he took action two years ago to update his irrigation system – and kept his fairways in picture-perfect condition, even with the summer heat, sandy soil and a pumping system that brings up well water with sediment.

So, what's the magic wand that's working for these guys?

Think nozzles. Solid metal sprinkler nozzles specifically designed to retrofit and upgrade Toro and Rain Bird golf heads.

Two years ago, Crane Creek was plagued with dry patches. Admittedly, the system was getting old. More than 1,200 heads were installed in 1996, chiefly Toro 734s and 760s. The heads were not performing well when Bagwell arrived at the course in 2007 and nothing seemed to solve the donuts and brown patches.

Bagwell checked the head spacing and ran pressure tests. He then started taking the sprinklers apart and discovered that the tail rotor sprays were plugged with sand and other small particles. He had a choice: rework the three-pump house system to include filtration, a major expense, or try a set of solid metal nozzles, which he had read about.

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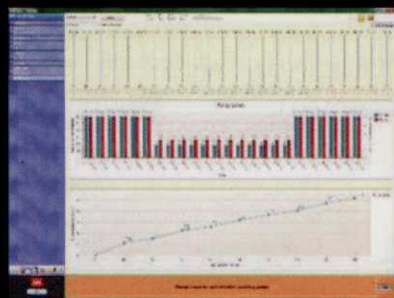
"We initially ordered 100 Profile nozzles, based on recommendations from other superintendents. We installed them on our



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worst fairways and the results were apparent within a week. The Distribution Uniformity improved dramatically – the turf greened up and the dry spots disappeared,” he says.

Bagwell convinced his Greens Committee to invest \$13,000 from his operating budget to gradually replace the sand-packed nozzles over the next two years. By the end of 2009, his crew had converted 950 full-circle and 45 part-circle heads to Profile nozzles and his Distribution Uniformity went from 67 to 74. Plus he saw water and energy savings.

“Once we eliminated the problem areas on the turf, we could optimize our programming schedule and make the system perform more efficiently. We were previously running the sprinklers 40 minutes at a time, irrigating greens and fairways on alternate days.

“We cut that back to 18-minute run times on alternate days at .79 inches per hour precipitation rate. Water consumption has been reduced by 40 percent,

which I attribute to the Profile nozzles and better soil chemistry,” he says.

Also on the plus side, he lowered energy usage by approximately 25 percent.

“Our annual utility budget was approximately \$43,000 a year. We trimmed that by nearly \$8,000 because both our coverage and scheduling underwent major improvements,” says Bagwell.

#### A REAL CAUTIOUS GUY

Meanwhile in Ohio, the historic Camargo Club, designed by Seth Raynor in the 1920s, is recognized as one of the prestige courses in the Midwest. In 1995, the entire irrigation system was replaced with Toro 730s, plus the course has the benefits of a filtered municipal water supply.

But that didn’t stop the donuts.

“The crew was constantly hand-watering to compensate for dry spots,” says Norwell. “It was very labor intensive and taking time away from other projects.”

He heard about Profile nozzles

and gave them a try. “Initially, I ordered just eight,” Norwell says. “I’m a real cautious guy when it comes to spending money and making changes on the course.”

The new nozzles were switched into the Toro heads on just one hole, yet within a week the crew noticed a visible difference.

“After conducting a site evaluation and determining that the nozzles really did enhance distribution uniformity and overall conditions, we went ahead and ordered replacements for all 1,100 heads.

“Through Spring 2009, we retrofitted every sprinkler on the course....took us about four weeks.”

That same spring, however, turned out to be one of the wettest in a decade.

But when Summer 2010 rolled around, the retrofit made all the difference between a reliably performing system and hand-watering hell.

“At Camargo we were able to stay on top of the situation with both the retrofitted sprinklers and wetting agents. There was

no major loss of turf this entire summer,” he says.

Although Camargo has no water restrictions, Norwell’s team is very resource conscious.

“We try to stay in the forefront on water management and keep the course as dry as possible. It’s good for the turf and for the community.”

Back at Crane Creek in Idaho, the membership and Board of Directors took notice of the improved conditions and as the utility bills went down, they were pleased to give Bagwell the credit for initiating the nozzle switch-over.

“The board saw a real return on our investment,” he says. “The Profile nozzles paid for themselves within two years and the course has never looked better.”

#### TAKING THE “LEAP OF FAITH”

Former USGA staff agronomist, Mike Huck, who currently heads up a golf course water management consulting firm, Irrigation & Turfgrass Services, had his own first-hand experiences with retrofitting a course with metal nozzles.

