

OCTOBER 2014  
golfcourseindustry.com

# GOLF COURSE

## INDUSTRY

SERVING THE BUSINESS  
OF GOLF COURSE MANAGERS



## SNAP JUDGMENTS

Even at an average 8 feet-800 lbs., alligators aren't the bloodthirsty killers most envision. How some courses manage their toothy tenants.

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### INSIDE

Brauer: Rethinking widths / **P 36**    Fall fertilization / **P 52**    *Poa* control / **P 59**



# TURFONOMICS™

Chapter 3

## TOUGH TIMES NEVER LAST. GREAT PRODUCTS ALWAYS DO.

Highly productive equipment that performs well under challenging course conditions is only half the battle. Delivering on the bottom line during challenging economic conditions is the other half. Look to Toro for the whole story.

**It's simple Turfonomics.**



[toro.com/contour](http://toro.com/contour)

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For rough mowing, one size doesn't fit all, but one company does – Toro.

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# GOLF COURSE INDUSTRY



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## ON THE COVER

Kyle Sweet, the superintendent at The Sanctuary Golf Club on Sanibel Island, Fla., provided this photograph of an alligator lurking in one of the course's lakes.



## FEATURES

- Cover story*
- 14 SNAP JUDGMENTS**  
Even at an average of 8 feet-800 lbs., alligators aren't the bloodthirsty killers most envision. How some courses manage their toothy tenants.
- Professional Development*
- 34 LOOK AND ACT THE PART**  
GCI's Bruce Williams explains how a professional appearance and approach benefits a golf course superintendent.
- Fertilization*
- 52 FEEDING TIME FOR YOUR TURF**  
Implementing the proper fall fertilization program can produce huge benefits in the winter and spring.

# IN THIS ISSUE

## COLUMNS

- 20 OUTSIDE THE ROPES**  
Tim Moraghan: Strange days ahead
- 36 DESIGN CONCEPTS**  
Jeffrey D. Brauer: XXL
- 50 IRRIGATION ISSUES**  
Brian Vinchesi: Green golf
- 56 GAME PLAN**  
Henry DeLozier: Focus on finances
- 62 THE MONROE DOCTRINE**  
Monroe Miller: Let's treat ourselves to a little optimism
- 90 PARTING SHOTS**  
Pat Jones: WNTKC

## DEPARTMENTS

- 4 TEEING OFF:** New digs for GCI
- 6 EDITORS NOTEBOOK:**  
Not as bumpy
- 76 TRAVELS WITH TERRY:**  
Equipment ideas
- 80 CLASSIFIEDS**
- 80 AD INDEX**



## 2014 FALL PREP GUIDE

A checklist to prepare for the new season, ways to enhance your budget and tips for getting a jumpstart on pest control are included in this special section sponsored by PBI Gordon.



## RENOVATION GUIDE

Major projects require thorough research, tough-minded selling and a vision for the long-term health of your golf course. This special section sponsored by Rain Bird provides templates for getting big things done.

- Industry update*
- 59 COMING ATTRACTION**  
PoaCure's march toward commercial launch in the U.S. continues with issuing of an experimental use permit.
- Course Management*
- 66 SETTING THE STANDARD**  
Fall is the prime time to tackle course component standards at your facility.
- Equipment*
- 72 CRUNCH THE NUMBERS**  
Collect data and develop hard figures to justify replacing your aging equipment.



## NEW DIGS FOR GCI

**A**s I'm writing this I'm surrounded by cardboard boxes and unhung pictures and happily looking out my window at a bright fall sunrise over the green leafiness of scenic Valley View, Ohio...GCI's new corporate home. It's a very happy day for our team.

Our company, GIE Media, has always been in the Cleveland area but along the way we ended up split into two offices. Our main office was a modern, well-maintained (but a bit boring) space we leased in the burbs of Richfield.

Our downtown office where GCI's editors and sales team worked was in the slightly gritty but dynamic and interesting Ohio City area, about a mile straight west from downtown.

The company had basically been born there 35 years ago so it felt special despite the winos peeing in the alley and the other oddities of a semi-gentrified urban area. GIE started in one old house and, as we grew, another house was cobbled onto it. Periodic remodeling turned the structure into a crazy-quilt of strange little offices and cubbyholes with editors and salespeople stuck into every nook and cranny.

Yet, despite the cramped circumstances, we thrived and the company grew over three decades from one publication (*Pest Control Technology*) to include our green group (*Lawn & Landscape*, *GCI*, *Nursery Management*, *Greenhouse Management*, *Produce Grower* and *Garden Center* pubs) plus similar clusters in the industrial manufacturing and recycling and waste disposal markets. We've faced a few challenges, but we've continued to grow and succeed while other media companies did not. Why?

Well, first because we're a well-managed, family-owned company. GIE Media is a rarity these days in a publishing in-

dustry dominated by venture capitalists, investment banks and "flippers" who buy and sell media companies. Our owner – Chris Foster – isn't in some tower on Wall Street...he's down the hall from us and we work with him every day.

Second, we practice what others preach about success in media these days: It's all about quality content. We hire more great editors and designers than other companies our size and we believe in giving a platform to our industries' best and

brightest voices. That's why you get to enjoy Tim Moraghan, Bruce Williams, John Kaminski, Henry DeLozier and the rest of our contributors every month. Quality content means innovative ideas and real solutions you can use.

Third, we've invested in technology to bring you digital solutions no one else can provide. Our native apps, market-leading social media feeds and topic-specific newsletters have resonated in the golf market and our other segments. As a result, we're recognized as the clear leaders in digital in golf and every market we serve.

Finally, we LOVE what we do. We hire people who are passionate about their business and, quickly, they become passionate about your business. That passion shows up in every page of the magazine, every post on our website and every tweet we send. We're having fun and it makes us better.

So, our new digs reflect us well. It's a great space in a terrific location (there's a driving range across the street and we're close enough to the river to walk over and catch a few walleye at lunchtime) and, most importantly, we're all under the same roof sharing the same culture and pursuing the same goal: serve our readers better than any other business publisher. We love what we do...and we hope you do too. **GCI**



**Pat Jones**  
Editorial director and publisher

# GOLF COURSE INDUSTRY

Serving the Business of Golf Course Management

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## Not as bumpy

**Saddle Creek Golf Club has altered a bumpy process.**

The public facility in Lewisburg, Tenn., 45 minutes south of Nashville, unveiled a creative response to greens aerification: 8-inch cups.

Superintendent Adam White's crew completed the fall aerification program on Sept. 8. Along with thatch and other unwanted organic material, the crew removed its normal 4¼-inch cups, replacing them with the bigger ones for three straight days following aerification. Club manager Jason Sanders says associate golf professional Dameon Burns initiated the idea. "It seems like the most logical thing in the world," Sanders says.

The concept was, well, a big success at Saddle Creek, a 6,700-yard Gene Bates design. "People are freaked out when they hear the word aerification," Sanders says. "They think, 'Oh, man, it's going to be a nightmare.' But nobody can make a 50-foot putt anyway, or at least the margins are slim. The bumpiness calls into question how good of a putter you are within 10 feet. We felt like 8-inch cups would counterbalance the, 'Oh, man, I missed another putt because of the greens.' It took away a bunch of ... I guess it took away all the excuses."

Despite the threat of poor weather, the course received steady business over the three days, with 150 golfers making their way to what Sanders calls a "Small Town USA" setting. A turnout of between 75 and 100 golfers would have satisfied Sanders. Saddle Creek announced the change to its regular players by sending out emails and posting information on its Twitter and Facebook accounts about the big cups. White and his crew needed one day to punch, topdress and groom the greens. If they didn't use the big-cup idea, the course would have likely alternated nine-hole closings and openings on Sept. 8 and 9.

"Aerification is nails on the chalkboard to some golfers," Sanders says. "You have some people that will say, 'I'll give you a couple of weeks to heal.' That doesn't have to be the mentality of the golfer. I think you can say, 'Hey, look, come have fun.'"

Normal cultural practices will include aerifying the bentgrass greens in the spring and fall, with the spring being the bigger of the two. Big cups are expected to follow next spring's aerification.



Along with thatch and other unwanted organic material, Saddle Creek GC removed its 4¼-inch cups, replacing them with 8-inch cups for three straight days following aerification.



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## STOP WASTING MONEY

You're probably putting down too many chemical applications, according to the first-year results of the Global Soil Survey. The report, which debuted in late September, is the culmination of a year of data collection from 28 soil test kits from around the world, examining what makes up the soil where turf is already performing well.

Superintendents submitted three kits per course, each taken from a part of the course with good-performing turf, from courses in the U.S., Canada, Japan and Thailand. The team behind the study, Dr. Micah Woods of the Asian Turfgrass Center, and Dr. Wendy Gelernter and Dr. Larry Stowell of PACE Turf, analyzed the soil's nutrient levels to see what was present when turf grew strong. The report itself can be found at [bit.ly/1podLCF](http://bit.ly/1podLCF).

What they found is that soil, even from a wide range of locations with various types of turf, probably doesn't need as much help

as we've been giving it. They compared the results of the soil tests to conventional industry guidelines for chemical applications for potassium, phosphorus, calcium, magnesium and sulfur.

In each of these cases, at least 30 percent of the soil sampled tested below the medium level suggested by conventional industry guidelines. A total of 55 percent of the samples had less Mg than those guidelines, and for K and S, more than 80 percent of the samples came in under.

"The implication of that is that the conventional guidelines are too high, because turf managers are getting good soil with nutrient levels well below the conventional guidelines," Woods says.

Woods joined us on the Superintendent Radio Network podcast (check it out at [bit.ly/1vu24zv](http://bit.ly/1vu24zv)) to talk about the Global Soil Survey, and how being a part of it benefited both the course and the wider golf community.

Having a range of samples helps in validating revised Minimum Levels of Sustainable Nutrition guidelines for appropriate chemical applications. "This is an ongoing project, one that will see the guidelines get better and better, meaning more and more accurate, as more data are added to the project,"

Woods says. "It has been exciting to see so many turfgrass managers get involved with this project, and we are looking forward to working with many more turf managers from around the world to

compile an incredibly useful dataset of soil test results."



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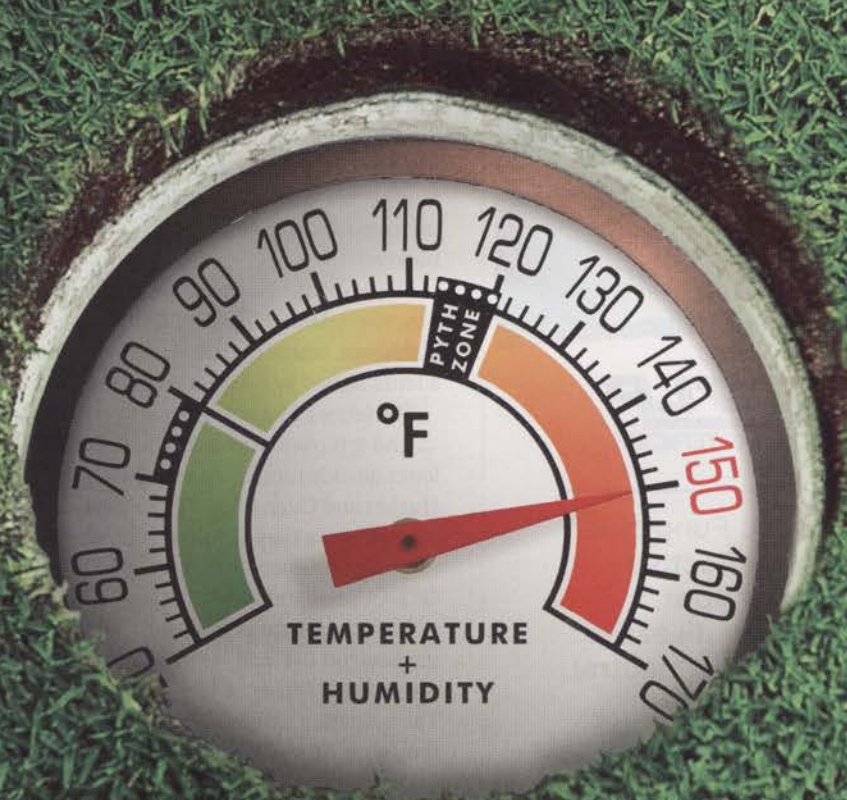


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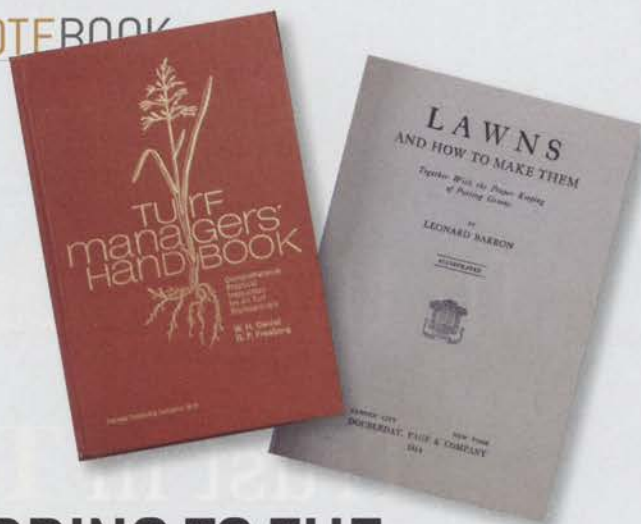
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NOTEBOOK



## ADDING TO THE BOOK COLLECTION

An 8:30 a.m. clubhouse meeting arranged by a general manager before a 9 a.m. shotgun start can add to a superintendent's Saturday morning anxieties. In Matthew Wharton's case, an unexpected weekend meeting increased the size of his turf library.



Following the directions of his general manager, Wharton, the superintendent at Carolina Golf Club in Charlotte, N.C., entered the clubhouse, where members Chris Hughes and Ed Oden handed him a letter signed by 63 members.

The letter had a heart-skipping start: "You have been here 10 years ... and it is obvious you still don't know what you are doing..." The letter quickly turned congenial and led to a symbolic gesture, as Hughes and Oden lifted a tablecloth and unveiled a collection of 14 old turf books they acquired at an auction for Wharton. Part of the collection was previously owned by Charles Tadge, who served as GCSAA president in 1979.

The books were published in multiple decades, with the oldest being Leonard Barron's "Lawns and How to Make Them/Together with the Proper Keeping of Putting Greens," which was released in 1914. The collection also included Charles V. Piper and Russell A. Oakley's renowned "Turf for Golf Courses."

"For any of us history and turf nerds, it's just beyond cool," he says. "I was just totally blown away." Wharton studied under Dave Chalmers at Virginia Tech and keeps turf books in his office. Chalmers' book collection always intrigued him. "I will never forget the first time I spent significant time in his office, just looking through books in his shelf," Wharton says. "I still have a vivid recollection of that moment."

Whenever Wharton stares at his office bookshelf, he should have a vivid recollection of another moment – a pleasant clubhouse meeting. "We all get into this business for a multitude of reasons, whether it's the love of the outdoors, a love of the game of golf, etc... We all have that thing that motivates us," he says. "But still no matter how hard we work, you want to know that those you are working hardest for value what you do, appreciate what you do and respect what you did. I think this gesture overwhelmingly did that for me."



## EOP 1-2-3

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This year's EOP is a powerful combination: a simplified program with leading innovations. The result? Big savings on solutions that will keep your turf beautiful and bring you peace of mind. Plus, don't pay until June 5, 2015 on agency products.

Purchase Total	Oct. 1 – Oct. 31, 2014 Rebate*	Nov. 1 – Dec. 12, 2014 Rebate*
\$1,500 - \$4,999	4%	3%
\$5,000 - \$14,999	7%	5%
\$15,000+	10%	7%

### Innovation Kicker – Give your rebate a boost! →

Increase your rebate 2% when you include any of these products or a Cube!

**Lexicon**  
Intrinsic™ brand fungicide

**Honor**  
Intrinsic™ brand fungicide

**Xzemplar**  
fungicide

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MINI YOUR CUBE		\$5,551.44	
<i>Perfect start to disease control and plant health on all greens.</i>			
	Qty	Acres	
Curalan® EG fungicide (12 x 2.75 lb.)	1	12	
Lexicon™ Intrinsic™ brand fungicide (4 x 21 oz.)	3	12	
DEEP FREEZE CUBE		\$6,353.57	
<i>An excellent combination of solutions for snow mold control.</i>			
	Qty	Acres	
Curalan EG fungicide (12 x 2.75 lb.)	1	12	
Lexicon Intrinsic brand fungicide (4 x 21 oz.)	3	12	
Trinity® fungicide (2 x 2.5 gal.)	1	15	
PLANT HEALTH CUBE		\$7,764.66	
<i>Foundation of disease control and plant health on all greens.</i>			
	Qty	Acres	
Honor® Intrinsic™ brand fungicide (1 x 36 lb.)	1	12	
Lexicon Intrinsic brand fungicide (4 x 21 oz.)	3	12	
HONOR AMERICA CUBE		\$16,776.83	
<i>Trusted dollar spot and plant health for fairways.</i>			
	Qty	Acres	
Honor Intrinsic brand fungicide (1 x 36 lb.)	4	48	
Curalan EG fungicide (12 x 2.75 lb.)	4	48	
MORE RESILIENCE CUBE		\$19,640.93	
<i>Perfect early season foundation cube for greens and fairways.</i>			
	Qty	Acres	
Xzemplar™ fungicide (2 x 114 oz.)	2	40	
Emerald® fungicide (50 x 0.49 lb.)	1	50	
Curalan EG fungicide (12 x 2.75 lb.)	4	48	
Lexicon Intrinsic brand fungicide (4 x 21 oz.)	3	12	

DEFEND YOUR FAIRWAY CUBE		\$20,729.14	
<i>The ultimate fairway protection for dollar spot and plant health.</i>			
	Qty	Acres	
Xzemplar fungicide (2 x 114 oz.)	2	40	
Honor Intrinsic brand fungicide (1 x 36 lb.)	3	36	
Emerald fungicide (50 x 0.49 lb.)	1	50	
SEASON FOUNDATION CUBE		\$23,415.98	
<i>Ultimate course-wide disease control and greens plant health.</i>			
	Qty	Acres	
Xzemplar fungicide (2 x 114 oz.)	2	40	
Honor Intrinsic brand fungicide (6 x 3 lb.)	1	4	
Emerald fungicide (50 x 0.49 lb.)	1	50	
Curalan EG fungicide (12 x 2.75 lb.)	4	48	
Trinity fungicide (2 x 2.5 gal.)	2	30	
Lexicon Intrinsic brand fungicide (4 x 21 oz.)	3	12	
COMPLETE CUBE		\$31,831.80	
<i>Complete disease control and plant health for your course.</i>			
	Qty	Acres	
Xzemplar fungicide (2 x 114 oz.)	3	60	
Emerald fungicide (10 x .49 lb.)	3	30	
Curalan EG fungicide (12 x 2.75 lb.)	4	48	
Trinity fungicide (2 x 2.5 gal.)	2	30	
Lexicon Intrinsic brand fungicide (4 x 21 oz.)	3	12	
Insignia® SC Intrinsic™ brand fungicide (2 x 2.5 gal.)	2	42	



Qualifying Agency Products	Package	Agency Price	Order Quantity	Total Dollar Purchases
Mini Your Cube	see reverse for details	\$5,551.44		
Deep Freeze Cube	see reverse for details	\$6,353.57		
Plant Health Cube	see reverse for details	\$7,764.66		
Honor America Cube	see reverse for details	\$16,776.83		
More Resilience Cube	see reverse for details	\$19,640.93		
Defend Your Fairway Cube	see reverse for details	\$20,729.14		
Season Foundation Cube	see reverse for details	\$23,415.98		
Complete Cube	see reverse for details	\$31,831.80		
Emerald fungicide	10 x 0.49 lb.	\$1,450.40		
Emerald fungicide	50 x 0.49 lb.	\$6,247.50		
FreeHand® 1.75G herbicide	1 x 50 lb.	\$90.00		
FreeHand 1.75G herbicide (1/2 truckload) <sup>⊖⊖</sup>	1 x 50 lb. (8 pallets)	\$27,200.00		
FreeHand 1.75G herbicide (full truckload) <sup>⊖⊖</sup>	1 x 50 lb. (16 pallets)	\$51,200.00		
Honor Intrinsic brand fungicide	6 x 3 lb.	\$2,412.00		
Honor Intrinsic brand fungicide	1 x 36 lb. keg	\$3,559.68		
Insignia SC Intrinsic brand fungicide	4 x 30.5 fl. oz.	\$1,573.80		
Insignia SC Intrinsic brand fungicide	4 x 122 fl. oz.	\$5,880.40		
Insignia SC Intrinsic brand fungicide	2.5 gal.	\$2,652.00		
Lexicon Intrinsic brand fungicide	4 x 21 fl. oz.	\$1,689.24		
Pendulum® AquaCap™ herbicide	1 x 15 gal.	\$690.00		
Pendulum AquaCap herbicide (bulk)	110 gal.	\$5,060.00		
Pendulum AquaCap herbicide (bulk)	220 gal.	\$10,120.00		
Xzemplar fungicide	2 x 114 fl. oz.	\$3,052.92		
<b>SUBTOTAL</b>				<b>\$ ( A )</b>

Qualifying Non-Agency Products	Package	Redemption Value**	Order Quantity	Total Redemption Value
Admiral® lake and pond colorant <sup>⊖</sup>	4 x 1 gal.	\$160.16		
Black Onyx® lake and pond colorant <sup>⊖</sup>	4 x 1 gal.	\$291.20		
Curalan EG fungicide	12 x 2.75 lb.	\$1,196.25		
Drive® XLR8 herbicide <sup>⊖</sup>	4 x 0.5 gal.	\$275.63		
Green Lawnger® turf colorant <sup>⊖</sup>	2 x 2.5 gal.	\$271.25		
Pendulum AquaCap herbicide <sup>⊖</sup>	2 x 2.5 gal.	\$318.75		
Pillar™ G Intrinsic™ brand fungicide	30 lb.	\$65.63		
Pylex™ herbicide	8 fl. oz.	\$450.00		
Siesta™ insecticide fire ant bait	15 lb.	\$176.25		
Tower® herbicide	5 gal.	\$1,375.00		
Transition HC dark turf colorant <sup>⊖</sup>	4 x 1 gal.	\$566.16		
Trinity fungicide	2.5 gal.	\$484.38		
Turf Mark® spray pattern indicator <sup>⊖</sup> – Blue	2 x 2.5 gal.	\$210.00		
Turf Mark spray pattern indicator <sup>⊖</sup> – Green	2 x 2.5 gal.	\$255.15		
Vision Pro HD turf colorant <sup>⊖</sup>	4 x 1 gal.	\$522.76		
<b>SUBTOTAL</b>				<b>\$ ( B )</b>

**Calculate your rebate** Use this amount to determine rebate percentage in the left chart (A+B) **TOTAL PURCHASE** \$ ( C )

Purchase Total (C)	Oct. 1 – Oct. 31, 2014 Rebate*	Nov. 1 – Dec. 12, 2014 Rebate*	Innovation Kicker Rebate %
\$1,500 - \$4,999	4%	3%	2%
\$5,000 - \$14,999	7%	5%	2%
\$15,000+	10%	7%	2%

Oct. or Nov. – Dec. 12, 2014 Rebate %	%
2% Innovation Kicker (if applicable)	%
<b>TOTAL REBATE %</b>	<b>%</b>
Total Rebate %	%
<i>multiplied by</i>	
Total Purchase ( A+B )	\$ ( C )
<b>TOTAL EOP REBATE</b>	<b>\$</b>

\* Must be purchased in case increments on one invoice. A qualifying October purchase of at least \$1,500 locks end user to October rebate column for duration of EOP. <sup>⊖⊖</sup> FreeHand 1.75G herbicide half and full truckloads must be ordered and purchased within one transaction to qualify for special pricing.

**Additional Program Details and Qualifications:**

- \* The end user's rebate % is not cumulative, with the exception of the Innovation Kicker.
- \*\* Redemption value used for non-agency products.
- \* All Agency products sold are on the behalf of BASF. All sales are final. NO RETURNS.
- \* Rebate will be based upon reported sales from the BASF authorized agent(s).
- \* This program applies only to qualified end-user professionals (Golf, Greenhouse, L&L, Nursery, Ornamental, Sports Turf, Sod Farms, Municipalities, and Parks & Rec).
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- \* End user must be in good standing with agent to receive special promotional terms. All agency terms offered at the agent's discretion.
- \* All agency products invoiced between October 1, 2014 and January 31, 2015 will receive June 5, 2015 terms for the end user. All agency products invoiced after January 31, 2015 will receive net 60-days for the end user.
- \* Terms for qualifying non-agency products are determined by a BASF authorized distributor.

- \* Qualified end users will receive a rebate on the total invoiced dollar amount (excluding taxes) of qualified products purchased from an authorized BASF T&O agent. All rebates will appear as a credit on the end user's account with the agent who processed the order.
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From   
**THE FEED**

Many superintendents shared the same major project in September: fall aerification. Fortunately, superintendents are at their digital best during big projects. For this month's Feed, we give you some witty aerification-related tweets.



**Andrew Jorgensen**

@LowBudgetSupt

Final aerification is starting today. Or, as we like to call it: "find all of the shallow hydraulic tubes day"



**Chuck Connolly**

@turfsupergcc

Like back to school is a stress relief for parents, punching holes is stress relief for superintendents



**Paul Diegnau** @diegnau

It appears we have a new record for rocks "discovered" with the fwy aerifier...a boulder among pebbles



**Sean McCue** @SKMQU

Going through the final pieces of equipment before aerification. 13 days til I "ruin" the golf course.



**Steve Cook** @OHCCTurf

Greens always look best the day after you aerify



**Kevin Hicks** @golfsuper1992

I feel like the only one in Twitter-turf land not aerifying today. Resort course. Got my ticket punched for Oct. 29 #waytoolate



**Dan Tolson** @mountainturf

Operation "healthy turf 2015" is 1/2 done! Back 9 green/tee aerification successful. Front nine closed tomorrow.



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## HANDS-ON LEARNING

About 30 Chicago-area superintendents got to see research in action at this year's Turf Science Live event at the Merit Club in Libertyville, Ill., Aug. 25. The event brought together new research as well as product demonstrations for superintendents with the kind of hands-on demonstration that wouldn't normally happen outside the Golf Industry Show.

The superintendents went from station to station through the course to see displays from Jacobsen, Syngenta, Smithco and Turfco. Dr. Karl Danneberger of The Ohio State University was also around to talk about the preliminary results of his new bentgrass brushing research. The study, looking for the effects of using a brush one to three times each week with regular mowing, hasn't produced damaged turf yet.

Superintendents saw the Turfco Wide Spin 1550 topdresser with programmable application rates, as well as talked about the importance of frequency of clip with Jacobsen. One demo watched closely by superintendents was the Smithco Sharp-shooter system, a precision turf management sprayer that uses GPS technology to maintain efficient spray applications.

One other system got a surprise demonstration, as the course's lightning alert system urged everyone off the course briefly in the face of an afternoon storm.

## INTERN SEARCH

**Missed Dr. John Kaminski's webinar sponsored by BASF? We have it covered. A replay of the webinar can be found on Golf Course Industry's website. Kaminski, a GCI columnist and the director of the Golf Course Turfgrass Management Program at Penn State University, discussed creating a successful internship program at your golf course. Kaminski travels the country visiting his students at work. He's seen all sides of the internship experience. Who knows? Maybe something in this webinar helps you land a future full-time employee.**





# AROUND THE INDUSTRY

**Superintendents with Nemaacur stockpiles** received a major reprieve. The EPA granted a GCSAA request on use of existing stocks of Nemaacur for golf courses until Oct. 6, 2017. The extension was granted less than two weeks before the Oct. 6, 2014 deadline for disposing all existing stocks of the insecticide.

We wrote about the dilemma the deadline posed for superintendents in our September issue ([bit.ly/1nGDXI9](http://bit.ly/1nGDXI9)) and options for nematode control in our June issue ([bit.ly/1i5oXWW](http://bit.ly/1i5oXWW)).

**The EPA reached a settlement** with DuPont for alleged violations of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) caused by the herbicide Imprelis. DuPont will pay a \$1.853 million penalty to resolve allegations that the company failed to submit reports to the EPA about potential adverse effects of Imprelis, and sold it with labeling that did not ensure its safe use.

When customers applied the misbranded Imprelis, it led to widespread death and damage to trees, including many on golf courses. DuPont has submitted over 7,000 reports to the EPA of damage or death of trees – primarily Norway spruce and white pine – related to the application of Imprelis.

**Another Donald Ross course has been restored.** Wilmington Municipal Golf Course reopened Oct. 1 following a \$1.5 million makeover. Reading the project's tight schedule will accelerate heartbeats. Work started April 28, only 13 days after Duinick Construction was selected for the project. All 18 greens on the 85-year-old course were restored. Approaches, bunkers and the practice putting green were also restored, and irrigation and drainage were improved. The course receives an average of 60,000 rounds per year.

**Golf Course Industry has a new home.** GIE Media Inc., GCI's parent company, settled into its offices at 5811 Canal Rd. in Valley View, Ohio, on Sept. 29. GIE had maintained two Northeast Ohio offices, with the majority of GCI's staff working in Cleveland. GIE acquired its new building in March and has been making renovations and updates to the property. For those wondering, golf options abound near our new digs. We're less than 15 minutes from numerous golf courses, including the Cleveland Metroparks gem Sleepy Hollow.



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By Guy Cipriano

# SNAP JUDGMENTS



Even at an average 8 feet-800 lbs., alligators aren't the bloodthirsty killers most envision. How some courses manage their toothy tenants.

**T**heir tails and feet leave artistic imprints in sand and dew, a 5:30 a.m. sign an animal considered mythical in some places and exotic in others roamed a golf course.

They aren't nocturnal. Or shunners of the environmental spotlight. Or as ruthless as those of us who don't live among them think. Yet when an alligator crosses a golf course, it's a noteworthy event, no matter how often it happens at a facility.

"You still get a kick out of seeing them," says Brian McMinn, superintendent at The Atchafalaya at Idlewild in Patterson, La. "I have been in Louisiana for 15 years. You see them all the time, but the novelty never wears off."

The novelty is a reality on golf courses in the Southeast and Gulf Coast. No recent studies on the American alligator population have been conducted, but University of Florida biologist and alligator expert Dr. Kent Vliet estimates the population rests between 4.5 million and 5 million. The American alligator range extends from northern parts of North Carolina to east Texas.

Louisiana and Florida are alligator havens. Louisiana's alligator population approaches 2 million, according to the Louisiana Department of Wildlife

and Fisheries. Florida's population rests between 1.25 million and 1.5 million, according to Vliet. Georgia, Alabama, South Carolina, Texas and Mississippi also boast significant populations. The numbers are encouraging considering the American alligator was included in the Endangered Species Act passed in 1973. The Fish and Wildlife Service removed the animal from the endangered species list in 1987.

Co-existing with alligators represents part of life on southern golf courses, and superintendents often serve as stewards when managing the animals at their facilities.

"You have people that at probably one

time or another thought of alligators as these vicious creatures that were going to gobble them up and eat them and chase them around the course," says Kyle Sweet, superintendent at The Sanctuary Golf Club on Sanibel Island, Fla. "They see us out on the golf course helping to manage them instead of getting rid of them or having a situation that is dangerous for the members.

"Most of our people get how important it is to co-exist. Not all, but most. Enough that it makes a difference in my satisfaction of the job to know that I'm doing the right thing for both the alligators and the members. I'm supposed to be the manager

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of the golf course, and if that means wildlife or if that means weeds, that is the role that we have taken.”

Paul Bradley, like Sweet, embraces the role as his course's alligator advocate. Bradley is the superintendent at Bonita Bay Club in Bonita Bay, Fla., where alligator sightings are frequent at the 2,500-acre property's three golf courses. “We are open every day for golf, so golfers are interacting every day with gators,” he says.

Bradley strives for positive interactions. Florida's abundant alligator population creates an unforgiving situation for nuisance alligators, which are animals measuring at least

four feet and potentially posing a threat to people, pets or property. More than 8,000 nuisance alligators were removed and killed in Florida in 2013, according to the Florida Fish and Wildlife Conservation Commission.

“The last thing I want is to have a gator removed because it's in the way of a golfer,” Bradley says. “We are here on that natural property, so we are invading their space. I want to do as much for them, so they can continue to live throughout their lives. That's exactly how I want to be. It's very fulfilling to see it work.”

Statistically, alligators aren't posing major threats to main-

## GETTING A GRIP ON GATORS

Alligators don't have to be an intimidating presence on your golf course. Here are tips to ensure peaceful interactions with them.

- Don't feed them
- Don't attempt to move them
- Be cautious when working along lakes and ponds
- Keep your distance
- **Post signage near areas where alligators and humans might interact**
- Create an open area with a retaining wall where they can bask
- Rope off areas where females are nesting
- Establish a local rule to prevent golfers from playing shots near lakes where they live
- Call the proper wildlife management authority if one becomes a nuisance



tenance workers or golfers. An 83-year-old woman was killed by an 8-foot alligator while walking near a lagoon in a Georgia golf course com-

munity in 2007. But there has never been a documented maintenance worker or golfer death caused by an alligator attack on a golf course in the

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U.S. Florida had 12 reported alligator bites in 2013 and the state hasn't reported an alligator-related fatality since 2007. Georgia is the only other state to have a documented death caused by an alligator attack. South Carolina, home to more than 100,000 alligators, has only 11 reported alligator bites since 1948, according to the University of Georgia's Savannah River Ecology Laboratory.

Jay Butfiloski, alligator program coordinator for the South Carolina Department of Natural Resources, says alligators don't view humans in upright positions as prey because normal human behavior and posture contrasts the activity of animals that

are regular parts of alligator diets such as fish, turtles, birds and small mammals. "You're upright, you're six-foot tall," he says. "You're not something that they would normally see and think, 'That looks like a pretty good meal.' Size-wise it just doesn't fit."

#### NO FEEDING, PLEASE

Still, overlooking alligators or treating them like pets on a golf course is foolish. Workers who must perform tasks in crouched positions are vulnerable to attacks, especially in areas where heavy vegetation acts as a barrier between water and land. The vulnerability increases when food is involved.

On a typical day, each member of TPC Louisiana superintendent Robb Arnold's crew encounters one or two alligators. Most sightings are in mornings or evenings, and occur when alligators are crossing between lakes. Alligators are cultural icons in parts of Louisiana, and the state's population has increased by more than 1.5 million in the last 50 years, so most of Arnold's workers are accustomed to seeing them. That doesn't stop Arnold from reinforcing two points.

"We tell them we don't feed the gators," Arnold says. "Rule No. 2 is be cautious when you are around areas like banks. I have never seen one jump out of the water and grab somebody, but I don't want to take that chance. Basically, don't feed them and respect their environment."

## DOWN ON ALL THREES

Golf's most famous alligator visits the course Robb Arnold maintains.

Tripod, a three-legged alligator, creates regular stir at the TPC Louisiana, site of the PGA Tour's Zurich Classic. Tripod has been a tournament-week staple since 2007. "He has a knack," Arnold says. "When the lights come on, he's front and center."

The Zurich Classic is contested in late April, which coincides with Louisiana's alligator breeding season. But it's possible cameras, fans and ample food lure Tripod to the course. University of Florida biologist and alligator expert Dr. Kent Vliet says alligators are capable of recognizing activity patterns and associating dates with those patterns.

Vliet and other alligator experts strongly discourage feeding alligators, but it's inevitable food will creep onto the course during a well-attended tournament. "You don't get a free hot dog if you don't make yourself visible," Vliet says. "They might just be getting out and getting visible when the large crowds are there and the chances of getting a free lunch are better."

Nobody knows for sure how Tripod lost his front right leg, but alligator fights that leave the loser without a leg are common. "An alligator missing a leg is not a rare spectacle," Vliet says. "It happens from fighting or it can be from predation. It often happens when they are young and small."

There's another layer to the tale of Tripod the TPC Louisiana: Arnold says a second three-legged alligator has been recently spotted on the course. "To add to the myth, we'll just say the second Tripod that I have got his revenge a little, I guess," Arnold says.



Kyle Sweet: "Most of our people get how important it is to co-exist. Not all, but most. Enough that it makes a difference in my satisfaction of the job to know that I'm doing the right thing for both the alligators and the members."

Louisiana's alligator nesting season, which lasts from June to mid-July, can be a perilous period. Atchafalaya at Idlewild, located near the Atchafalaya Basin, the country's largest wetland swamp, provides the proper elements for a successful hatch. "When it's breeding season and egg-laying season, we know what areas to avoid and we just don't go into those areas," McMinn says. "Some females can be pretty

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## COVER STORY

aggressive.”

Unless alligators become a nuisance toward golfers and workers, McMinn says they are left free to bask along the course's lakes. Alligators are cold-blooded, meaning they can't regulate their own body temperatures. Basking in the sun represents a cooling tactic. The alligators roaming Atchafalaya at Idlewild travel between ponds, and are most visible to maintenance workers and golfers in the morning, although they can be seen basking during afternoons in winter months.

The Sanctuary finds itself in a unique environment, with the course resting inside the J.N. Ding Darling National Wildlife Refuge. Sweet says members of his staff encounter three or four alligators during an average shift. “Maintenance staffs are kind of the front line,” he says. “They are the ones seeing them all the time.”

To educate employees and members about alligators on Sanibel Island, The Sanctuary invited Vliet to the club. The 2004 death of a 54-year-old woman attacked by an alligator while landscaping on the island sparked Vliet's visit. The woman wasn't working at The Sanctuary, but the incident increased interest in human-alligator interactions on Sanibel Island.

“Anytime landscapers are working near the water, if they are doing anything like planting, pruning or pulling weeds, it creates dangerous circumstances for them,” Vliet says. “People tend to be in one place for an extended period of time, they are very often crouched down and they are tugging on plants and waving things around, so they are being fairly conspicuous.”

### BEACHES, PLATFORMS AND SIGNS

With help from Vliet, The Sanctuary developed an alligator management program, which led to Sweet and his staff constructing “Gator Beach,” a gently sloping area free of thick vegetation. The beach took one 8-hour shift to build and a 24-inch retaining wall prevents alligators from leaving the beach and entering the fairway. The





## GAUGING THE GATORS IN GEORGIA

Jekyll Island, Ga., features 63 holes of golf. The three 18-hole layouts and 9-hole course cover 480 acres.

Tracking alligators on a golf course — or for that matter a 5,529-acre island — isn't easy. But researchers from the University of Georgia's Savannah River Ecology Laboratory are attempting to accurately determine the island's alligator population and characteristics.

Gregory Skupien, a graduate student in the Odum School of Ecology, is working with Dr. Kimberly Andrews on the project. Skupien says the island's golf courses are alligator friendly spots. "We have at least 125 alligators on Jekyll Island and a lot of them live on the golf course because it's such an excellent habitat for them out there," he says.

The alligator population on Jekyll Island is biased toward smaller alligators. In 2012, the researchers started tracking the habits of larger alligators, which are those measuring six feet or more, by using radio transmitters. Active, adult male alligators are common sights on Jekyll Island's golf courses. Twenty-three stormwater lagoons meander through the island.

"Some of the adult males move around a lot," Skupien says. "They are using multiple lagoons on these golf courses. One of my more active male alligators is eight feet and using 12 ponds on two of our golf courses." Females, on the other hand, rest in one or two ponds, according to Skupien. "They find a good habitat where they can nest and reproduce," he says.

Other observations from Skupien's research:

- Jekyll Island's alligators are most active at dusk and dawn. "Very seldom do you see alligators active during the day, especially in the Southeast," he says.
- The majority of alligators are non-threatening to humans. "Nine times out of 10 that alligator isn't going to be a threat," he says. "Talking with some of the people that work on the golf course, I haven't really heard anything negative about interactions with alligators."
- A golf course represents an ideal spot to view alligators. "People always ask, 'Where can I see alligators on Jekyll Island?' I tell them the best place to go is to play a round of golf because that's where a lot of people are going to come in contact with alligators," he says.

The study has shifted from field work to data analysis. Skupien, who graduates in May, plans on publishing his findings in scientific journals within the next couple of months. He hopes the research changes perceptions about alligator behavior.

"There are a lot of myths and misconceptions out there on TV and in the media nowadays," he says. "We are trying to get good, accurate information out to people so they don't feel threatened and they know how to act around alligators."

area increases worker and golfer safety because it prevents alligators from basking in scraggly areas where they might not be visible. "Lo and behold, we put the gator beach out there and that's where the gators went," Sweet says.

At Bonita Bay, Bradley created an alligator basking platform in the middle of

a lake. Bradley constructed the platform by using triple-rinsed, 30-gallon drums that were sealed up as a floating base. Bradley connected the drums with 2x4 boards and built a wooden ramp allowing alligators to easily climb onto the platform.

(COVER STORY continued on page 78)

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**Tim Moraghan**, principal, ASPIRE Golf [tmoraghan@aspire-golf.com]. Follow Tim's blog, Golf Course Confidential at [www.aspire-golf.com/buzz.html](http://www.aspire-golf.com/buzz.html) or on Twitter @TimMoraghan

## STRANGE DAYS AHEAD

Golf in 2040 will appear much different than it does today.

I've been playing golf for 42 years and in the golf business for 38.

I don't say that to claim any great insight into where the game is going, but to explain that I've seen it change enormously over the past five decades. I believe nearly all the changes – in equipment, conditioning, agronomy, you name it – have been for the better. I'd like to think that sort of progress will continue. I certainly hope so.

My main area of interest is in helping superintendents and clubs get the most and best out of their golf courses. It's much more than simply getting the grass to grow or keeping the trees pruned. In the last few years, the fields of turfgrass research, agriculture and ecological science have progressed further and faster than any other parts of golf. Take a look at the mowers and sprayers and verticutters used; the incredible advances in chemicals, fertilizers and seed; and the curriculum for students of landscape management. Each of these disciplines has made incredible strides, and thanks to the never-ending forward motion of science, are sure to keep improving.

But there are certain things that will never change. For instance, we're always going to need the assistance of Mother Nature to make our courses beautiful and playable. In fact, 25 years from now we'll probably need her help even more as superintendents (and architects) deal with tighter environmental laws, restrictions on water use and the effects of climate change. So, in 25 years, the man or woman in charge of tending your golf course will have to be even smarter than he or she is today.

As the next generation of super-

intendents gets smarter, I hope the public will, too, at least regarding courses. The golf industry has to make the naysayers and the non-golfers understand that courses actually help the environment by providing a home for plants, animals and other living organisms, and they provide needed green spaces in a world that keeps building houses, shopping centers and parking lots.

I hope that by 2040, those who play golf and those of us who work in the industry won't still be on the defensive. But I'm not convinced that will be the case.