Before joining the USGA, Huck worked as golf superintendent at the Southern California Golf Association members’ club in Temecula, Calif., where Rain Bird 91 heads were in place.

He had a nightmare hole, Fairway No. 4, which challenged players with bayou-like conditions in the low spots and arid desert play in the high areas. The problem was so bad it affected germination of overseeded perennial ryegrass each season. Donuts only disappeared after substantial rainfall.

By chance, at a GCSAA Golf Show, he met David Malcolm, the engineer who invented the Profile nozzles. Malcolm decided to send Huck a trial set for Fairway No. 4.

“It was like putting in a new irrigation system,” Huck says of

## Solid Metal Nozzles: How They Work

**P**rofile nozzles were introduced more than a dozen years ago by inventor David Malcolm and are manufactured by Underhill International, based in southern California.

The Profile nozzle line has been expanded to retrofit all popular Toro and Rain Bird golf heads. They provide both long-range and close-in coverage and are color-coded for easy field ID.

The Profile housings are constructed from solid brass and feature stainless steel orifices engineered to provide uniform distribution and reduce wind drift. Along with producing a main stream of water, the stainless steel insert has tiny notches pressed into the nozzle face, which strip away a small amount of water from the main stream, depositing it in close proximity to the sprinkler head. This produces the most uniform distribution of water possible, next to rainfall.

Primarily designed for golf courses, the metal nozzles operate reliably in sandy or rocky soil, as well as in clay or loam, and are designed to resist clogging from dirty water. The nozzles have undergone extensive laboratory testing at the Center for Irrigation Technology at California State University, Fresno, CA, along with field testing by superintendents at various sites. In all cases they demonstrated improved Distribution Uniformity and overall water and energy savings.



Profile nozzles.



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the retrofit project. "I became a believer overnight."

During his travels with the USGA, Huck visited courses around the southwest, working closely with superintendents on coverage and pressure issues.

Among his toolbox of suggestions to improve DU and turf conditions were retrofits with metal nozzles. In fact, in one of his first USGA Turf Tips, Huck prepared a report that demonstrated how solid metal nozzles improved course conditions and contributed to turf health.

"For many years, superintendents were taught that head to head coverage was the only way to irrigate a course," Huck says. "With more accurate data analysis and improve products, that's not true any longer."

Manufacturers previously

did not mention much about Distribution Uniformity testing, Huck says, and did very little to promote the concept. Today, under pressure from water agencies and local communities, courses have become more aware of their resources and are focused on maximizing coverage.

"Consultants are looking very closely at the distribution patterns of individual sprinklers and use computers to analyze the data," he says. "Irrigation is being fine tuned so that each head now produces a more efficient and consistent DU pattern, which is an excellent barometer of turf health."

"Donuts, brown spots, oversaturated areas disappear on courses that closely monitor their DU," he adds.

Huck admits most superinten-



When the nozzles start failing, retrofitting is one option.

dents are initially very skeptical about retrofitting every head on their course.

The question they always ask Huck is: "If they're so great, why aren't they factory installed?"

There's a range of reasons why plastic nozzles are still the industry standard, he says.

"First, it costs much less to produce injection-molded plastic nozzles," Huck says. "Solid metal nozzles would add another 10 to 15 percent to the cost of the heads, a difficult sell in these economically-challenged times."

Many irrigation systems in the Midwest and East Coast can run seven to 10 years with plastic nozzles that perform reliably, Huck says.

"When the nozzles finally start failing, manufacturers would prefer to sell these courses new heads or an updated system, rather than suggesting nozzle retrofits," he says.

Another reason why superintendents are reluctant to change out plastic nozzles is brand loyalty to the sprinkler manufacturer.

"However, it's interesting to watch the conversion when a superintendent takes the 'Leap of Faith' and moves ahead with retrofitting the worst fairway on the course," Huck says.

"Like true converts, they become the product's best advocates and are often delighted to discuss their success with other

professionals," he adds.

The word-of-mouth about metal nozzles has spread over the last five years as golf course superintendents move to new courses and bring retrofit technology with them.

"A new superintendent is typically brought in as a problem-solver," Huck says. "Since the Board wants to see results right away, the superintendent has a good chance of convincing them at the start that retrofits are a viable option."

Courses often work a retrofit program into their operating budgets for two or three years. This spreads out the cost and the nozzles can be installed in bite-sized chunks over the winters and early spring.