Another hope is that in a few years, a golf course somewhere – not Augusta National or any of the other big-name courses that sometimes go to extremes to appear natural – will be designated a national park, somewhere visitors can see the best practices of agronomy and environmental science in action.

“Bet on this: In 25 years, we will have erased the color green from the golf spectrum.”

The past few years have seen remarkable advances in turfgrass, new science that makes courses stronger, more resilient, less thirsty and more playable. Thanks to genetics and breeding, we're already creating grasses that are tolerant of less water, more traffic and higher temperatures. We already have some that tolerate high-sodium content. Perhaps by 2040, courses in desert areas will pull water from oceans rather than tapping into aquifers and other public water supplies. Maybe by 2040, grass will need little to no water at all.

Bet on this: In 25 years, we will

have erased the color green from the golf spectrum. Brown will be the norm, and with almost no effect on the way we play and enjoy the game.

In some areas, real grass will be replaced by some yet-undreamt-of synthetic. High-use turf areas such as par-threes will be “planted” with pseudo grass that needs no maintenance, no water, no mowing. Watch for “faux trees” that can be unrolled like a window shade or accordion doors, or raised and lowered like umbrellas to make a course harder for the club championship, easier for the junior clinic. Not enough light getting to the sixth green? Lower the trees for a few hours.

Since golf is a game dependent on aerodynamics, we have a long history of adapting technology from the aerospace industry. It won't take 25 years for superintendents to be flying drones over their courses, monitoring conditions and sending back status

reports. Similarly, solar-powered and electric maintenance equipment will be controlled by sophisticated GPS units, rolling out of the barn on their own early each morning.

The changes won't only come in agronomy. The ball washer will become an information source: While cleaning your ball, it will offer tips on how to best play the hole, recite the Rule options covering what to do when your tee shot sails out of bounds and send an order to the drink cart.

(MORAGHAN continues on page 78)





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## FOR WHAT WE CAN'T PREDICT, WE PLAN.

**R**ight about now, millions of Americans are doing fall chores, putting away their golf clubs, and getting out their skis and sleds. Their turf will barely cross their minds for the next few months. But for those of us in the golf industry, turf never leaves our minds for very long. Tees, fairways, and greens might look like they're sleeping, but we know better. And we know that the 2015 season begins with the planning that can make or break us. Gordon's Professional is honored to join Golf Course Industry and our fellow sponsors in bringing you this Fall Turf Planning Guide to help you prepare for the coming season.

Fall planning is vital, as we never can tell just what nature will throw at us when it warms up. It may seem odd thinking about something like Pythium this time of year, but we know the damage it can do. That's why we're excited that 2015 will be our first full season offering Segway Fungicide SC as part of the Gordon's Professional line-up.

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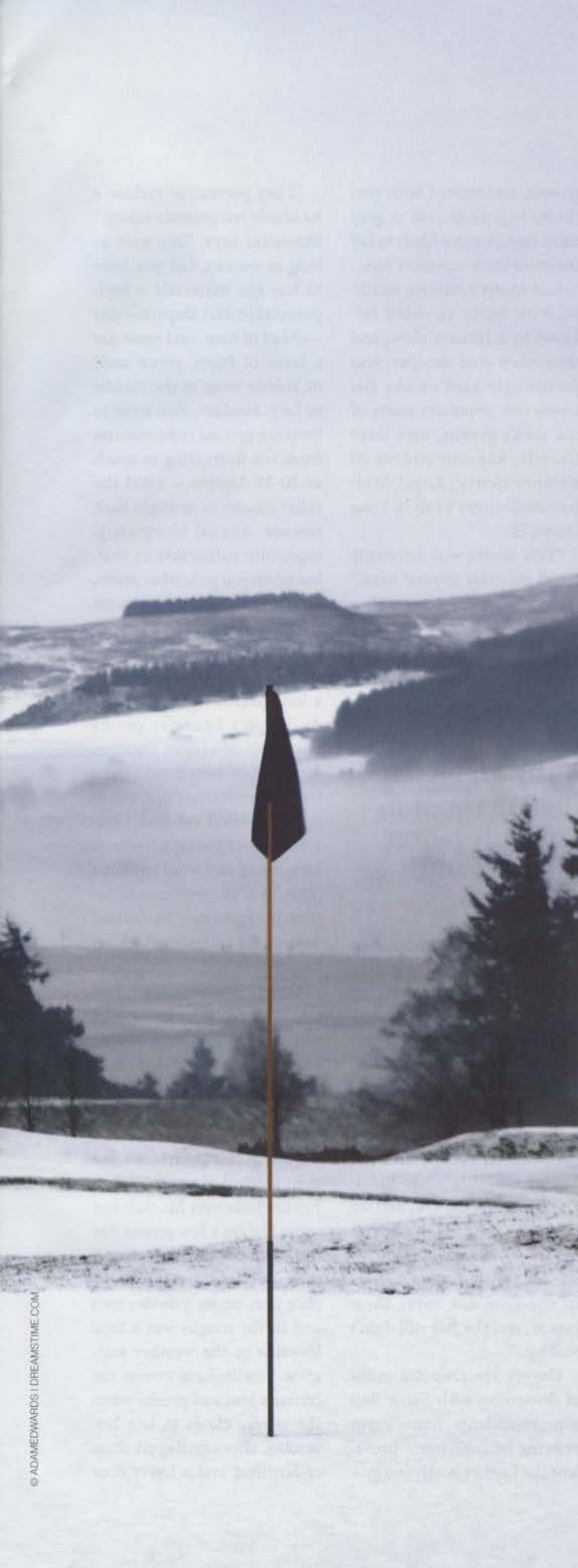
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# CHECK, PLEASE

BY JIM DUNLAP





## WINTER'S COMING. REVIEW THIS STEP-BY-STEP APPROACH TO GET YOUR COURSE TO WHERE IT NEEDS TO BE BEFORE SEASONS CHANGE.

**P**reparing your course for winter means significantly different things and involves dramatically different agronomic and turf management processes depending upon where in the U.S. you're located. Obviously, a superintendent north of the Mason-Dixon line has radically different concerns than a superintendent in the Deep South or the desert playgrounds of Arizona and Southern California who is gearing up for the annual onslaught of play from residents, snowbirds and visiting golf enthusiasts.

Some superintendents may have unique items on their winter prep to-do lists, such as preparing winter habitat for protected bird or animal species on their properties or even readying their properties for other outdoor activities such as cross-country skiing or ice skating. But we have selected some of the most common fall tasks facing superintendents preparing to shut-down or gear-up.

### EQUIPMENT

If your course is in the northern climates and either closes for the winter or is open only for the sporadic warm spell, then late fall and early winter are good times to make sure all your equipment is in top condition for the spring reopening.

Mower blades and cutting tools should be re-ground, adjusted or replaced, and all maintenance machinery overhauled and tuned up, fluids replaced or added, batteries and bearings checked or replaced.

It is a good idea to review the number of hours you have on equipment like mowers, tractors, not only to determine if certain components should be replaced, but to ascertain

whether it might be time to put a new one or two in next year's budget. If the budget won't stand the capital expense, and your crew is up to it, equipment often can be rebuilt during the winter downtime.

### TREE CARE

Fall is an ideal time to do what Troon Golf senior vice president of agronomy Jeff Spangler refers to as "project enhancements." That includes not only tree care and brush cleanup, but bunker repair or rebuilding and leveling of tees and other aesthetic and operational tasks.

With tree care, Jim Skorulski, head of the USGA Green Section for the Northeast Region, says after an assessment



of sun angles and shade patterns throughout the course, superintendents should identify trees causing turf problems due to excessive shade. Those trees should be removed or cut back in the fall to eliminate future problems without disrupting play during the course's busy season.

Trees should be examined for signs of disease, cracked or broken limbs or intrusive roots, and – no matter how iconic – removed if necessary.

Ken Nice, director of agronomy at the Mike Keiser-owned, KemperSports-operated Bandon Dunes Golf Resort on the Oregon coast, has nearly no trees to deal with, owing to the seaside links nature of the resort's courses. He does, however, have plenty of gorse bushes and other brushy areas that trap wayward golf balls (and golfers) and need to be cut back in the fall months.

At another KemperSports-run property, Desert Willow in Palm Desert, Calif., it might seem unlikely a pair of desert courses would have significant vegetation issues other than cacti, but agronomist Mike Tellier says late in the year, his crew trims or removes up to 800 trees each.

As courses get ready to close, Spangler recommends blowing out irrigation lines to eliminate any remaining water that could freeze and damage lines.

#### GREENS AND TEES

Every superintendent knows unplayable greens is the one unforgivable sin in the eyes of his golfing customers. As a veteran superintendent and principal of ASPIRE Golf Consulting, Tim Moraghan brutally, but factually, points out. "Fifty percent of the game is played

on your putting greens," he says. "If you don't have healthy greens in the spring and start losing them in the summer, you'd probably better start getting your resume ready."

Last year's brutally cold winter may have come as a shock to superintendents who hadn't been in the industry after the extreme winters of the mid-1990s. "Many of them hadn't experienced a really cold, prolonged winter where they lost turfgrass," Moraghan says. "They need to learn from what happened last year. If we don't have a bad winter this

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“Fifty percent of the game is played on your putting greens. If you don't have healthy greens in the spring and start losing them in the summer, you'd probably better start getting your resume ready.”

—Tim Moraghan, ASPIRE Golf Consulting

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year, the worst that can happen is that you have better turf in the spring.”

The best way to heighten the chances of greens surviving the winter, as well as turf for tee boxes, fairways and roughs, is a combination of timely fertilization, fungicide and moisture control. Contrary to what the general public might think, a heavy snow pack that lasts throughout the majority of the winter months is typically less harmful than intermittent thaws followed by frigid blasts and ice and then more snow. Turf that hasn't been properly aerated to allow water to permeate, fertilized to promote carbohydrate storage and root

growth, and treated with pesticides to prevent pink or gray snow mold is more likely to fail the snow-thaw-ice-snow test.

Last winter's extreme weather, with heavy snowfall followed by a January thaw, and then more cold weather, was particularly hard on the *Poa annua* that populates many of the area's greens, says Dave Groelle, superintendent of KemperSports' Royal Melbourne Country Club in Long Grove, Ill.

"Last winter was extremely tough on grass around here," Groelle says. "Courses with a

"They prevent or reduce a lot of cold temperature injury," Skorulski says. "We wait as long as we can, but you have to buy the materials – both permeable and impermeable – ahead of time, and some use a layer of foam, straw and/or bubble wrap in the middle to help insulate. You want to keep the ground temperatures from not fluctuating as much as 30-35 degrees – avoid the roller coaster of multiple flash freezes. Annual bluegrass is especially vulnerable to that, but when you go further north, even courses with bentgrass are starting to cover."

However, most Snow Belt superintendents don't mind a long period of snow cover. As Troon's Spangler points out, their Michigan courses, for instance, benefitted from a lengthy snow cover that essentially insulated the turf. Conversely, Spangler says, if winter brings cold and wind but not a great deal of snow cover, superintendents may be advised to turn the irrigation back on to prevent turf dehydration. "There is probably more turf loss through lack of irrigation and dehydration than disease or other causes," he says.

Last winter's alternating freezes and thaws cost Glens Falls Country Club in Queensbury, N.Y., some turf area. Superintendent of grounds Chris Frielinghaus says his club lost some turf on a few greens due to the alternating freezes and thaws. The ryegrass which the club uses on its practice tees and in the roughs was a total loss due to the weather variance. Frielinghaus covers the course's tees and greens when the course closes in late November, after a final application of fertilizer and a heavy dose

high degree of *Poa annua* had a lot of damage in the spring. Several courses had such severe damage they decided to go ahead and renovate their greens. It wasn't anyone's fault – we had the third highest snowfall on record and the *Poa* just couldn't handle it. Our bentgrass did OK, and we manually remove any *Poa* in the spring, so we were OK. We don't cover, but some courses in the area did cover their greens, and the *Poa* still didn't make it."

Covers are always a point of discussion with Snow Belt superintendents. Snow cover systems become more prevalent the further north you go.



of potassium to promote cold tolerance and the final deep tine aeration and top dressing.

#### FAIRWAYS AND ROUGHS

In the northern regions where courses are still hoping to eke out some late rounds and revenues before winter arrives, superintendents are scheduling their final deep-tine aeration and fertilization applications for their fairway turf and roughs. In most areas, irrigation has been cut back as the summer heat wanes.

Eric Richardson, director of golf and grounds for the Essex County Club in Manchester-by-the-sea, Mass., makes weekly sprayable fertilizer applications on greens and tees, but raises the height of the mower cut on all surfaces throughout the course as fall proceeds. He also applies deep-tine aeration to promote water passage, and limits irrigation, saying, "The dryer the better."

Moraghan advises superintendents to use this time to review history as far back as 20 years and assess how many acres of sod their course has lost. If that sod needs to be replaced in the coming years, he recommends reserving five acres of sod with their supplier to be sure it is available for replacements as needed.

In the winter golfing meccas of the Phoenix and Palm Springs areas, fall means overseeding. Winter ryegrass is overseeded to take over for native Bermudagrass and other grasses. Many of the desert courses close for up to a month in the early fall before the desert "high season" begins on roughly Dec. 1. Desert Willow's Tellier says he'd finished his half-inch tine aeration in mid-September, and was applying



### Anyone's guess

There are widely varying forecasts concerning what the coming winter has in store for various parts of the U.S., in part dependent upon the strength and impact of the generally anticipated El Niño weather condition.

Some prognosticators are foretelling a slightly milder winter in the North and Midwest than last year's rugged season, while others say it will be more of the same this year. In any case, most superintendents will do as they always do: prepare for the worst and hope for the best.

growth regulators to slow down the existing Bermudagrass.

#### BUNKERS

As northern courses begin to shut down, it's a good time to carefully inspect bunkers and see what repairs, redesign and upgrades may be necessary in the coming season. Do some or all need new bunker liners? How are the sand levels and quality? How are the edges? Do some or all need to be rebuilt?

Regardless of which part of the country, if there have been some high wind events, or if they're likely in the winter, precautions must be taken to prevent a wholesale sand replacement expense in the spring. At seaside courses like several of the Bandon Dunes

courses and others along the Atlantic seaboard, fences need to be maintained or repaired to control the shifting or loss of sand dunes which may not be on the course, but border and affect it.

Bunker preservation is another reason many northern superintendents don't mind a lengthy snow pack. Snow cover protects against sand loss, and courses need to take steps to protect their bunkers as much as possible regardless of what winter brings.

#### COLLARS AND APPROACHES

In northern regions, fall is an ideal time to clean up drainage problems on and around the greens caused by the buildup of "collar dams." The USGA's

Skorulski says check the grades of the collar areas and, when necessary, lower that grade so water doesn't flow into that area of the green or green surround, collect and then freeze in the cold, ruining the turf.

"You've got to get the water off the greens," Skorulski says. "If you have a collar dam, get rid of it so water doesn't collect on the sides of greens."

At Glens Falls CC, Frielinghaus uses this time of year to correct any surface drainage issues, including removal of collar dams, and to get down fresh sod where necessary before winter arrives. **GCI**

*Jim Dunlap is a freelance writer based in Encinitas, Calif., and is a frequent GCI contributor.*



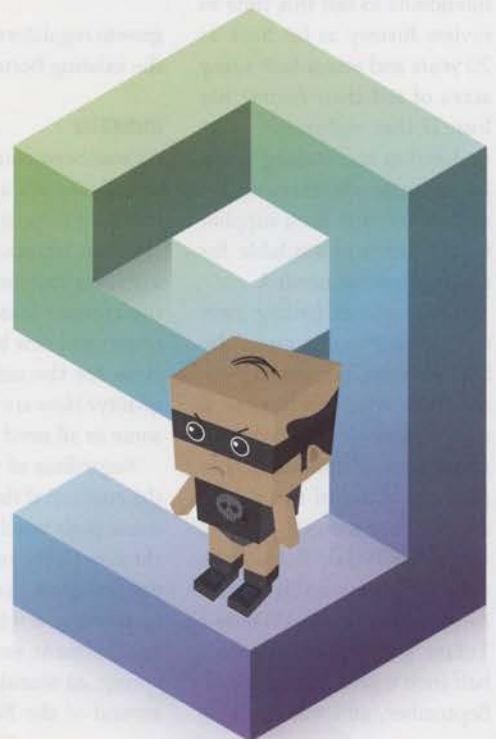


## NUMBERS

# GAME

ESTABLISH NEXT  
YEAR'S BUDGET TO  
MEET PERFORMANCE  
EXPECTATIONS —  
BOTH YOURS AND  
PLAYERS.

BY JIM DUNLAP





**T**hese days golf course agronomy is more about economy than science.

For superintendents across the country, that assessment by Jeff Spangler, Troon Golf senior vice president for science and agronomy, never rings more true than this time of year, when most superintendents are submitting their proposed budgets for 2015.

As a rule, few golf course department managers are caught in a tighter squeeze between performance expectations and the budget to meet those goals than superintendents. The work of superintendents and their crews is on display every playable day, and club members or paying public customers have certain course conditioning and preparation expectations that may be all but impossible to achieve if there is insufficient money budgeted for them.

Superintendents in the Snow Belt areas of the country in particular may be struggling with their 2015 budgets. Superintendents whose courses were hard hit by last year's brutal winter may have learned some hard lessons about areas of the budget that will need to be increased in the coming year to deal with the potential consequences of another harsh winter, such as labor and equipment for snow and ice removal, additional sod to replace any turf lost due to weather, enhanced fertilization and disease prevention, etc.

ASPIRE Golf Consulting Principal Tim Moraghan urges superintendents to learn from the recent past and adjust both their operational plans and the budgets to pay for them accordingly.

Moraghan suggests superintendents ask themselves: What did I learn from last winter or this past summer?

"If I'm in New England, what if I get another 100-inch snow this year?" he says. "What was the take-home message for me after last year?" Ideally, the 2015 budget will have room to add some contingency funds to cover extreme weather events. If those funds end up being unnecessary, they can either be applied to other areas where there may be a shortfall, or simply remain unspent, which hopefully will earn the superintendent an "attaboy" from the club's financial overseers rather than news that those funds will be eliminated from the next year's budget.

Some superintendents use the zero-based budget system, essentially creating new budget line items and amounts each year, while others prefer to use the previous year's budget as a template and adjust the various line items either up or down based on historical trends, new developments such as price increases, replacement costs or anticipated new capital expenditures for various projects at the course or club.

"We have some benchmarking guidelines based on the quality of conditioning we expect and the location of our various facilities," Spangler says. "Internally, we look at 'like' facilities. There are also some general guidelines that the GCSAA puts out, I believe."

This is the time of the year for superintendents to do their research for their budget, Spangler says. "We don't think that the concept of relying on last year's budget is necessarily good, so we ask our superintendents to use the

zero-based budget approach," he says. "We want them to rebuild their model according to their agronomic plan for the coming year. Most experienced superintendents have a pretty good idea what they plan to do on the golf course in the next year. They should write that out in the winter and plan out the entire year. It can actually be much more formalized than most people think."

Many superintendents, particularly those at established and traditional private clubs, prefer to rely on the many years of accumulated trends and data to build the following year's budget.

Chris Frielinghaus, superintendent of grounds at the 100-year old Glens Falls Country Club in Queensbury, N.Y.,



## Supporting your budget

In most cases, the superintendent's budget is reviewed (and eventually approved or revised) by a number of people, most of whom have little or no background in agronomy. The Golf Course Superintendents Association of America

(GCSAA) has a number of advisories about budget preparation available for download, including several recommendations about the presentation and "sale" of your proposed budget.

GCSAA recommends a budget presentation should be prefaced with an explanation of what goals and standards the proposed budget is designed to accomplish. Their recommendation is that the previous year's budgeted and actual expenses by line item, along with the budgeted and projected actual expenditures for the current year, be presented side by side with next year's budget figures.

With that history as background for upper management, ownership or board members, you should highlight any significant departures from the previous budgets and explain why those numbers need to go up (or occasionally down) next year.

Those justifications could be any of a wide range of things, from replacement or renovation of greens or other turf areas to a new retaining pond, bunker renovation or a host of other projects or anticipated course repairs or enhancements.





doesn't use the zero-based budget approach because he doesn't see the crazy fluctuations from year to year.

"I take current expenditures, project those out to year-end, see what line items are over and then make adjustments [for 2015]," he says. "Do I need more people, or to give raises? What are my costs going to be for other expenses like security, trash cleanup, irrigation of the grounds, all those things? Are there any capital items I need to include? Then, in my case, that budget goes through a couple of committees and then to the board of governors."

Labor can be difficult to budget for, but is critical to most superintendents' budgets.

If possible, superintendents should analyze the ebb and flow of work patterns throughout the year and adjust staffing levels accordingly. It can be difficult to keep good, qualified workers if their employment fluctuates too much, but few things can ruin a maintenance budget faster than a full maintenance crew on the clock with very little to do.

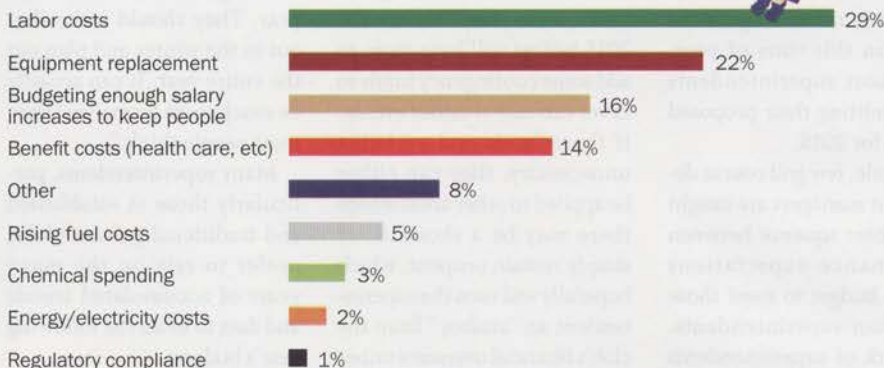
"The first step is to analyze your payroll/labor requirements and provide for some seasonal flex where it's appropriate," Spangler says. "For instance, this time of year you'd downsize in New England and gear up in the Southwest. Staffing sheets are a real issue because they're such a big percentage of golf course budgets." GCI

*Jim Dunlap is a freelance writer based in Encinitas, Calif., and is a frequent GCI contributor.*

## By the numbers

Labor costs and equipment replacement are the top budget stresses faced by the majority of superintendents, according to recent GCI research. This financial challenge is compounded by the fact that only a third of superintendents report a bump in their budget over the last three years.

## Greatest budget challenges

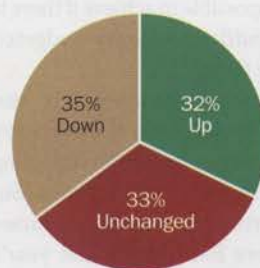


## Annual budget breakdown

LINE ITEM	2013 (\$)	\$2012 (\$)	\$2011 (\$)
Water	40949	32412	26379
Fuel	30078	28000	37788
Mowing/	26738	25000	60054
Cultivating equipment (non-capital)			
Handheld equipment	2839	2000	3705
Course accessories	4644	4000	5556
Energy	25615	16000	29201
Shop tools	2682	1500	3765
Irrigation parts, heads and maintenance	9370	7500	11164
Fungicides	32759	25000	40356
Herbicides – Pre-emergent	7770	5000	11078
Herbicides – Post-emergent	4477	2500	5569
Insecticides	6963	3000	7893
Granular fertilizers	20043	15350	27655
Liquid fertilizers/ biostimulants/ foliars	12730	6250	12983
Wetting agents	5753	4000	5581
Plant Growth Regulators (PGRs)	5247	3500	6645
Seed	5196	2500	7629
Aquatic weed control/	3019	500	2630
Water quality issues			

— Sources: GCI research

## Three-year average budget comparison







long by providing new off-  
seasonal water to all systems  
with appropriate forecasts and  
radical flow water use to fully  
maintain irrigation system as long  
as that is correct. However, new  
and older courses are planning to  
use on-line data and other online  
tools to help them make more  
accurate and timely decisions  
regarding water use. This will  
help them to be more efficient  
and save money.

Symptoms of pink snow mold,  
*Monographella nivalis* (also  
known as *Microdochium*  
*nivale*), in an area missed  
during spraying of fungicide.

# PREPPING FOR **PESTS**

TIMING ESSENTIAL WHEN APPLYING FINAL  
PESTICIDE APPLICATIONS BEFORE WINTER.

BY JIM DUNLAP

**A**s with many of the other items on the superintendent's fall checklist, pest control varies significantly depending on whether the course is preparing for winter shutdown or gearing up for what it hopes will be an onslaught of play in the golfing high seasons of the Deep South or the desert Southwest.



The vast majority of pest control in the colder climates revolves around pathogens like pink or gray snow mold, dollar spot or other turfgrass diseases that can wreak havoc if turf is not properly treated with fungicides before cold weather and snow cover combine to create perfect habitat for the diseases. The trick for many superintendents is to time their final fungicide applications correctly to prevent having the protection washed away in fall rainfall before the snow arrives or in the snow-thaw-snow cycle.

"We're mostly trying to prevent pink snow mold," says Dave Groelle, superintendent at Chicago-area Royal Melbourne Country Club. "Our biggest decision is when to apply the fungicide. We want it to get into the growing plant, so the timing is critical for us. We usually apply it in the first half of November on fairways, tees and greens."

Some courses don't receive deep snow pack, and others are located in environmentally sensitive zones where certain fungicides are prohibited. The Essex County Club, located in the coastal area of Manchester-by-the-sea, Mass., fits into both categories. Director of golf and grounds Eric Richardson says the club treats for both late-season dollar spot and applies one large application for snow mold. As an environmentally sensitive site, however, Richardson applies Interface before the first snowfall, as well as Wintergreen, an anti-desiccant which covers and coats turf leaves to lock in the fungicide application for the winter months. Richardson further protects his greens with both permeable and impermeable covers to help keep roots warm



Correctly timing the final fungicide applications of the year in colder climates is critical to preventing the protection from being washed away in rain before snow arrives or in the snow-thaw-snow cycle. Fall is also a good time for preventative fungicide applications on renovated greens.

and dry. As for other types of pests, Richardson's club is far enough north for Mother Nature to keep most insects out of play during the winter months, although he does apply some treatments to discourage grubs and Japanese beetles before putting the course to bed.

In addition to snow mold and dollar spot prevention, Valley Crest Golf Course Maintenance national director Todd Bunnell says that particularly for courses who have recently undertaken some greens renovation, fall is a good time to do some preventative fungicide applications to control take-all thatch. Some of the products used for that purpose are Heritage QoI fungicides or Insignia, sometimes mixed with DMI.

Doug Oberman, di-

rector of sales for PBI Gordon, calls fall a "great time" to apply herbicides, especially to control the spring cycle of perennial broadleaf weeds such as dandelions and clover.

"Dandelions generally germinate in the fall and puffballs blow around when it starts cooling off in September," Oberman says. "After we get some rainfall, they aren't very big, but they are growing and establishing throughout the fall. Dandelions are the No. 1 broadleaf weed and they are fairly common on golf courses, and some clover could be growing as well. They

can be controlled in the fall by using SpeedZone, Super Trimec and Trimec Classic."

Rapid blight is another problem, particularly for western courses which get limited fall rainfall and thus have limited ability to flush salts from the plants' root zones, according to Bunnell. He said that particularly at Arizona courses which overseed their putting greens, it's a good time for a preventative application of herbicide to combat *Poa trivialis*. Similarly, because most forms of *Poa* germinate in the fall regardless of where it occurs, fall is a good time to treat it and hopefully retard its germination to mitigate its appearance in the spring.

Superintendents in Florida and some other parts of the Deep South face different problems at this time of year. Both Bunnell and John Foy, director for the Florida region of the USGA Greens Section, say plant parasitic nematodes





Nematodes are a fall problem in Florida and other parts of the Deep South.

are a threat throughout the area and need to be suppressed. Foy says some frequently used products are Multi-Guard Protect, Avid and later in the fall, Nortica to protect turf roots from nematodes. Another pest Bunnell says can wreak havoc on a lot of turf in a short period of time if not controlled in the fall are armyworms, which feed on turfgrass seed and need a quick application of insecticide as soon as they are detected. Jim Goodrich, fungicide and insecticide product manager for PBI Gordon, recommends applying Zylam 20SG and Zylam Liquid to control armyworms.

Other Florida concerns, Foy says, include tropical signalgrass, which is best treated in the late summer or early fall. Foy says that process has become more expensive due to the fact that MSMA, a favorite tool for control and prevention, is no longer available, and most approved chemical treatments

are more expensive. Another Florida bane, due to the prevalence of Bermuda greens in the region, is rhizoctonia zeae, or sheath and leaf blight. Foy says infection of that particular pest typically occurs in the late summer, but generally isn't detected until the fall's cooler temperatures and shorter days arrive.

Winter frosts and snow keep most insect and animal pests holed up until the spring thaw at most northern courses, but Foy says occasionally mole crickets can be a late-season issue for Florida courses. Ironically, he says, one of Mother Nature's deterrents to mole crickets and grubs, the sandhill crane, creates problems for superintendents by tearing up turf as they dig for an insect dinner. And, as reported in the September issue (enter bit.ly/luwX132 into your browser to read the article), red imported fire ants are a year-

round problem at some Deep South courses as well as courses throughout much of the Southwest and Southern California and need to be controlled by bait applications or spot surface insecticide treatments.

Course maintenance in the desert Southwest at this time of year revolves primarily around overseeding of winter rye or other turfgrasses to replace the spring and summer Bermudagrass as it goes dormant. Many superintendents use a

growth regulator to slow down the Bermudagrass during the winter months. Mike Tellier, superintendent at the two Desert Willow courses in Palm Desert, Calif., says he will include applications of Revolver during the late overseeding period to control *Poa*.

PBI Gordon's Goodrich says fall applications are critical to prevent issues when overseeding. "Big fall activity is seeding turf areas," Goodrich says. "If conditions are right, you can lose a lot of the seedlings because of the different pathogens that could wipe out those new seedlings. You can apply Segway preventatively to prevent the damping off disease."

And, in addition to keeping the afore-mentioned fire ants under control, Tellier says the fall occasionally brings some late season insect issues, but that is controllable with light pesticide applications. **GCI**

*Jim Dunlap is a freelance writer based in Encinitas, Calif., and a frequent GCI contributor.*

## FOR MORE

Check out the following video to see how a solid fall program can help manage snow mold outbreaks. Ron Calhoun, environmental turfgrass specialist at Michigan State University, shows how to recognize active snow mold on turf. Just enter [bit.ly/1CigPLK](http://bit.ly/1CigPLK) into your browser to access the video.







# Look and act the part

GCI's Bruce Williams explains how a professional appearance and approach benefits a golf course superintendent.

**A** superintendent's greatest asset is his knowledge. However, there are ancillary assets that serve as the icing on the cake. Put it all in a sharp looking package with the proper etiquette and you have a person at the top of their game.

## LOOK THE PART

In my early years, I spent time as a caddie and then worked in the rack room and pro shop. I marveled at the way the head pro and his assistants carried themselves with their attire. They showed up for work looking like they were ready for a GQ cover shoot. Over the years, I learned the PGA instilled in

its members the value of proper attire to succeed in the golf industry. If the pro was on the tee with members, you surely could not tell them apart.

There is a lot to be learned from what golf pros have done for years. A decade or so ago, I was in a focus group that discussed how to improve superintendent public relations.

I offered up, "We will know our PR campaign is working when foursomes show up at the first tee with a member, pro, superintendent and club manager, and you can't tell which one is the superintendent."

My father offered this safe advice: "Dress for the job you want to have rather than the job you do have." His message



was to look as professional as possible at all times. For a superintendent, this means a pair of slacks and a nice golf shirt. Keep a dress shirt, tie and jacket in your closet for the occasional surprise meeting at the clubhouse.

There are occasions when you need to get your hands dirty and that may necessitate coveralls. Also, while the dressy concept fits most facilities, there are exceptions. The old adage "When in Rome, do as the Romans do" applies. In many parts of the country, nice golf shorts are permissible during the warm months. While blue jeans would not seem like proper attire, I attended a superintendent meeting in Texas and learned golfers and superintendents alike wore jeans as normal attire. Bottom line is wear what fits with the players and staff at your facility.

I fondly look back at a time when I had an assistant working for me who wanted to know how to gain members' respect. I told him he needed to look the part. With that, he got rid of the uniform shirt with his name on it, the blue jeans and the keys hanging from his belt. For a couple hundred dollars, one can buy several pairs of Dockers, some logo shirts from the pro shop and a nice club cap. Within weeks, he told me it made a world of difference.

**BACK THEN.** Most of the younger generation is unaware of the time when superintendents had golf outings at the club and then went to a local restaurant for their meeting. Yes, there was a time when greenkeepers were not allowed in the clubhouse, even on Mondays when many clubs were closed. Best guess is that it may have been

related to dress codes and the perception that greenkeepers were the hired help. Superintendents have come a long way, but there is still a lot more to be done to be "welcome" at any type of a venue.

- Follow the club dress code
- If you don't know the dress code, then dress like the members of that club would, or better yet, ask
- Don't wear hats inside clubhouses
- For superintendent meetings, wear a nice cap with a generic logo or your own club logo. Don't look like a billboard for an advertising agency
- Tip the club staff appropriately at the beverage cart, locker room, etc.

**RESPECT.** Respect is an important part of PR and you have to give it to get it. This is a great lesson for both young assistants and current superintendents. Telling someone what to do rather than showing them what to do can make a huge difference. Getting into the trenches with someone can create a very positive attitude and boost employee morale. You are a leader and a manager, and successful superintendents learn this technique early in their careers.

Professionals show respect for their peers and their supervisors by being on time for meetings and finishing projects as promised. Be known as the "Get 'er Done" guy at your course. Set the standard and keep it at the top rather than doing just enough to get by.

**FOCUS.** The first thing that comes to mind is to focus on the task at hand. Know what the membership wants and provide it. If you don't know,

then it will be a challenge to provide it. Know your strengths and weaknesses and understand any gap that may exist. Work on strengthening areas that need it.

Focus on people when they speak to you. This includes eye contact when in person, and providing your full attention when on the phone. All too often modern technology has enabled us to text, Skype, email and search the web all from our phones. This is great, but we need to know when it is appropriate and when it is not. Keeping your phone on silent or vibrate will be appreciated by others. In fact, shut the phone off before you go into a meeting. It is doubtful that any emergency would occur that would require your attention in the hour or less the meeting might last. Glancing at a phone during an important meeting sends a message that what is on your phone is more important than the meeting you're engaged in.

Treat your staff well or better. It's rare to find a superintendent who does it all himself. We need a team to accomplish our goals. The rough and gruff approach to management seldom works. It is more important to treat your staff with respect and remember that without them you would be nowhere. Pros know how to get the best out of their people.

Every superintendent is going to run into situations that make their blood boil. What I might say at the moment I find a mower in the lake and what I might say 10 minutes later may be totally different. That 10 minutes gave me time to calm down and for the other party to simmer over the consequences they may face. I would always

handle the matter professionally and without anger after that 10-minute cooling down period.

However, we don't always have the luxury of a 10-minute grace period when we're forced to react or respond to the GM or the green chairman. Make sure your words are measured and often less is better in those conversations.

Remember, logic rules over emotion when communicating. Positive enthusiasm is fine, but anger and harsh words will result in scars that remain to haunt you and impede your career during the rest of your employment at that facility.

Emails on touchy topics should be written and saved without sending immediately. Instead, exercise restraint and apply the 10-minute premise with sensitive emails. Consider waiting until the next day to send the message.

Texting is a quick way to send messages. It is a series of words and often does not denote any exact feeling. A text is meant for a quick message or response and not meant for an in-depth dialogue. Use proper language and be sure auto correct does not embarrass you. Always double check your message before hitting the send button.

**SUMMARY.** If you want to be treated like a professional, then you should act like a professional. Remember, it is about how you look, how you act, how you lead, how you present yourself and how you communicate to those you work with. Time to step up and get the respect you deserve. **GCI**

*Bruce Williams, CGCS, is GCI's senior contributing editor.*





**Jeffrey D. Brauer** is a veteran golf course architect responsible for more than 50 new courses and more than 100 renovations. A member and past president of the American Society of Golf Course Architects, he is president of Jeffrey D. Brauer/GolfScapes in Arlington, Texas. Reach him at [jeff@jeffreydbrauer.com](mailto:jeff@jeffreydbrauer.com).

# XXL

## Reconsider wider corridors for faster play.

Like most others in the golf business, I've often joked there is no such thing as an "out-of-play area" on most public courses. Wherever you are, you will find a lost ball. In my previous discussions on fostering faster play, I noted "Provide wide play corridors" as a design component. I called out 50 yards as too narrow, 60 yards as the minimum and 70 yards as borderline for width, as far as keeping balls in play. I cited (from my experience) turf corridors of about 75-80 yards between the trees or native grasses bordering the landing zones to really speed up play.

Just after submitting the column, it occurred to me that I wrote that based on my "intuitive" experience. Years ago, I actually spent a few days measuring where golfers really hit the ball. I know other architects have similarly studied such things over the years, but rarely shared data. I have largely based design recommendations on randomly seeing, playing and playing with other golfers on my own and other courses.

I still have never seen truly comprehensive data on where shots land for average players, but there are a few studies which provide snippets of data we can use for design. One was a one-day study done by the USGA at a New Jersey public course. More recently, I found an article by Mark Broadie, a Columbia University professor, who has been in the news recently for his many studies of how pro golfers play. While those may not be relevant to designing courses for average players, back in 2008, he published "Assessing Golfer Performance Using Golfmetrics," which

included data on players in a pro-am, including a chart showing tee shot dispersion patterns of the 511 tee shots played by "D" level amateur (97-120 scores) players.

As you would expect, higher handicap players generally (with exceptions!) had shorter and wilder tee shots. Keeping them in play generally keeps better golfers in play. The distance and direction results he found are repeated in the tables shown.

	75% OF DISTANCE	STANDARD DIRECTIONAL DEVIATION IN DEGREES
PRO	275	4.0
AM 1 (70-83)	248	5.4
AM 2 (84-97)	237	6.4
AM 3 (97-120)	216	8.1

I went through the exercise of counting the charts' dots to see how much room it would take to keep all tee shots in play.

My measurements are approximations and the standard disclaimer that "your results may vary" apply, but I found that containing all shots within play isn't possible. Even for the better players, a few shots ended up 100 yards or more off line.

I tested some more reasonable "compromise" widths, measuring what it would take to keep all but one in four, six, eight and 12 tee shots in play. I've been in groups that lost one tee shot per hole, creating a very long round, and believe in designing for fewer lost balls than that.

"OUT OF PLAY" RATIO FOR 97-120 SHOOTER	YARDS LEFT	YARDS RIGHT	TOTAL YARDS
1 OF 12 (8%)	44	53	97
1 OF 8 (12%)	38	48	86
1 OF 6 (17%)	32	39	71
1 OF 4 (25%)	27	37	64

As can be seen, my intuitive 60-70-80 yard assumption was a bit skinnier than statistics suggest for true "hit it, find it, and hit it again" golf. Most of you are mentally going over your course, and saying, "No way are we that wide!" If you work at a busy municipal course, you might add, "But we should be!"

Attaining even an average of one tee shot every other hole might be difficult for most courses. Fortunately, many courses can be narrower, as the chart focuses on 97-120 shooters, which make up about a sixth of USGA handicaps. With a typical cross section of golfers, you will probably contain a slightly higher percentage of shots in play. Courses catering to better golfers might be even narrower.

As much as I would love to offer a "one size fits all" solution, every hole is unique in its balance of water use, customers, budgets, sprinkler patterns, topography, wind, elevation change, hazards, safety and other factors. A carefully considered turf area plan — in connection with a golf course architect — will produce the best result. **GCI**





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# SUCCESSFUL **RENOVATIONS**

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KEYS TO SUCCESS   TALKING COST   HARD SELL



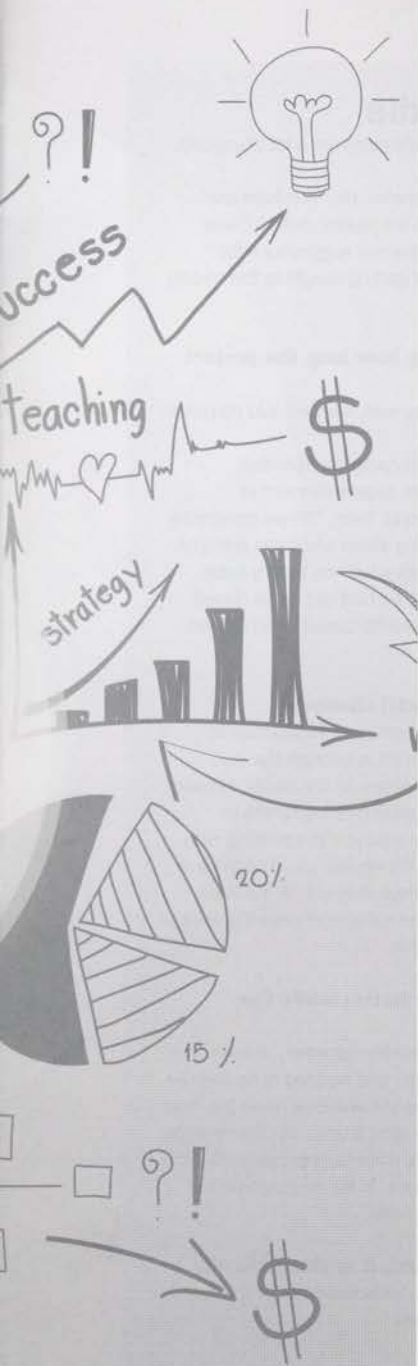
# KEYS TO **SUCCESS**

MULTIPLE PARTIES HAVE MAJOR STAKES IN A RENOVATION PROJECT. A SUPERINTENDENT FACES A DELICATE BALANCE ENSURING EVERYONE'S NEEDS ARE MET.



**BY RICK WOELFEL**





**A** renovation is a significant event at any golf facility. Whether the project involves a redesign of the entire golf course, rebuilding two or three greens or anything in between, it's a major undertaking, one that will leave a lasting impact.

A successful renovation project involves a collaboration among the club's members/customers, its golf and greens staffs and the architectural firm that actually does the work. All have a stake in the project, and all have concerns that will need to be addressed.

**DOS AND DON'TS**

A renovation effort may require a year or more to complete, but preparations begin well before the construction crew arrives on site.

B.J. Parker has spent a decade as the superintendent at Brentwood Country Club in Brentwood, Tenn. The golf course, which was built around an old plantation house, dates back to 1955. It has undergone a number of changes since then. The club recently completed a redesign of two holes and a renovation of its practice facilities under the supervision of architect Todd Jester.