The price tag for a complete retrofit generally adds up to \$13,000 to \$15,000 for the Profile nozzles on a course with 1,000 heads, but the costs are typically recouped in water, labor and energy savings within two years, particularly in the southwest.

"When you figure that most golf sprinklers cost at least \$125.00, it's just 10 percent of the cost of the sprinkler to make it run like a well-tuned machine again," Huck says. **GCI**

*Nancy Hardwick is head of Hardwick Creative Services in Encinitas, Calif.*

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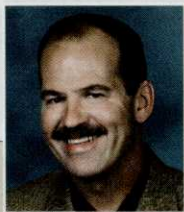
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## THE CASH COW – R.I.P.?

Around 30,000 years ago, a clever Neanderthal had a brainstorm: Given all the different spears and clubs available to his fellow woolly mammoth hunters, there should be some kind of gathering to bring all the stone-age weapons manufacturers together with customers in one big cave. Thus was born the trade show. Or at least that's how I remember it from "The Flintstones."

Anyway, the concept is little changed since that first stone-age event: Put together an interesting program, throw in cocktail parties and erect fancy displays hawking goods and services to attendees attracted by cheap seminars and free booze.

In the last two decades of the 20th century, trade shows in the golf/turf/landscape biz exploded as a marketing concept and as a way for not-for-profit organizations to subsidize their core activities. Local associations, universities and turf councils all wanted their own little cash cow to pay for education, research, lobbying and other activities dues couldn't fund. Money flowed in from exhibitors who wanted to sell stuff and "support the industry." All was right with the world.

But as the new millennium dawned, ominous things happened to trade shows that organizers tried to ignore.

First, they sort of maxed out. I estimated at one point there were at least 80 booth-driven events in the turf market. This plethora of things to bankroll created major headaches for the marketing director at Big Turf Company Inc., who eventually pays for all of this stuff. Even before 9/11, companies were bemoaning the redundancy of weak, often overlapping turf shows and wondering about the payback. Yet, the "we will be conspicuous by our absence" fear factor kept

them signing those booth contracts.

Second, this thing called the Internet got sort of popular. Enough said.

Next, you guys – superintendents and other turfheads who buy stuff – began to take these shows for granted. Oh sure, you still went to the conference itself to get education credits and see friends, but the show became less imperative. Lots of folks either zipped around the floor in 30 minutes or skipped it entirely to go home early or play golf with a buddy. Once busy show aisles got emptier.

Finally, there was sheer arrogance

shrank and bad shows sucked air.

The bottom line: Nearly every road-warrior exhibitor I know has told me flatly that – with the notable exceptions of the Carolinas and New England events – most turf shows aren't worth the time and money any more.

Now comes the GIS. The national show – as well organized and powerfully marketed as it is – is not immune to the same trends killing local and regional events. At least the hosts are trying new things to fight the tide. One attempt – the well-intentioned idea of consolidating the turf side

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**"They blindly assumed that if a company didn't exhibit they'd somehow be blackballed and badmouthed by the association's loyal members."**

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by event organizers. They blindly assumed that every company absolutely had to be at their show and if a company didn't exhibit they'd somehow be blackballed and bad mouthed by the association's loyal members.

These shows figured they could abuse the cash cow as much as they wanted and it would still happily give milk. Most commonly, they scheduled more seminars and events during show hours or simply failed to offer anything new, thus diminishing traffic on the floor. The cows didn't much like this. They bitched (mooed?) about poor attendance. Show organizers harrumphed and hoped things would magically get better.

Things not-so-magically got worse as the recession zapped travel and education budgets. Even some who had the funds stayed away because they didn't want to be perceived as fiddling away at some big party while Rome burned back home. Good shows

with the club side – came apart at the seams after a couple of years when the CMAA grew weary of being the junior partner and bailed out. Another change, the two-day show schedule, partially backfired as some suppliers that spend five- or six-figure amounts on elaborate booths carped that they now only get 17 total hours of selling time for their investments. Companies that buy booths at shows want more time with customers, not less.

Bringing in secondary partners or changing the schedule is rearranging deck chairs on the Titanic. Ultimately, what matters is you go to the event, spend a significant time on the show floor and engage with exhibitors.

Do you intend to do that? How about all your buddies? If not, the age-old cash cow that has fueled so many of the benefits we've enjoyed will run dry... and all of our associations better think up a new way to get free milk pretty damn quick. **GCI**



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