Parker says when embarking on a renovation, it's important a club to choose its architect with care. "You want to find an architect that shares the same vision as the club and its members, and can provide the type of look and feel that you want to accomplish," he says. "You want an architect that will listen not only to the members in focus groups, but also the club staff to understand the vision, get it on paper and then transfer that to the course and grounds."

Cutler Robinson is the director of golf course operations at Bayville Golf Club in Virginia Beach, Va. He calls choosing the architect "the most critical decision when it comes to the success of a golf course renova-

tion project."

"The right architect will result in the right contractor and right budget, and best long-term result," Robinson says. "Not just the result that looks good upon completion, but a result that has golfers wanting to play for years down the road."

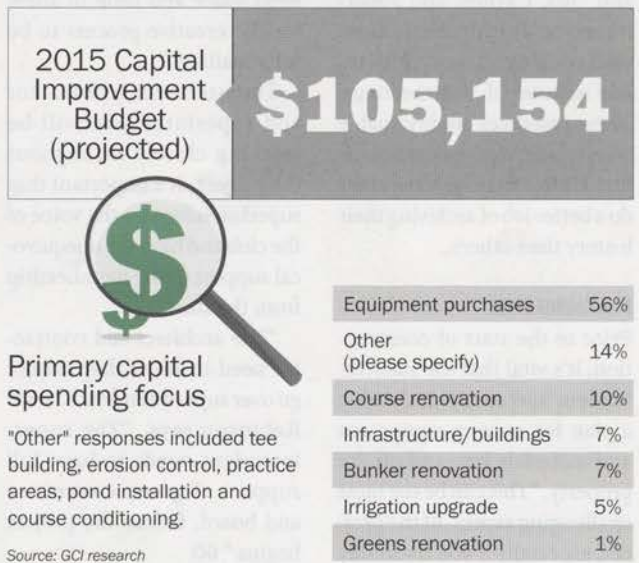
The finished product should also be practical to maintain once the architect and construction crew have departed. Prior to the most recent work at his club, Parker made an effort to stay in close touch with the key decision-makers, so that any potential issues could be resolved while the project was still a series of architectural

drawings.

"I made sure I knew every little detail about what was going on," he says. "What was being done, what was being communicated, if it could or couldn't be done. That was the biggest thing for me that I was in the loop as much as possible.

"If you look at what the architect has designed and get his vision of what it's going to look like, you can convey what's possible and what's not possible from a maintenance standpoint. That's huge. If it's something that's going to be difficult to maintain or something different from what you're doing, that can create a whole set of challenges."

**BY THE NUMBERS**





## FINDING THE RIGHT FIT

Just as a corporate lawyer should not be retained as a criminal defense attorney, every architect is not a fit for every job. If a club is considering hiring a particular architect, the members and superintendent should study their previous work to gain a sense of their design philosophy from both an aesthetic and a practical standpoint. "They should get a sense of how the architect's work holds up over time," Robinson says.

If a club is embarking on a restoration with the intention of restoring the original look of its presumably older golf course, it should retain an architect who is familiar with the work of the original designer. But it's also important the superintendent has that knowledge.

Royal Colwood Golf and Country Club in Victoria, British Columbia, opened in 1913. Around 2001, the club hired architect Wayne Carlton to develop a master plan in an effort to restore the Arthur Vernon Macan design to the way it looked in the late 1920s and '30s. Carlton and superintendent Donald Singlehurst worked off old photos and notes and minutes of club meetings. These resources are invaluable when planning a restoration effort. Unfortunately, some clubs do a better job of archiving their history than others.

## PLANNING TIME

Prior to the start of construction, it's vital that the superintendent and architect develop a plan for moving equipment and materials into and off the property. "This can be the most challenging aspect, of the project, especially if you try to stay

open and operating in some capacity," Parker says. "We created a staging area in the parking lot for all the materials and communicated that to the membership. We were able to stage most of the equipment needed for the renovations on the course."

Once the work gets underway, it's important the interested parties maintain open lines of communication with each other.

"Communication is the foundation of how successful a project will be," Robinson says. "It goes along with trust and the ability for all parties to be forthright with ideas and concerns."

The project architect should take the lead in these discussions. The club, after all, is hiring him for his expertise.

"The architect really needs to lead the creative process," Robinson says. "The superintendent needs to be able to express concerns openly and they need to be addressed in a timely manner. That can only happen when communication is at its best. But the architect and shaper are artists. They need space and time to allow for the creative process to be fully realized."

The architect, contractor and superintendent will be working closely throughout the project. It's important that superintendent be the voice of the club and have the unequivocal support of the membership from the start.

"The architect and contractor need to know they cannot go over superintendent's head" Robinson says. "The superintendent needs to have full support of green committee and board, before the project begins." **GCI**

## Stuck in the middle

It's no secret a renovation project will generate a lot of interest from a club's membership.

Regardless of the scope of the endeavor, the members are likely to express strong opinions on the matter, both for and against. With that in mind, here are some suggestions for superintendents who seek to avoid getting caught in the middle of the debate.

### Be conservative in estimating how long the project will take to complete

As any superintendent knows all too well, the best-laid plans can go awry.

"Renovations can be fluid, and what happens from day-to-day can change," says B.J. Parker, superintendent at Brentwood Country Club in Brentwood, Tenn. "So we constantly communicated with the membership about what was going on and what issues they would be dealing with on a daily basis. Throughout most of our renovation, we had two holes closed and several others that played differently based on what was going on that day."

### Provide updates through official channels

By far the most effective way to disseminate information to members about an ongoing renovation is through the club newsletter, or perhaps by posting notices on the club's website or in the locker rooms. It's best to avoid offering tidbits to members on a one-on-one basis, unless you're speaking with the club president or greens chair. Otherwise, you'll soon have a small group of members who believe they are 'In the Know' and privy to inside information. From a superintendent's point of view, very little good can come of that.

### Don't neglect other turf-care issues while the renovation is in progress

"I think this is common in the renovation process," Parker says. "Fortunately, I was able to see things that needed to be fixed or addressed along the way or that could benefit us down the road and implement those ideas or changes. It takes communication to get the word out, but while you're making improvements, you might as well address areas that need to be fixed or repaired that may have been that way for a while."

### When the golf course is closed, it is closed to all

Offering sneak previews to certain members creates ill will and slows down the progress of the work.

### Don't hide possible cost overruns or delays from membership

Delays during a renovation are almost inevitable. And if certain budget items exceed cost estimates, it's best to be up front about why and how much.

### Do not criticize the architect or contractor to each other or the membership

If the superintendent has a concern with the architect or contractor, he or she should speak to them directly.



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# CONVERSING ABOUT **COST**





## UP-FRONT DISCUSSIONS WITH MEMBERS CAN MAKE THE DIFFERENCE WHEN TRYING TO GET A COURSE RENOVATION PROJECT APPROVED.

BY RICK WOELFEL



**S**ome are of the opinion that the most challenging element of a golf course renovation is merely deciding to go ahead and do one.

Renovations do not occur in a vacuum. Virtually every aspect of club life is affected during a renovation effort. Members may be without all or part of their golf course, in some cases, for a year or more. Access to other club facilities may be restricted. And the cost is not insignificant.

The idea of a renovation or restoration is almost sure to generate a spirited debate within the membership of a club, particularly at a member-owned facility.

Proponents will argue that a redesigned golf course will attract new members or visitors and could perhaps lead to the club hosting a major tournament. If other clubs in the area have recently upgraded, there will be those who will contend that an upgrade is necessary to keep up with the neighbors.

Skeptics will argue, often quite vociferously, that the cost and disruption of a renovation will outweigh any benefit. That position will often be taken by older members who may be preparing to leave the club and are reluctant to spend money on a project they will personally derive no benefit from.

All of this is why so many golf facilities often hesitate to embark on major projects. It's fair to say the overwhelming majority of clubs won't

shy away from projects that are necessary. But members, greens chairs and boards of directors want to be assured their dollars are being spent wisely.

Paul Drobbin is the president of Hollywood Golf Club in Deal, N.J., which recently hosted the 53rd USGA Senior Women's Amateur championship. The golf course opened in 1918 and has undergone a number of changes. The most recent change was a bunker renovation completed this past spring. The renovation wasn't a condition for hosting the Senior Women's Amateur, but Drobbin says the members felt it was a necessary step.

"About five or six years ago, the membership decided that the bunkering was the weakest part of the golf course," Drobbin says. "We looked at the bunkers and decided they were not up to the same standard as everything else so the membership said, 'We need to do something about the bunkers.'"

In addition to the revamped bunkers, the project included the installation of a state-of-the-art drainage system and some tree removal. In this particular instance, generating member support for the project did not prove particularly difficult. But that's not always the case.

### CATER TO ALL GENERATIONS

Often the divide forms along generational lines, with younger members with a long-term stake in the club opting to press



on and older members expressing reluctance. But Drobbin is quick to point out the reverse can be true as well. “Somebody like myself who’s been here for 28 years is more emotionally attached to the club than somebody who’s here for three or four years,” he says. “That’s only natural. “The challenge overall is for golf courses these days is the emotional attachment that is required to keep members. (Golf) is an expensive hobby and oftentimes it isn’t the last to go off people’s hobby list. It may be the first to go, so golfers need the emotional attachment.”

As to actually financing a project, proven methods include borrowing the necessary funds from a bank and/or a member assessment.

“Certainly the members have to pay for it one way or another,” Drobbin says. “Whether you go to a bank and borrow the money or you ask the members for an assessment or a combination of both ... It depends on the strength of the membership and the value of the land. Our membership has been very stable the last six years or so, so if we went to a bank to borrow some money, I don’t think there would be a problem. Every project is different, so it’s important the members share an investment in what’s out there, fiscally and emotionally.”

The key to gaining member support for any sort of upgrade is providing accurate and comprehensive information about the scope of a project. Members at a private club want to be sure their dollars are being spent wisely and don’t want to be caught unaware.

Cutler Robinson, the director of golf course operations at

Bayville Golf Club in Virginia Beach, Va., says members need to know up front the project’s length, cost and impact on activity at the club, and whether the course will be closed.

Robinson says it’s imperative

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“Every project is different, so it’s important the members share an investment in what’s out there, fiscally and emotionally.”

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—Paul Drobbin, president, Hollywood Golf Club in Deal, N.J.

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a superintendent researches all these issues and discusses them with the key decision-makers as well as the project architect, the contractor, the shaper, if there is one, and his own assistants. From there, he or she can make a formal presentation to the membership.

“Utilize all knowledgeable parties as resources on the best methods, timing and costs to achieve the goal,” Robinson says. “Then make the proposal to the full green committee and board. Have as many questions answered as possible in the proposal. Be prepared for good questions that you can’t answer.”

#### DEMONSTRATE THE BENEFITS

Don’t oversell or be defensive if you don’t have an answer to a good question.”

Chris Hayman has been the superintendent at the Rancho Bernardo Inn and Golf Club in San Diego since 2009. He says a superintendent needs to show members or owners that a renovation will bring a tangible benefit to the club. “You have to speak in a business language,” he says. “You have

to explain how this downtime or lost revenue is ultimately going to pay itself back.”

Hayman says members and customers often end up as the driving forces behind a renovation.

“The people that are in charge of these clubs are businesspeople. They’re retired people. They don’t necessarily speak agronomy. They speak business, they understand the business world. So you have to speak to them in a language that is palpable for them and then if you have logic, then you can have success.”

It’s important to be up front about whether all or part of the course will need to be closed during, and if so, for how long. In the case of a private facility, the golf staff will often set up a series of reciprocal arrangements with nearby clubs so members have places to play golf during the work.

At a resort or daily-fee facility, the situation is more complex. Hayman’s facility, for instance, is open 365 days a year. Closing the course simply isn’t an option. The only exception to that policy occurred shortly after he arrived in 2009 when an outbreak of bacterial wilt destroyed several greens, leaving a golf course

that simply wasn’t playable. To avoid inconveniencing guests, Hayman says it’s vital for all parties involved in a renovation to develop and stick to a plan.

“The important thing when you’re staying open is to get out in front of (the work), to meet daily with your pro shop, to have your executives on board with the plan, and have everybody singing the same harmony,” he says. “You don’t want to be all over the golf course with equipment, you want to keep it confined to one area. On a typical day, a hole-and-a-half would be affected. If we were working on the half of the hole closest to the tee, we would move the tees up and modify the hole into a par three or par four. Or vice versa, if they were working in the green complex, half of the hole we would make a temporary green and modify the hole.”

The resort would offer special events and discounts on days that work was in progress and provide return passes to golfers who were interested.

This brings to mind the issue of integrity. If it’s necessary to close a hole, or utilize temporary greens, golfers making a tee time or booking an outing should be made aware of that fact by phone or online before arriving at the course.

Nothing will undermine a course’s reputation more quickly than withholding this kind of information. If a group discovers that a portion of the golf course is closed and wasn’t notified of the situation before it teed off, those golfers won’t be back, and neither will their golfing friends and business associates. **GCI**



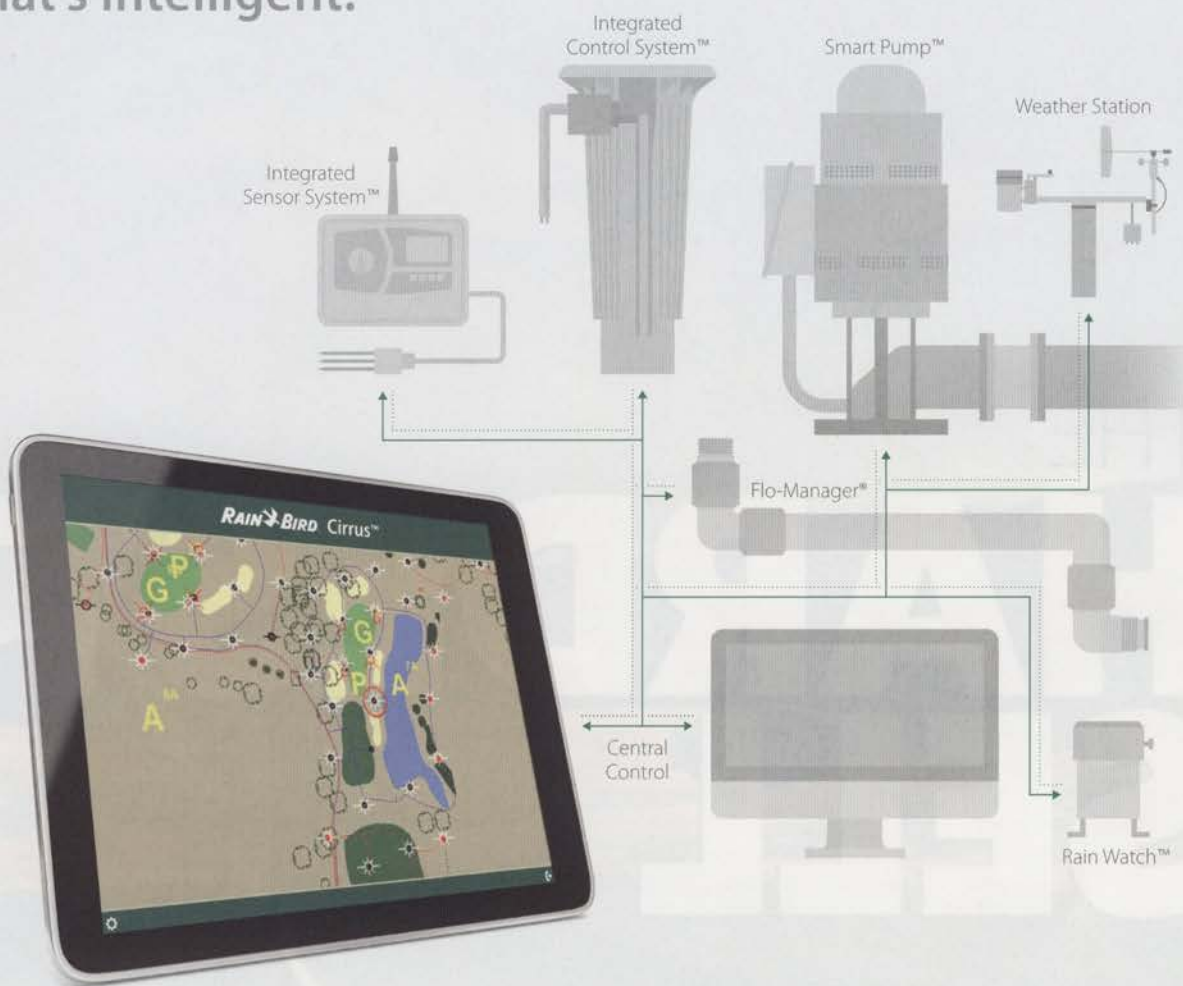


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## RECEIVING APPROVAL TO OBTAIN A NEW IRRIGATION SYSTEM ISN'T EASY, BUT THE BENEFITS COULD BE ENORMOUS.

BY RICK WOELFEL

**R**enovation and irrigation issues at a golf facility are essentially interconnected. The reason is obvious.

The irrigation system delivers the lifeblood to a golf course. No renovation effort can be successful in the long term – or the short term for that matter – if the facility's irrigation infrastructure is not up to snuff.

A state-of-the-art system allows the superintendent and his staff to provide first-rate playing conditions while reducing water usage and utility costs.

But Chris Hayman, the superintendent at the Rancho Bernardo Inn Golf Course in San Diego, contends that an irrigation upgrade can be a difficult sell to greens chairs, boards of directors and corporate managers. Clubs tend to put off upgrading their systems

in the manner of a motorist hoping to get "One More Year" out of an older car.

"It's probably the hardest sell of any project," Hayman says, "because people will say, 'Well, it doesn't look so bad, you're doing a great job, let's go one more year.' It's one of the hardest things to get passed because you don't see it. It's underground. Unless you have boots on the ground and you know the inefficiencies or your repair costs are so exorbitant that it's time to make a change, it's a hard sell."

Most clubs and superintendents will choose to deal with irrigation issues when they're simultaneously addressing other matters, in large part for the sake of efficiency in terms of both cost and man hours. Cutler Robinson, director of golf course operations at Bayville Golf Club in Virginia Beach, Va., points out the advantages of utilizing that approach,

"There is a huge cost advantage to installing irrigation that is exposed soil vs. turf being maintained for daily play," he says. "Irrigation digging and trenching moves much faster in exposed soil. Fitting pipes, wiring and backfilling are all easier during the construction phase of a project than if the area is in turf. It's not a hard sell when cheaper and faster go together."

B.J. Parker is the superintendent at Brentwood Country Club in Brentwood, Tenn., outside of Nashville. Unlike some clubs, Brentwood is upgrading its system a little at a time. Parker says it's important the superintendent makes it clear to a club's decision-makers why an upgrade is necessary. "The irrigation system is a tough

sell and takes lots of communication, especially if you are facing a major renovation or a complete upgrade," he says. "Most often the irrigation gets lumped in with another project and that makes it easier to swallow so to speak. It is important to stress the advantages of a new irrigation system and what it will provide the golfers.

"The hardest part is selling something they will never see so communicating the improvements is a must. We hired an irrigation consultant to help in this area and to provide us with the best design and keep up with the budget. Our system is being phased in, which is not ideal, and I wouldn't recommend it, but for financial reasons and for other projects to continue moving forward, that is the way we chose to renovate our system."

So what are the advantages of upgrading? The short answer: a state-of-the-art irrigation system will, over time, save money and utilize water more efficiently.

In August of 2012, Hayman launched an upgrade of the system at Rancho Bernardo. The resort operates year-round, so the golf course remained open during the work, which took more than six months to complete.

"We decided to do a complete renovation," Hayman says. "We're a 50-year-old golf course and a lot of the main lines were original from the 1950s. They were undersized and we had hydraulic issues getting water to the course in the water window we needed, as well as cover and pressure issues. It was a block system and it was terribly inefficient."

With the drought in California showing no signs of



abating, Hayman says it was imperative to install a system that conserved water. "We really wanted to get ahead of the curve with water savings," he says. "We put in all new main lines, five miles of main lines, 20 miles of laterals, and about two thousand valve and head sprinklers, all of which have no controllers on them. We have the Rain Bird IC with no clocks or controllers."

The system in place at Rancho Bernardo is designed to give a superintendent the maximum amount of control over how his water supply is utilized. It features a single-head control system rather than a block system.

"A lot of homeowners have a block system," Hayman says. "They turn on one station and four or five sprinklers pop on. The problem is that one station might be on a high area and one might be on a low area and they're going to be watered for the same amount of time. You might have a dry area up top and a moat down below.

"With a single-head control system, you can really fine-tune each geographic area and put the amount of precipitation down that you need. You have uniformity and better playing conditions and you're being smarter with your water."

The Rain Bird system also features a weather station. "I think having one is pretty standard and pretty important nowadays, so you can get a true measure of your water loss during the day," Hayman says. "I think that's the meat and potatoes of any modern irrigation system."

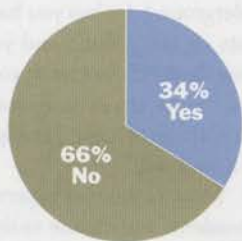
The weather station allows for the measurement of the rate of evapotranspiration, the total loss of water from both

## UPGRADES

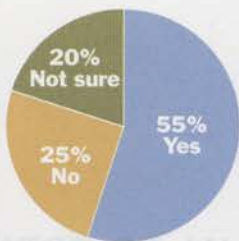
Nearly two thirds (66 percent) of superintendents do not believe an irrigation upgrade would make their facilities more competitive in their markets. This data is in line with respondents' attitudes toward placing a low priority on irrigation upgrades.

However, explaining the return on investment for such a project is not a problem. More than half (55 percent) of those seeking upgrades believe they can adequately justify to their boards or ownership the need for everything from nozzle and head upgrades to whole system upgrades.

And those planning to upgrade seem to be targeting nozzle replacement (36 percent), according to the data. Interestingly enough, despite recent industry debate about increasing irrigation efficiency through sprinkler head reduction, respondents didn't seem to be leaning in that direction. In fact, 31 percent indicated their upgrade plans included increasing the total number of heads, whereas only 5 percent indicated plans to reduce head totals.



Do you need to upgrade your irrigation system to be more competitive?



Regarding the approval process for a proposed irrigation upgrade, do you have the ability to demonstrate a return on investment (ROI) to your board or ownership?

Plans to upgrade any of the following irrigation components in the next two years?

36%	Nozzles
31%	Heads (increase total)
27%	Control system
24%	Partial-system upgrade
23%	Pump station
12%	Whole system
5%	Heads (decrease total)

the plant and soil. The rate changes daily based on weather conditions.

The heart of the system is a computerized control system. Each sprinkler head contains a microchip that allows for electronic communication with a central computer that controls every aspect of the operation. The system allows Hayman to know immediately if there are any problems.

"I can come in the morning and run a diagnostic on every sprinkler in the system," he says. "It takes about two minutes and gives me a green for pass and a red for fail. If I get a red for fail, I know exactly which head to go to to address the issue."

The system allows Hayman to closely monitor his rate of water consumption, no small matter in California where

the drought forced the state to implement water-use restrictions this past summer. Even before the restrictions were implemented, golf facilities were under constant scrutiny about their water usage.

"For better or worse, golf courses often get negative stereotypes as water wasters," Hayman says. "We in the industry know that we're probably the most efficient purveyors of water in all of agriculture. But with that said, there's that stigma out there that golf courses are water wasters. And so if we can do anything to stem that perception, then we're ahead of the game."

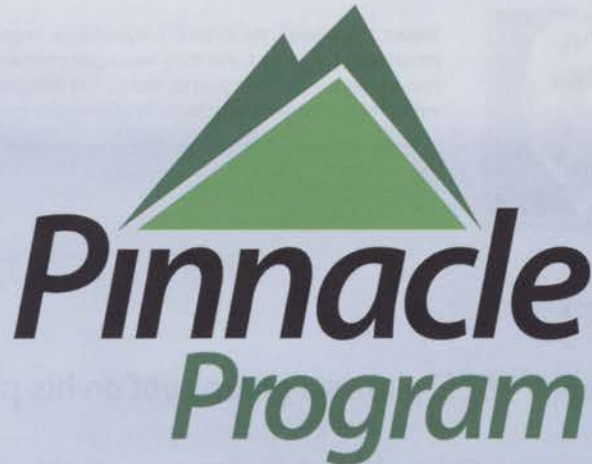
For many years, particularly in the past half-century, most American golfers preferred courses to look as green as possible. But following the U.S. Open doubleheader at Pinehu-

rst, golfers seem increasingly comfortable with a little less green in the playing areas. That mindset may be a passing fancy – or perhaps it represents a long-term shift in attitude.

"I'm all for a little brown around the edges," Hayman says. "I think it shows not only good environmental stewardship, but also provides better playing conditions. Any low-handicapper will tell you that they'd much rather see conditions a little hard and firm where your ball is going to roll out considerably longer."

As golf course superintendents, Hayman and his peers are charged with the responsibility of preserving the environment, a task they perform eminently well. In doing so, they are not only providing for the future of the game, but also our planet. **GCI**





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## GREEN GOLF!

Rockland CC's Matt Ceplo, CGCS, plants a green roof on his pump house.

**M**att Ceplo, CGCS, has a reputation for being an environmental steward, something not common in the golf industry. The 19-year turf veteran at Rockland Country Club in Sparkill, N.Y., not only "talks the talk," but "walks the walk" as a member of GCSAA's environmental committee. His list of environmental accomplishments is impressive.

In 2011, Ceplo received the Global Sports Alliance's New York Environmental Steward Award. In 2012, he received the Metropolitan (New York) Golf Association's Arthur P. Weber Environmental Steward Award. In 2013, he received the prestigious GCSAA President's Award for Environmental Stewardship. Throughout his years at Rockland, Ceplo has promoted golf's environmental benefits not only to his members and board, but to his community, county and state.

How has he done this? Ceplo says it all started with getting Rockland Country Club Audubon Certified. Here's a short list of his environmental activities

- President of the Tri-State Research Foundation
- Member Audubon International Board of Directors
- Chairman of the Rockland Water Quality Committee
- Formed a Rockland Water Wise Committee
- Member of the Sparkill Creek Watershed Alliance
- Established Rockland Country

Club as a Monarch Way Station and a Designated Operation Pollinator Golf Course

- Runs an annual fishing derby to showcase Rockland's irrigation pond and sponsors local environmental activities with girl and boy scouts.
- Joined the North American Butterfly Association and posts bi-weekly counts to NABA's website.

So why is environmentalism in an irrigation column? Ceplo recently oversaw the installation of a water efficient 18-hole irrigation system at Rockland, including a new pump station. The pump station installation required replacing the existing wet well for the turbine pumps into the existing renovated pump house. To install the new wet well and pumps in the existing building, that pump house had to be expanded and remodeled. Due to permitting issues, the old facility could not be demolished because a minimum of two walls from the original building needed to be maintained. This restriction limited the location and look of the new pump house. The remodel work called for replacing the slightly sloped roof on the existing pump house with a flat roof.

Ceplo saw the project as a "green" opportunity. Rockland's pump house is visible from the clubhouse's main dining room, which accounted for the desire to move the wet well and pumps inside. Because the building is so visible from the clubhouse,

Ceplo's goal was to make the pump house more aesthetically pleasing. Ceplo suggested to his board that the pump house have a green roof. And even though it was more expensive, a green roof made the building more attractive from not only the clubhouse, but from other areas of the course, as well.

Weight is an issue with any green roof, so the roof trusses were designed to deal with the added weight. The roof was a typical green roof system with a layered soil profile. The top soil layer of the 760-square-foot roof consists of a green roof planting soil mix that includes volcanic ash and organic compost to reduce weight. The green roof is planted with an Ernst Seed showy Northeast native wildflower and grass mix. Roof drains are utilized to remove any excess moisture.

The green roof has several advantages: there is, of course, the aesthetic value, oxygen production, and reduced cooling and heating requirements for the pump house.

I've heard of courses that have green roofs on their maintenance buildings, but not pump houses that have green roofs installed above ground. Most golf courses would not incur the additional expense to install the green roof. Given Ceplo's track record, he convinced the board that the extra expense of the green roof was worth it. Just another example of his environmentalism, which adds to his reputation. **GC**



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Fertilizer



# FEEDING TIME

## for your turf

Implementing the proper fall fertilization program can produce huge benefits in the winter and spring.

By Jim Dunlap

**“**If I could only make one fertilizer application a year, fall would definitely be the one I would make,” says Dr. Jeff Higgins, business development and strategic accounts vice president with Harrell’s and the former director of agronomy for ValleyCrest Golf Course Maintenance. That critical fall fertilizer treatment becomes even more important when it’s followed by harsh winter conditions such as those experienced in many parts of the country in the past two years, if courses are to emerge from the cold with healthy, playable turf.

As superintendents in most parts of the U.S. are well aware, fall is the time when turfgrasses hopefully build up the carbohydrate food reserves to keep

them healthy and help fight off cold-weather diseases such as snow mold throughout the winter months. The trick is to provide them with the right diet and dosages of fertilizer at the optimum time to maintain a strong base of downward root growth and carbohydrate supply during the winter to ensure that spring turf “pops” when spring brings warmer temperatures, sunshine and, hopefully, a fresh crop of eager golfers.

Timing for fall fertilizer applications obviously varies throughout the U.S. depending upon local climates, or even micro-climates within a region. One tipoff as to the best time for the final fall fertilization, according to agronomists like Higgins, is when the turf is no longer producing clippings.

“There’s a big misconception

about fall fertilization,” Higgins says. “Some people think that it takes place in late summer or early fall, but that’s usually too early. The best time for carbohydrate storage is late fall, but some people miss the timing. Turf management all goes back to carbohydrate management. When the (carbohydrate) food bank is gone, the plant dies.”

While both the timing and the types of fall fertilization are critical in terms of overall turf health through the winter, those decisions can also be affected by the need to maximize golf revenues for as long as the weather permits. Mild fall weather means more golfers, and they expect robust turf until winter consigns their golf clubs to the garage until spring. In cases like that, if the budget permits, superintendents may

opt for a late application of quick release fertilizer applications to keep the turf green for as long as possible.

Doug Melchior, superintendent at Sykes/Lady Overland Park Golf Course in Kansas, says that by mid-August, he is typically through the major fertilizing of his zoysia fairways for the rest of the year, but will do some applications on the bluegrass fescue roughs and bentgrass tees and greens in the next couple of months, using quick release products if the weather is favorable and slow release if it is colder. Melchior says his last fertilizer applications for the fall are typically around the first of November. But, he adds, voicing a frequent concern of golf course superintendents almost everywhere, the number and types of ap-



plications are also dependent on the state of that year's maintenance budget. "Some years, we've had no fertilizer in the roughs," he says, a concern that may or not have been shared by the course's more erratic golfers.

Chris Gray, marketing manager for professional fertilizers at Pennsylvania-based Lebanon Turf, is in full agreement on the importance of a good fall fertilizer program. "Late fall nitrogen fertilization is definitely the best of the year," he says. "It's critical in how it relates to your full-year program, getting ready for spring. By promoting strong root growth during the winter, you're trying to avoid really aggressive spring nitrogen applications which promote shoot growth rather than root growth."

For fall fertilization, Gray recommends against using nitrogen applications that require a lot of microbial activity for maximum efficiency. He is in favor of using ammonium sulfate-based products or high activity methylene urea products. The critical consideration, he says, particularly in cold winter climates, is promotion of the deepest root growth possible. Additionally, he says, slow release products are more effective in fighting diseases like snow mold throughout the winter, creating a harder cuticle on the turf which helps to protect against winter damage to the plant.

#### FINDING A FINANCIAL FIT

There is some difference of opinion regarding the efficacy of a strong dose of potassium in the fall fertilization recipe book, but both Higgins and his successor as ValleyCrest Director of Agronomy, Dr. Todd Bunnell,

are strong supporters. "Potassium plays a key role in fall fertilization," Higgins says. "It regulates water in plants, and creates more stress tolerance."

One product that has declined in usage by golf course superintendents over the years, primarily due to its increased cost, is IBDU, a slow release, low water soluble fertilizer application. If the budget can afford it, there is little doubt that it produces greener, healthier looking turf in many cases, but today's budgets being what they are, its use on golf courses has declined

One superintendent whose budget can afford it is Jeff Corcoran, manager of golf course and grounds at famed Oak Hill Country Club in Rochester, N.Y. Corcoran uses

a variety of products to protect the Oak Hill turf, including slower release products like

UMAX stabilized urea in the course's roughs and fairways, a dormant fertilizer with IBDU and snow mold protection consisting of PCNB in combination with a systemic fungicide, typically administered in November.

"As far as IBDU, I like the way it looks in spring when we open for play again," Corcoran says. "We use it as we go into winter, but it's just one part of the overall maintenance plan. A cultural program is paramount, and that includes aerification, tree removal and other environmental applications to make sure the turf gets enough air and sunshine. We prepare for the worst every winter, and hope for the best. The key is to take the plant into winter as healthy as possible, and it involves a comprehensive wholesale assessment."

When it comes to price, Hig-

gins says superintendents would be well advised to read the labels closely when making price-based fertilizer product choices. "A lot of superintendents make decisions based on cost per bag," Higgins says. "Ammonium sulfate is cheap, but it doesn't last very long. They should probably price according to the price per week for greening of turf, rather than just the cost per bag. Another thing they should consider is how much fertilizer is in a bag versus how much filler. For maximum results, if you're using a slow release product, you need 70 to 75 percent slow release fertilizer in the blend, because the rest is likely to be filler."

"A lot of people are moving toward liquids, but those don't transport down into the root base, so eventually if that's all you're using, it could hurt the turf product," Higgins adds. "A lot of studies have indicated that a combination of granular and liquid is best. There's not enough carbohydrate production in the fall with just liquids to last through the winter. Of my 27 years in the golf course industry, I'd have to say that fertilizer is the least understood aspect of turf management."

#### THE WACKY WEST

The prime motivation for late fall fertilization is preparation of turf to survive and thrive through cold winter seasons, but for those parts of the country where "snow" only occurs where there's poor TV reception or a shortage of Head & Shoulders, such as the golfing meccas of Palm Springs, Phoenix and (usually) Las Vegas, the process is a bit different. In those areas, many superintendents prepare for winter, their busy season, by overseeding the typical Bermudagrass with rye

or other winter varieties, and fertilize for instant growth, not merely winter survival. Pat Gross of the USGA Green Section, Southwest Section, deals with the full spectrum of turf conditions and treatment practices in his widespread domain.

"I've always said that the Southwest Section has the most diverse set of turf conditions in the country, with every kind of turf known to man," Gross says. In addition to the widespread Bermudagrass strains in the desert areas, the section extends to the northern border of California and incorporates the mountainous areas of the Sierra Nevada and Arizona ranges where snow melt and runoff can wreak havoc on granular fertilizer applications.

In the warmer areas that overseed with ryegrass, superintendents push growth with heavy fertilizer applications in October and November, using as much as a half-pound of nitrogen per 1,000 square feet of turf per week. The result is the verdant green we see on television from the West Coast swing of the PGA Tour through Palm Springs and Scottsdale.

Some desert courses further hedge their bets by "scalping" the Bermudagrass turf in preparation for the ryegrass overseed, but Higgins and others feel that is counterproductive because the Bermudagrass has to fight that much harder to reestablish in the spring. On the other hand, Gross notes, there are chemical products on the market which can be sprayed in the spring to eliminate the ryegrass immediately, followed by blasts of ammonium sulfate products to get an almost instant transition back to Bermudagrass. GCI



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**Henry DeLozier** is a principal in the Global Golf Advisors consultancy. DeLozier joined Global Golf Advisors in 2008 after nine years as the vice president of golf for Pulte Homes. He is a past president of the National Golf Course Owners Association's board of directors and serves on the PGA of America's Employers Advisory Council.

## FOCUS ON FINANCES

Unwavering commitment is needed for sustainable revenue growth.

**A**s the saying goes, you can either fish or can cut bait. In other words, you have to commit and make a decision.

As most golf course facilities look toward 2015, club leaders and managers face a host of decisions. But none is more important than a commitment to the financial health of their facility.

According to the National Golf Foundation (NGF), approximately one-third of U.S. golf clubs and courses consider themselves "financially secure." Another 20 percent consider themselves at financial risk. If you're in the first group, you know there's no resting on laurels. If you're in the second group, you know it's time to get to work.

Financial health for most golf facilities is a matter of sustainable revenue growth. For private clubs, that means annual increases in member count. Increasing membership involves expanding the reach of the club, which requires increasing the volume of reliable membership candidates.

Steve Graves at Creative Golf Marketing is among those who believe current members are a highly reliable source of new prospects. In fact, Graves dedicates much of his marketing activity to engaging and empowering current members.

Some simple math suggests that an ambitious 10 percent annual success rate for converting prospects to members requires 10 times as many leads as there are new-member openings. Therefore, if the goal is 25 new members, your club must identify 250 leads.

At daily-fee facilities, the formula for growth requires increasing rounds

played and revenue per round. Most daily-fee courses have too few dedicated players – the people who prefer your course to their other options – and struggle to maintain adequate demand for tee times. The remedy, of course, is to recruit, capture and retain golfers who become loyal to your course. Even in highly competitive markets, two tactics have proven successful:

An early 2015 resolution should be to be more strategic. Most clubs lack strategy. Their thinking seems to be that because they're not sure where they're going, one road is as good as another.

Strategic thinking increases when you expand your sources of information and gather more knowledge. Learn which tactics are working for other similar facilities. Just as impor-

“ Strategic thinking requires market research and understanding. Do you know what your golfers want? Have you asked them lately? ”

- Loyalty programs. As any airline or department store understands, consumers appreciate their loyalty being repaid with benefits. If you want to add 2,000 rounds, for example, consider inviting golfers to play 20 rounds with you at full price in exchange for free golf (or cart fees only) the balance of the year. You can choose a reasonable number to use as an incentive – as long as it's realistic. Build 2015 on a foundation of full-fee rounds played early in the season.

- Social programs. People flock to the Friday Night Fish Fry to socialize and to see and be seen by friends, not necessarily for the fish and fries. Create events and activities that invite your golfers to socialize. Don't be discouraged by low or inconsistent turnouts at first. Keep changing the format, using live music, prize drawings and participation awards to find the formula that works. An opportunity to win a trip to the 2015 PGA Championship would be sure to get people to your next event.

tant, go to school on other business categories and apply their successes at your course.

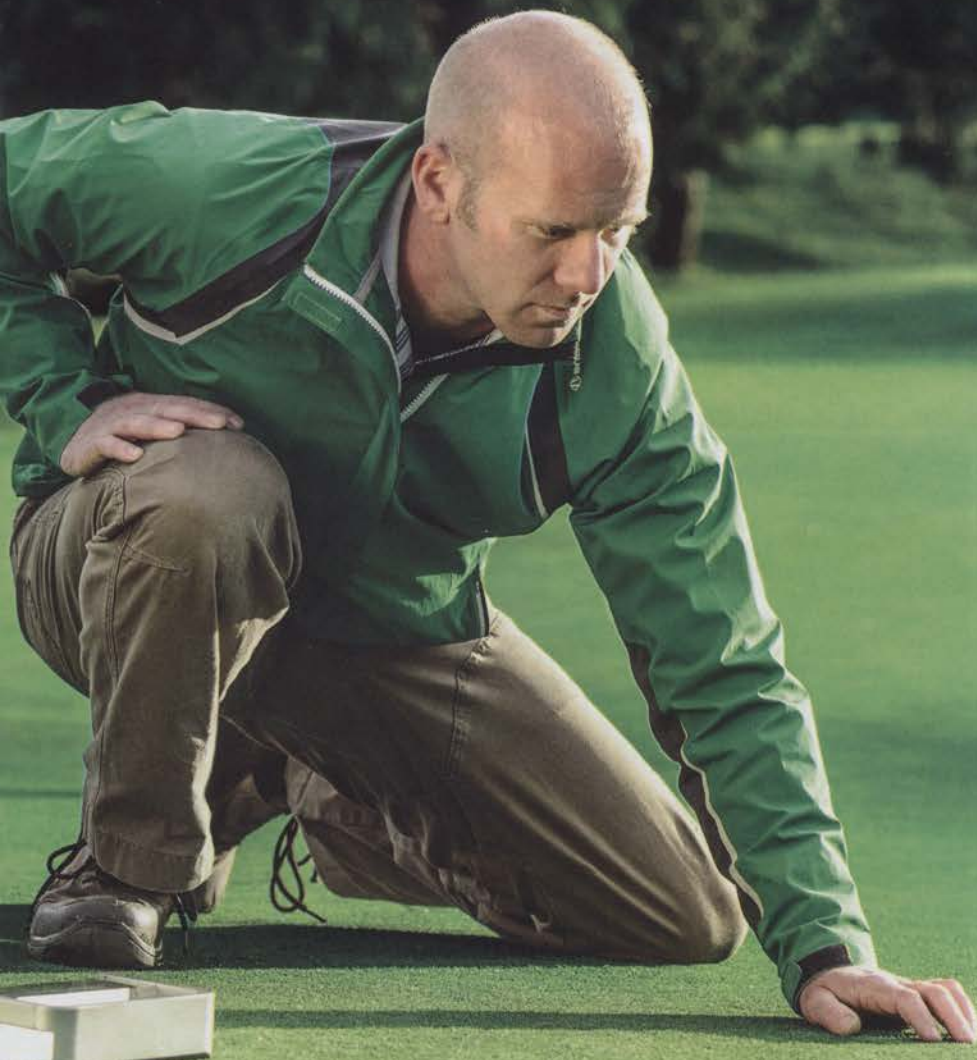
Expand your reading list beyond your own association's periodical. Read the best ideas from other segments that rely on attracting consumers to a service-oriented business.

Strategic thinking requires market research and understanding. Do you know what your golfers want? Have you asked them lately? Ask members or players what you can do to encourage them to play more golf and what would encourage them to refer their best friends for membership or play.

Of course, in the end, membership and revenue enhancement usually comes down to selling. Improve your selling skills by understanding that good salesmanship is as much science as it is back-slapping.

A commitment to success in 2015 should also include a willingness to fail, at least on occasion. If you are not failing from time to time, you are not trying enough new ideas. **GCI**





## Sit back and wait.

No, that's not your style. Your turf is your livelihood so you anticipate problems and take the initiative to solve them before they appear. But the environment has become less predictable, and the pressure to do more with less means your resources are not what they once were. Now you need a different plan of attack to make things happen. **What are you waiting for?**

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# Coming attraction

PoaCure's march toward commercial launch in the U.S. continues with issuing of an experimental use permit.

By Guy Cipriano

PoaCure, which was used on the left part of this practice putting green in Illinois, has received an EPA experimental use permit (EUP). More than 160 registered golf courses in 34 states can use PoaCure on an experimental basis during the next two years.

**D**an Dinelli is a 54-year-old son of a superintendent who understands the dilemmas caused by *Poa annua* better than almost anyone in the Chicago area. Dinelli, after all, grew up on a house along the 15th fairway at North Shore Country Club in Glenview, Ill. He even succeeded his father as the club's superintendent in 1995.

A lifetime tussle against *Poa annua* sparks Dinelli's optimism surrounding PoaCure (methiozolin), a herbicide developed by Moghu Research

Center in South Korea.

"I have been in this industry all my life," Dinelli says. "We have been looking for something like this since Day 1. It looks like finally there's a tool that will become available with EPA approval that we can use to selectively remove *Poa* out of a mixed stand of bent-*Poa* and do it while still allowing play to continue."

PoaCure recently moved a step closer to entering the U.S. commercial market when the product was granted an EPA experimental use permit

(EUP). More than 160 golf courses in 34 states were informed they can use PoaCure on an experimental basis over the next two years. Registered courses can begin their EUP usage of PoaCure following state approval.

South Korea represents the lone country where PoaCure is commercially available. The product has been used on the country's cool-season turf since 2010. Kyung Han, USA Moghu PoaCure development manager, says the product can commercially launch in Japan



as early as this fall.

Moghu is targeting a late-2016 commercial launch of PoaCure in the U.S., according to Han. Until then, registrants must adhere to the following conditions as part of the EUP:

- Product must not be used on golf courses that utilize tile drains.
- No more than six acres per golf course may be treated per year.
- Product must not be applied within 100 feet of any water body.
- Applications must only be made via hand sprayers or riding sprayers equipped with low-drift nozzles.

Researchers view the EUP period as an important part of PoaCure's evolution. Non-EUP research was conducted in the U.S. under the guidance of university researchers permitted to test unregistered pesticides according to national and state regulations.

"EUPs allow the company and the industry to gather more valuable information on the best-use strategies for the product under more controlled conditions to further ensure safe and effective use once the product is registered," says Dr.

Jim Baird, a University California, Riverside, assistant Cooperative Extension specialist in turfgrass management. "There is absolutely no way to test a new product in every environment and management scheme before registration. The EUP program will allow us to test the product on a larger scale, but under close monitoring to avoid results that are unexpected and unwanted."

Dinelli considers the EUP period the middle part of a three-step process for PoaCure's commercial launch in the U.S. "It takes time and money to do these things and to do the research," he says. "I get it. Not everybody has deep enough pockets to do it. But they are doing it, in my view, the right way to help minimize surprises out in the field."

Dinelli has worked with University of Illinois turfgrass professor Dr. Bruce Branham and researchers from the Chicago District Golf Association Turfgrass Program. PoaCure has been used on fairway turf, chipping greens, a push-up green and practice putting green at North Shore. Dinelli says in two years PoaCure helped convert the population



A fairway in South Korea after one year of being treated with PoaCure. South Korea remains the lone country where PoaCure is commercially available.

on North Shore's practice putting green from 85 percent *Poa annua* to 95 percent bentgrass.

Branham's work with PoaCure started in 2012, with the majority of his research occurring on golf courses instead of research plots. He says PoaCure contrasts other herbicides because Moghu is promoting use on bentgrass greens, even during the EUP period.

"If you look around at the typical herbicide label, almost none of them allow you to use them on bentgrass putting greens," Branham says. "They will allow you to use it in bentgrass, but they will specifically exclude putting greens and the reason is that it's liability. If you damage any turf on a putting green, you're looking at major liability for a very small acreage that you are treating. This product turns that on its ear and is gearing all of their efforts toward putting greens."

"Now that's in a sense very good marketing. Superintendents don't like *Poa* on their fairways, they don't like *Poa* on their roughs. But they absolutely hate annual bluegrass on their putting greens. It will get used by all of these golf courses that signed up and the major use will be on putting greens, which shows a lot of confidence by the company."

Branham adds the EUP pe-

riod has the potential to "make or break" PoaCure in the U.S. "The problem with putting green trials is that you can only have one or two failures before the product will get a bad vibe and people will stop using it," he says.

PoaCure has been tested in various regions. Baird, for example, has used it primarily in northern and southern California, but he's also helped with trials in Colorado, Wyoming, Montana, Nevada, Oregon and Washington. He says straying from instructions on the label can cause problems.

"The beauty of PoaCure lies in the slow, seamless transition from *Poa*-riddled turf back to *Poa*-free turf," Baird says. "Or, it can prevent invasion of *Poa* into new stands of turf. Using higher rates and/or more frequent applications contrary to label instructions to obtain faster results are recipes for disaster."

Moghu has exercised patience with PoaCure. Last year's U.S. government shutdown delayed the granting of the EUP. Although PoaCure has generated a buzz in South Korea, Han says lessons learned from the Imprelis ordeal are also behind Moghu's methodical U.S. research and launch. "We want to make sure the product is safe and people know that," he says. **GCI**



An close-up view of an area treated with PoaCure. Moghu Research Center is targeting a late-2016 commercial launch of PoaCure in the United States.

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**Monroe Miller** retired after 36 years as superintendent at Blackhawk CC in Madison, Wis. He is a recipient of the 2004 USGA Green Section Award, the 2009 GCSAA Col. John Morley DSA Award, and is the only superintendent in the Wisconsin Golf Hall of Fame. Reach him at [groots@charter.net](mailto:groots@charter.net).

## LET'S TREAT OURSELVES TO A LITTLE OPTIMISM

Good vibes in Wisconsin might foreshadow positive national trends.

Whenever I think about the changes – some say decline – in golf since I retired in 2008, I'm flushed with gratitude that I worked the 40 years previous.

It was a time of unprecedented growth. Golf clubs were full and had waiting lists. Daily fee and public courses were making money and, for a time, we were determined to build one new golf course each day in America. Our course hired an architect and he designed a significant project for us nearly every year, just like lots of other golf facilities. We hired 25 employees, mowed fairways seven days a week with triplex greensmowers (and collected the clippings), and started mowing greens and tees with walkers. Every year brought something new and exciting.

Then the crash came and with it came downsizing in every imaginable way in golf. There was a lot of misery that has been well-documented, and most of it continues today. It is related to the lousy economy we've had the past half-dozen years. I've seen it in my travels around Wisconsin, visiting not only golf courses, but sod producers, lawn care and landscape management companies, and sports turf operations. Our literature

has been focused on it, the consultants have documented it and those of us in the field know it.

But I think I see signs of an improving economy. These may not be based on statistics, science or research. Sometimes, however, instinct and a well-developed clairvoyance can lead to conclusions that are

“It is too hard being depressed all the time, worrying about our futures in golf.”

accurate. Here are a few of the things leading to my optimistic hunch that we have stabilized or are even improving:

- New books. Cheryl and I were visiting Geoffrey Cornish in his home at Fiddlers' Green, Mass., a couple of years after I retired. He said the golf book market had completely tanked, a sure sign of the tough days facing golf. Well, some terrific books have recently hit the bookstores. Witness:

1. “A Difficult Par” by James R. Hansen. Hansen, a history professor at Auburn University, is a well-recognized expert on the history of golf architecture, has written a very extensive yet readable biography of Robert Trent Jones. It's almost 500 pages, and I

was up late several nights this summer reading it. It's a great book; Geoff would have loved it.

2. “Turfgrass History and Literature: Golf, Lawn and Sports” by James B. and Harriet J. Beard. I had the privilege to read the manuscript before it was published, and only one person could have written this

magnum opus – Dr. Jim Beard. I would recommend every superintendent's office have a copy on the bookshelf. It is interesting and invaluable. It was just released from Michigan State University Press.

3. “His Ownself” by Dan Jenkins. Jenkins is one of our best sports writers, and I think his best writing went into golf. This book is pure entertainment. He has written a number of golf novels and I have read all of them also. This is a combo autobiography/memoir, and it is a funny book.

4. “Wide Open Fairways” by Brad Klein. Many of us know the author. Like his previous books, this one is very comfortable reading. I recommend it highly.

5. “Turfgrass: Biology, Use and Management”

from the American Society of Agronomy. This monograph is the ASA's latest on turf. Chapters are written by well-recognized experts/faculty in our profession. It is another “must have” book for your professional bookshelf.

- Membership levels in our professional organizations seem to have stabilized and even increased in a few.

- Attendance at our events – monthly meetings, educational conferences and field days – has also stabilized.

- Golf has found some new and exciting heroes to replace Tiger Woods. Rory McIlroy, Jordan Spieth and Rickie Fowler immediately come to mind.

- Some courses – definitely not all – are experiencing increased membership and more play.

- Imprelis had huge negatives, but the settlements have come in time to help quite a few courses that were in trouble, more than I would have guessed.

- In our state, we have even started a new endowment fund at the University of Wisconsin Foundation devoted to turfgrass research. For us, that is a very positive sign.

- Salesmen report some of the old turf and irrigation equipment is being upgraded and replaced.



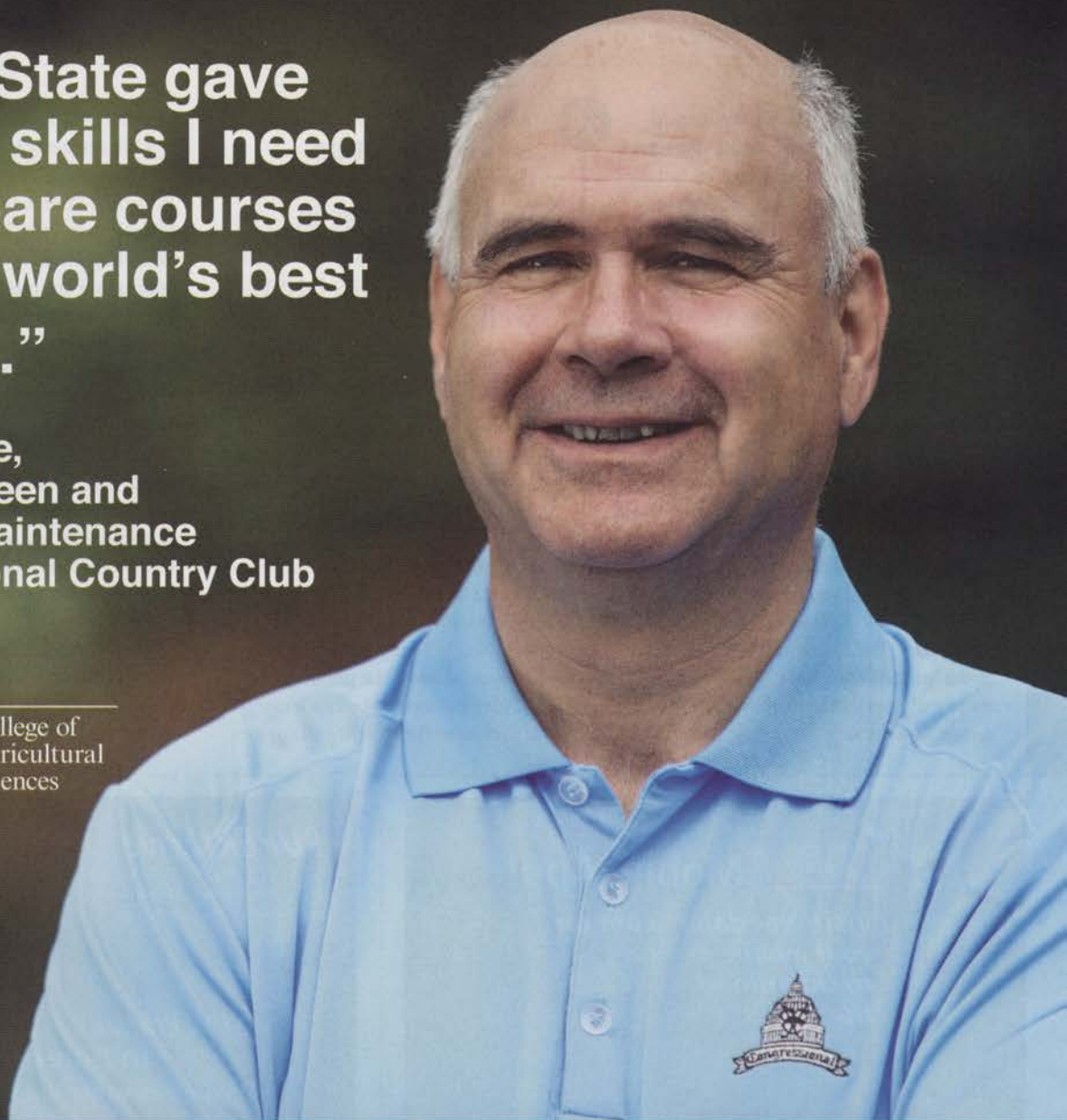
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• I have noticed there is a distinct upswing in golf course remodeling projects. Many are modest and inexpensive, but the famed SENTRYWORLD has undergone a major facelift by RTJ Jr.

• There is considerable excitement in our state centered on some new golf course construction projects. The Kohler Co. is working through the planning and permitting process to build a fifth golf course. This one will be located south of Sheboygan along the Lake Michigan shore on 250 acres Kohler already owns. Up in the central sands region of Wisconsin, on property that was the bottom of old Glacial Lake Wisconsin about 10,000 years ago, construction has already started on 2,000 acres of sand and sand dunes. Golf course developer Mike Keiser (of Bandon Dues fame) hired Bill Coore and Ben Crenshaw to design the first course. There could be more golf courses there, maybe up to half-dozen 18-holers.

“Then the crash came and with it came downsizing in every imaginable way in golf. There was a lot of misery that has been well-documented, and most of it continues today. It is related to the lousy economy we’ve had the past half-dozen years.”

• The USGA created a lot of interest in golf this year by hosting back-to-back U.S. Opens – men and women – at the famed Pinehurst No. 2. To top it off, the redesigned course showed the public that our fields of play can indeed be challenging even if they have the look of golf courses

75 years ago. Three cheers!

• We are lucky in our state that we will host the 2015 PGA Championship at Whistling Straits, the 2017 U.S. Open at Erin Hills and the 2020 Ryder Cup, also at Whistling Straits. That kind of interest can only create optimism in the golf industry, and that includes superintendents.

It is too hard being depressed all the time, worrying about our futures in golf. That is why I proposed superintendents work on a Plan B – to relieve some of that stress.

But it is also important to look on the bright side, finding a half-full glass instead of a half-empty one. I believe that no matter where you work there will always be concerns about rounds played, variable weather and other entertainment opportunities for families.

A closer look, maybe a more objective view, can also expose some good reason for optimism, just like we have found in Wisconsin. **GCI**

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<b>Pegasus HPX</b> <i>Fungicide</i>	Our proprietary NexGen formulation of Pegasus™ HPX with its unique green pigment, is the most advanced liquid fungicide based on chlorothalonil. Pegasus HPX provides superior tenacity, longevity, tank-mix options and performance, for better control of diseases like dollar spot, brown patch, anthracnose and many others.
<b>Pegasus DFX</b> <i>Fungicide</i>	Our proprietary Pegasus DFX is a reformulation of the active ingredient chlorothalonil plus a green pigment in an extruded granule. This unique improvement provides superior, long-lasting fungicide performance compared to old spray-dried products, resulting in better turf quality. One of our exclusive NexGen products, Pegasus DFX also offers tank-mix options to improve disease control and minimize resistance.
<b>Viceroy® 70DF</b> <i>Fungicide</i>	Viceroy 70DF provides superior control of Pythium and other soil-borne diseases, including many stress-related disease complexes in turfgrass – such as Summer Stress and Bentgrass Decline – when mixed with fungicides like Pegasus, Raven, T-Bird or Kestrel MEX.
<b>Symmetry® NXG</b> <i>Aquatics</i>	A broad spectrum algaecide ideal for use in golf course ponds. <i>No restrictions on swimming, fishing, irrigation, livestock watering or potable water use.</i>





# Setting the Standard





## Fall is the prime time to tackle course component standards at your facility.

by Bob Lohmann

With

fall upon us – meaning shorter days, cooler temperatures and relatively fewer golfers – now's a good time to start thinking about your design and maintenance expectations for next season by creating a set of standards for your golf course.

Let's be clear: No, it's not too early to get this process underway, and standards development is not a new concept by any means. The USGA Green Section and other turf publications have written about it before. As designers, setting expectations is something we do as a matter of course during initial design programming. Simply put, we set a goal, then determine a method to achieve it.

It's an approach we tend to take for granted, but it's a fundamental process worth sharing again, and now seems like a good time to do so – not only because the autumn months bring superintendents a little more time to breathe, but also because I just read a great story on setting green standards featuring John Zimmers, the superintendent at Oakmont (Pa.) Country Club.

The story appeared in one of GCI's

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## COURSE MANAGEMENT

Talkin' Turf features. Enter [bit.ly/1ryDLA](http://bit.ly/1ryDLA) into your browser to read the article.

Zimmers concentrates on greens and the specific standard of green speed. Obviously just one aspect of a comprehensive program, his example illustrates the benefits of setting quantitative and qualitative benchmarks for all the vital components of your golf course, in order of importance, which usually goes something like this: greens, fairways, approach areas, green surrounds, tees, primary rough, sand bunkers and practice range.

These priorities will vary from course to course. And it's a good idea to survey your members to pinpoint exactly what their priorities are.

But the real work here, once the priorities are established, falls to the superintendent and, when appropriate, to the golf course architect with whom that superintendent collaborates. By working together, the two can apply to those standards all relevant data, i.e. the man-hours it would take to reach them, the climatic conditions that will allow (or hinder) success, the design changes or capital expenditures required to meet or maintain the long-term expectations.

Why is it important to compile these objectives?

Well, if we were all running golf courses with unlimited budgets, maybe it wouldn't be that important. But only a handful of elite clubs, if any, fit that description. The rest of us are obliged to make do with limited resources. Realistic standards for all the vital components of the course allow course managers to measure performance year to year; they allow superintendents to assess the time and money they're actually spending on bunker maintenance vs. tee maintenance, for example; they can be vital to making the case for renovation, large scale or (more likely) limited scale; they can also help you assess beforehand what's truly affordable.

I get into the nuts and bolts of putting together a standards document below, using an actual document developed by a client club. I don't want to name the client, because sharing this info outside a club can be delicate, but suffice to say, this club cannot just go out and commission a \$6

million renovation. Its standards were developed to create benchmarks up to which the superintendent, club management and the members want their course to live. When those expectations aren't being met, established standards help pinpoint what needs attention, be it more man hours, a different approach, renovation, etc.

The fall season is the ideal time to get started on this process, because, as Zimmers indicated in the linked story, "starting each season with an approved set of course standards makes the conversation easier because everyone has a clear idea of the end goal. When members get involved in developing standards, they become more aware of budgeting – a process that's inseparable from green speed."

If you went and read that story, you know that Zimmers talked exclusively about greens standards. So, I'm going to highlight something a bit further down the list of priorities at most clubs: fairway standards.

Notice, too, that the standards themselves are only part of the process. They are followed by those reasons why expectations are not currently being met – and what the club and its superintendent actually need to do in order to achieve the desired goals. In areas where things aren't up to snuff, it makes sense to insert these "next steps" so management and members understand what the superintendent is dealing with.

With solutions, it's important to provide anticipated cost, which is frankly where we, as architects and course contractors, get involved, though we work with lots of clients in the assessment stage, too.

I should point out that this particular standard was laid out by Jerry Kershasky, former superintendent at Westmoor Country Club in Brookfield, Wis., where Lohmann Golf Designs worked for many years on a series of renovation projects. Kershasky now works for Reinders Inc., the Sussex, Wis.-based golf course distributor/supply firm. He was kind enough to authorize the sharing of this info/template not only because he's a good guy, but also because standards development is something he continues to emphasize in his consultations with superintendents.



## FAIRWAY STANDARD

Uniform in texture and density, with height being  $\frac{3}{8}$  inch to  $\frac{7}{16}$  inch. Firm, fast and rolling with great winter and summer survival characteristics, good drought avoidance and good disease resistance.

We have not achieved this standard due to the following conditions. The *Poa annua* and ryegrass component of the grass stand we have on fairways (20 to 40 percent depending on the fairway) has poor winter survival traits. *Poa annua* also has survival problems in hot humid summers, requires more water more frequently than bent or rye grass, and a mixed stand of the three provides less than ideal ball lies when compared to a pure stand of any one of the three. The water-retaining clay loam soils on all fairways, and tree shade and tree roots on a few fairways, make growing conditions more conducive for *Poa annua* rather than the desired bentgrass. The clay loam fairway soil after a rain or multiple irrigation cycles renders soft, non-rolling, earthworm-cast playing conditions along with providing a good environment for turf disease. Consistent, excellent playing conditions are not the rule for our fairways due to the aforementioned water retaining clay-loam soil, tree shade and tree root competition, and the *Poa annua*, ryegrass component of the fairway turf.

## Solutions

1. Sand topdress to improve drainage, ball roll, firm lies, reduce earthworm casting, reduce disease and improve conditions to sustain a bentgrass dominant fairway turf.
2. Seed memorial bentgrass to improve uniform texture and density for good ball lies, firm ball lies, ball roll, drought tolerance and disease resistance.
3. Tree removal to improve growing conditions for bentgrass, improve ball lies, ball roll and reduce earthworm casting.
4. Replace 160 inefficient irrigation sprinklers to improve distribution of water.
5. Install surface drainage catch basins in water collecting areas to increase ball roll, improve both ball lies and growing conditions for bentgrass and reduce earthworm casting.

•**Sand topdress fairways:** The minimum amount of sand needed to reap a significant benefit for playing conditions and an environment that favors bentgrass is 2 inches but an overall goal of 4 inches is the target. Once a 4-inch depth is achieved a program using less sand could be adopted for maintenance purposes. The maximum amount that can be applied in one application is  $\frac{1}{4}$  inch and an ideal plan would have us putting down three applications per year (April, September, November). The cost of  $\frac{1}{4}$  inch of sand on 26.4 acres of fairways is \$14,026 and we have a budget that will allow us two applications ( $\frac{1}{2}$  inch of sand) this year. The initial cost of sand is high, but the long-term benefits will reduce costs in fungicides, watering and provide the use of golf cars earlier in the season and sooner after heavier rains. Most importantly, it will render superior, sustainable, consistent playing conditions.

•**Interseed fairways** with memorial bentgrass at the September and November sand topdressing dates. Cost is \$7,063 per seeding. Funds have been allocated for seed this year and once we achieve a full stand we can reduce interseeding to once per year during the November sand topdressing. Memorial bent grass is drought resistant and disease resistant, meaning we will have drier fairways and save money on watering costs and fungicides.

•**Remove trees**, where possible, within 40 feet of a fairway to reduce shade, tree root problems, earthworm casting and to allow wind drying of fairways, all of which favor bentgrass, improve ball lies and ball roll, and reduces turf disease and watering.

•**Replace 160 fairway irrigation sprinklers.** Budget allows us to replace 48 sprinklers this year leaving 122 to be replaced in the future at a cost of \$262 per sprinkler or a total of \$31,964. We are replacing model year 1980 sprinklers that are not capable of producing the exacting precipitation rates that the current model year sprinklers do. Plus, the 1980 models, at times, do not rotate and do not turn off which causes even wetter fairways than these general inefficiencies do.

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•Install surface catch basins and drain tile. This will hasten the removal of rain and snow melting water, making for better playing and growing conditions. This type of drainage was done in all renovation areas in the 2008 project. The work proposed will be done in areas not part of that project. Total material costs for all areas except No. 15 is \$16,805. No. 15 has more dramatic drainage issues dealing with spring seepage and high ground water in two areas. Materials for No. 15 are \$13,805. No funds are in the current budget for fairway drainage.

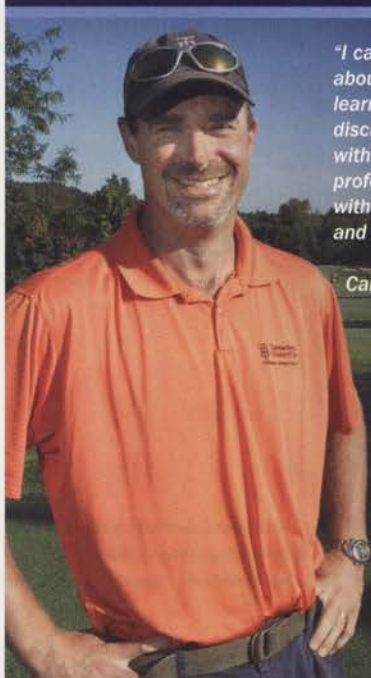
“With solutions, it’s important to provide anticipated cost – which is frankly where we, as architects and course contractors, get involved, though we work with lots of clients in the assessment stage, too.”

You got all that? It’s pretty detailed, but a superintendent could knock out one of these reports in a week. By the time winter comes, you’re done — and you have a template document you can refer to and update continually for years to come — to track progress, argue for funding and make

sure funding is being directed to areas most in need. The document also illustrates to members or public commissioners your awareness and attention to their concerns, which is a vital piece of communication, especially in the “instant response” world we live in these days.

The standards also provide context. The value of a more dedicated aeration and top-dressing schedule, for example, can be argued for and justified in terms of expected performance. And the methods can be compared to a rival course down the street. This drives home to members and manage-

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Realistic standards for all the vital components of the course allow course managers to measure performance year to year. They also allow superintendents to assess the time and money they're actually spending maintaining various parts of the course, can be vital to making the case for renovation, large scale or limited scale, and help you assess beforehand what's truly affordable.

ment the benefits the club derives from that sort of investment.

Working with courses on these standards, over time, led us – as architects and contractors – to think differently about the way our clients handle renovation. There simply isn't the money these days to put together a traditional master plan and spend millions to execute it all at once. Ultimately, we developed an approach we call the Asset Management Plan (AMP), where we divide a master plan into

smaller, affordable chunks and help clubs tackle them on a year-to-year basis.

You can see how the development of standards can dovetail with this approach to renovation. The issues are already divided up into project-size chunks, with priorities and costs affixed. **GCI**

*Bob Lohmann is founder, president and principal architect of Lohmann Golf Designs and a frequent GCI contributor. Check out his blog at [lohmanncompanies.blogspot.com](http://lohmanncompanies.blogspot.com).*

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# Crunch the numbers

Collect data and develop hard figures to justify replacing your aging equipment.

By Stephen Tucker

Over the last seven years or so, I have been working to figure out when equipment needs to be replaced. I'm looking for a method that takes the emotion out of the situation and gives you some real data to make decisions by vs. just looking at something and saying it needs to be replaced. I started with a simple Excel sheet, but as I continued to see other factors that drive replacement, I made more changes, and more changes and so on.

Finally, I have a prototype (Excel to the max). I utilized this program fully in Dallas and have received a lot of help and feedback along the way building this program.

I am working on programming it so it can be utilized by the masses online, as well as a tool used during my consulting trips to other facilities around the world. Here is an outline of what my equipment replacement system defines.

## EQUIPMENT INVENTORY

Every golf course should have a complete, up-to-date equipment inventory. It should be complete with ID number, year, model, equipment type, serial number and current hours. Take care to update this list every year. Revising the amount of accumulated hours helps make your agronomic plan much more accurate, which is a key driver of the 10-year equipment replacement plan.



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## EQUIPMENT

### THE AGRONOMIC PLAN

Everything at your operation should be driven by an agronomic plan. This determines a number of things, but what I use it for is to tell me how long it takes to do a job task and how many times we will do that task per month. Knowing this will tell me how many hours each month will be put on a piece of equipment.

If you know how many hours you will accumulate for a given year, you can estimate how many years until you reach a set amount of hours. This is where the program starts. It's factual data that is different at every golf course. So when people throw out how long equipment will last and we all assume that time frame should work for us as well, it really doesn't because each facility is unique.

Having worked with a number of consultants in the past, they were quick to tell us how they could save us money on equipment, but they had no data to base the decisions on, which resulted in a flawed plan

EQUIPMENT TYPE	ID	YEAR	BRAND	MODEL	SERIAL#	HOURS
AERIFIER (DEEP TINE)	1	NO				
AERIFIER (FAIRWAYS)	1	NO				
AERIFIER (GREENS)	1	2013	TORO	648	313000730	
AERIFIER (GREENS)	2	2013	TORO	648	313000731	
AERIFIER (PB)	1	2006	JACOBSEN	744423	7444230166	
AERIFIER (PB)	2	2006	JACOBSEN	744423	74442300133	
AERIFIER (TEES)	1	2007	JOHN DEERE	800A	TC800AC065137	
AERIFIER (TEES)	2	2006	JOHN DEERE	800A	TC800AC060329	
BLOWER	1	2014	BUFFALO	KB4	22812	
BLOWER	2	2006	BUFFALO	KB2	11853	
BLOWER	3	2011	TORO	PRO FORCE	311000165	
BLOWER	4	2014	BUFFALO	KB4	22813	
BLOWER RAKE	1	2008	JOHN DEERE	1200A	TC1200A180864	

that never would get us out of the hole we were in.

That puts us all in a place we don't want to be at times. This is the exact reason I believed the formula should be the same, but the results are going to be different at each golf course facility.

### EQUIPMENT'S USEFUL LIFE

Everything has a useful life. What I mean by this is how many hours are typical for a piece of equipment to last before it starts costing more to maintain it. Each piece of equipment is different and some items may not log tons

of hours on it in 15 years and that needs to be thought about. A great example would be a fairway aerifier. We need them, but how many hours per year are we really putting on them? If I told you that most pieces of equipment begin to see a huge decline at around 4,500 hours,

AREA	HOURS/USE	#EQUIP	TOTAL EQUIP. HOURS PC	TOTAL HOURS COMBINED PY									
TRANS (MD)	3	14	42	15330.0									
USE PER MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
	31	28	31	30	31	30	31	31	30	31	30	31	365
TOTAL HOURS/MONTH	93	84	93	90	93	90	93	93	90	93	90	93	15330
AREA	HOURS/USE	#EQUIP	TOTAL EQUIP. HOURS PC	TOTAL HOURS COMBINED PY									
TRANS (HD)	3	3	9	3285									
USE/MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
	31	28	31	30	31	30	31	31	30	31	30	31	365
TOTAL HOURS/MONTH	93	84	93	90	93	90	93	93	90	93	90	93	3285



would you believe that to accumulate that at most golf courses on a fairway aerator that could take 20-30 years.

If you were to put 4,500 hours on it in five years, it could take it but in a span of 20, not so much due to parts rusting and the machine sitting for months before use.

So repairs add up each year mainly because the machine isn't used much. One of the things you can do to get started with your 10-year plan is use your agronomic plan to tell you how many years it will take to accumulate 4,500 hours. If you know you will put 1,000 hours per year on a rough mower and your useful life is 4,500 hours, it will take 4 1/2 years until it needs to be replaced. Do that for your entire fleet of equipment because it can help you determine if you should lease or purchase equipment.

#### RESIDUAL VALUE

One of the common questions I receive is about residual value. I look at this two ways. Residual value on a lease is what the estimated value will be on your piece of equipment when it returns off lease. On a purchase, I look at it as the

EQUIPMENT TYPE	EST USEFUL LIFE (HRS)	TOTAL HRS/YR	REC QTY	HRS/YR/MACHINE	REC USEFUL LIFE (YRS)
AERIFIER (DEEP TINE)	2000	60	1	60	33
AERIFIER (FAIRWAYS)	2500	80	1	80	31
AERIFIER (GREENS)	2500	252	2	126	20
AERIFIER (PB)	3000	100	2	50	60
BLOWER	5000	1566	2	783	6
BUNKER RAKE	5000	2190	2	1095	5
FAIRWAY CUTTING UNITS	4500	1560	1	520	9
FAIRWAY MOWER	4500	1560	3	520	9

value I can sell it for when the equipment reaches its time of replacement. The one mistake many make on a lease is they care about the cost of the equipment and not the residual. The better residual you get on your equipment, the better the payment will be and this all comes down to how well you take care of the equipment during the lease. The residual numbers can make a HUGE difference on your payment.

#### FACTORS

There are a lot of calculations in my program that I can't share, but there are a lot of things that can affect your equipment replacement. Those include:

- Facility or golf course near the ocean.

- Equipment is stored outside in the elements.
- Level of maintenance kept on the equipment.
- How often the equipment is used.
- Pricing you receive on the equipment.
- How many years of warranty you negotiate.

These factors have to be accounted for, which makes doing something like this for the masses extremely complicated. I will begin putting reports together utilizing this system on consulting trips, but I wanted to just put out there that purchasing equipment is something that should take us time to do. It's a huge financial burden for a club, and knowing

what to expect and when makes everyone much more comfortable accepting it. The best thing we can do, though, is to take the emotion out of it and let the data do the talking. It's always much easier that way. **GCI**

*Stephen Tucker is the CEO of IGCEMA and equipment manager at Four Seasons Hotels and Resorts.*

EQUIPMENT TYPE	REC QTY	REC USEFUL LIFE (YRS)	TOTAL UNIT COST	TOTAL COST	END RESIDUAL
AERIFIER (DEEP TINE)	1	33	\$32,779.87	\$32,779.87	\$1,638.99
AERIFIER (FAIRWAYS)	1	31	\$38,192.37	\$38,192.37	\$1,909.62
AERIFIER (GREENS)	2	20	\$30,614.87	\$61,229.74	\$3,061.49
AERIFIER (PB)	2	60	\$8,423.62	\$16,847.24	\$842.36
BLOWER	2	6	\$7,552.92	\$15,105.84	\$755.29
BUNKER RAKE	2	5	\$11,500.03	\$23,000.06	\$1,150.00
FAIRWAY CUTTING UNITS	1	9	\$13,531.25	\$13,531.25	\$676.56
FAIRWAY MOWER	3	9	\$46,006.25	\$138,018.75	\$6,900.94







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

## Travels With Terry

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.

## NIGHTTIME GREENS AERIFICATION

“We wanted to aerify greens at night so we could complete them all in one day,” says Brian Goleski, superintendent at the Noyac Golf Club in Sag Harbor (The Hamptons), N.Y. The Toro ProCore 648 Greens Aerator is equipped with three, 150 lumen LED utility lights, with mounting brackets, model No. 41001-2551 manufactured by Ironton purchased from Northern Tool. A 5/16-inch hole was drilled to bolt each light bracket. The light switch, Toro model No. 95-8999, which controls all three lights, was installed by cutting out a square on the switch panel. Each light/bracket costs \$29.99 plus shipping/handling and it took about 1½ hours to install. J.R. Wilson, equipment manager; Chris Briggs, first assistant; Tim Melian, second assistant; and Dan Powell, third assistant, round out the successful team at Noyac.



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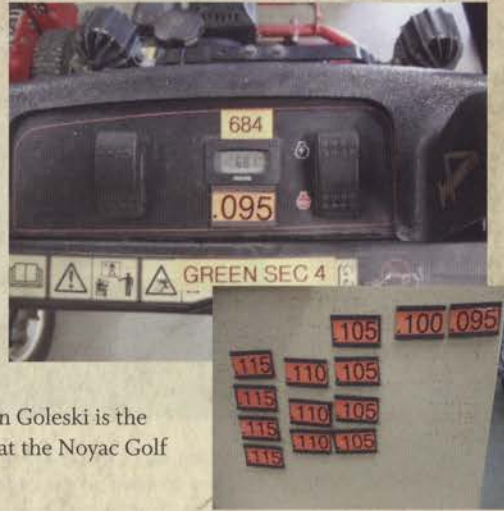
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## MAGNETIC GREENS MOWING HEIGHT DISPLAYS

The ULine Magnets, model No. S-6421, measuring 1 inch by 1½ inches cost about \$.35 each and are rated at one pound of strength, are mounted onto the walk-behind greens mowers control panel so different mowing heights can be displayed quickly and easily. A Brother P-Touch Label Maker is used measuring 18mm (.7 inches), with a 36-point font size using orange-colored tape. The magnets will definitely hold-up for one season and they could be knocked off when a power washer nozzle gets too close to them. The Toro Flex 21 Greens Mower control panel also displays the hour meter, when the next servicing is due label and the section that each respective mower is used. Attaching all of the labels to the magnets took about 30 minutes. Brian Goleski is the superintendent and J.R. Wilson is the equipment manager at the Noyac Golf Club in Sag Harbor, N.Y. **GCI**



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(COVER STORY continued from page 19)

Birds immediately landed on the platforms because it offered an ideal spot to scout fish. Painting it black helped retain heat, thus increasing alligator activity on the structures.

"You would see golfers driving around the bank and that would frighten the alligators back into the water," Bradley says. "I wanted to make sure we had a healthy divide of letting them live in a natural environment where we are able to golf."

When Sweet gives wildlife tours of The Sanctuary, he takes visitors to "Gator Beach," where they can observe alligators as large as 10 feet from a safe distance. Experts recommend staying within 60 feet of an adult alligator. The Sanctuary also posts caution signs in areas frequently occupied by alligators. "People here have done a really good job of enjoying from a distance," Sweet says. "That's what we say: View from a distance."

Jekyll Island, a 63-hole facility in Georgia, places safety stickers in golf carts and posts signage at the starter's hut urging golfers to avoid feeding and approaching alligators. Female alligators are especially pugnacious during nesting season, and Vliet suggests putting little red caution flags and temporary fencing along cart paths and low spots to alert workers and golfers of potentially aggressive animals lurking. To protect golfers, Butfiloski recommends clearly communicating local rules such as penalty-free drops along ponds and lakes. Designing steep banks along lakes touching fairways is another tactic to limit human-alligator interaction, Butfiloski says.

Besides occasional overnight treks through bunkers that require raking, alli-



At Bonita Bay Club, superintendent Paul Bradley created an alligator basking platform. Bradley constructed the platform by using triple-rinsed, 30-gallon drums that were sealed up as a floating base. He connected the drums with 2x4 boards and built a wooden ramp allowing alligators to easily access the platform.



gators, unlike groundhogs and geese, pose few maintenance challenges. Vliet says alligators are "pretty frightened" by large objects that move and make a lot of noise such as mowers and tractors. Retreating is a common reaction when an alligator sees an upright human.

Alligators are more difficult to handle underwater. Divers who recover golf balls from lakes can place themselves in vulnerable positions because alligators can't see any better beneath water than humans, according to Vliet. "That's really a dangerous situation," Vliet says. A man

was bitten on the left arm by an alligator while diving for golf balls at Bonaventure Country Club in Weston, Fla., this past August. The same man was also attacked in 2006.

Painful encounters with alligators, fortunately, are exceptions on golf courses. "Most of the time, if you go up to them, they will go into the water," Bradley says. "So they have a fear of us. It's a general respect. If you respect them, they will respect you. You can live in harmony." **GCI**

Guy Cipriano is GCI's assistant editor.

(MORAGHAN continued from page 20)

With drones, satellites and GPS units monitoring play, a loudspeaker in your cart will ask (politely the first time, not so nicely the second and third) to "hurry up, please," while informing the other golfer in your cart that his ball is nestled under the leaves of the tree 210 yards down the right side of the fairway.

Which is soon to be followed by androids, holograms and other "avatars" taking to the course in our place. We'll be back home in our man caves controlling their movements. Or, better yet, let the droid stay home and vacuum our faux lawn while we run out for a quick nine.

But one thing will not change: The Old

Course will be exactly as it is. Forever and ever. **Amen. GCI**

*Editor's note: A version of this article originally appeared in the August/September 2014 issue of The Met Golfer.*



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AD INDEX

COMPANY	WEBSITE	PAGE
AAT Direct Solutions	<a href="http://www.aatdirectsolutions.com">www.aatdirectsolutions.com</a>	76-77*
Amvac	<a href="http://www.amvac-chemical.com">www.amvac-chemical.com</a>	5
Aquatrols	<a href="http://www.aquatrols.com">www.aquatrols.com</a>	50, 51
Audubon International	<a href="http://www.auduboninternational.org">www.auduboninternational.org</a>	61
BASF	<a href="http://www.betterturf.basf.us">www.betterturf.basf.us</a>	insert
BioPlex	<a href="http://www.bio-plex.com">www.bio-plex.com</a>	18
Civitas / Petro Canada	<a href="http://www.civitasturf.com">www.civitasturf.com</a>	57
Cushman	<a href="http://www.cushman.com">www.cushman.com</a>	55
FMC	<a href="http://www.fmcprosolutions.com">www.fmcprosolutions.com</a>	15, 17, 19
Gempler's	<a href="http://www.gemplers.com">www.gemplers.com</a>	16
Grigg Bros.	<a href="http://www.griggbros.com">www.griggbros.com</a>	7
Jacobsen	<a href="http://www.jacobsen.com">www.jacobsen.com</a>	92
Koch	<a href="http://www.KASTurf.com">www.KASTurf.com</a>	58
OHP	<a href="http://www.ohp.com">www.ohp.com</a>	9
Otterbine Barebo, Inc.	<a href="http://www.otterbine.com">www.otterbine.com</a>	8
PBI Gordon	<a href="http://www.gordonsprofessional.com">www.gordonsprofessional.com</a>	13, 64
Penn State	<a href="http://www.turf.psu.edu/apply">www.turf.psu.edu/apply</a>	63
Penn State Online	<a href="http://www.worldcampus.psu.edu/gci">www.worldcampus.psu.edu/gci</a>	70
Phoenix Environmental Care	<a href="http://www.PhoenixEnvCare.com">www.PhoenixEnvCare.com</a>	65
Plant Food Systems	<a href="http://www.plantfoodsystems.com">www.plantfoodsystems.com</a>	10
Precision Labs	<a href="http://www.precisionlab.com">www.precisionlab.com</a>	79
Qualipro	<a href="http://www.quali-pro.com">www.quali-pro.com</a>	68
SePRO	<a href="http://www.sepro.com">www.sepro.com</a>	49

COMPANY	WEBSITE	PAGE
SipcamAdvan	<a href="http://www.sipcamadvan.com">www.sipcamadvan.com</a>	91
SUPERthrive / Vitamin Institute	<a href="http://www.superthrive.com">www.superthrive.com</a>	64
Toro	<a href="http://www.toro.com">www.toro.com</a>	2
Winfield	<a href="http://www.winfield.com">www.winfield.com</a>	67, 69, 71

\*denotes regional advertising

FALL PREP GUIDE		
COMPANY	WEBSITE	PAGE
PBI Gordon	<a href="http://www.gordonsprofessional.com">www.gordonsprofessional.com</a>	23

SUCCESSFUL RENOVATIONS		
COMPANY	WEBSITE	PAGE
Rain Bird	<a href="http://www.rainbird.com">www.rainbird.com</a>	41, 45

PAYBACK PRODUCTS		
COMPANY	WEBSITE	PAGE
Medalist Golf Inc.	<a href="http://www.medalistgolfinc.com">www.medalistgolfinc.com</a>	82-83
Redexim Charterhouse	<a href="http://www.Redexim.com">www.Redexim.com</a>	84-85
U.S. Battery Mfg.	<a href="http://www.USBATTERY.com">www.USBATTERY.com</a>	86-87
Wiedenmann	<a href="http://www.wiedenmannusa.com">www.wiedenmannusa.com</a>	88-89



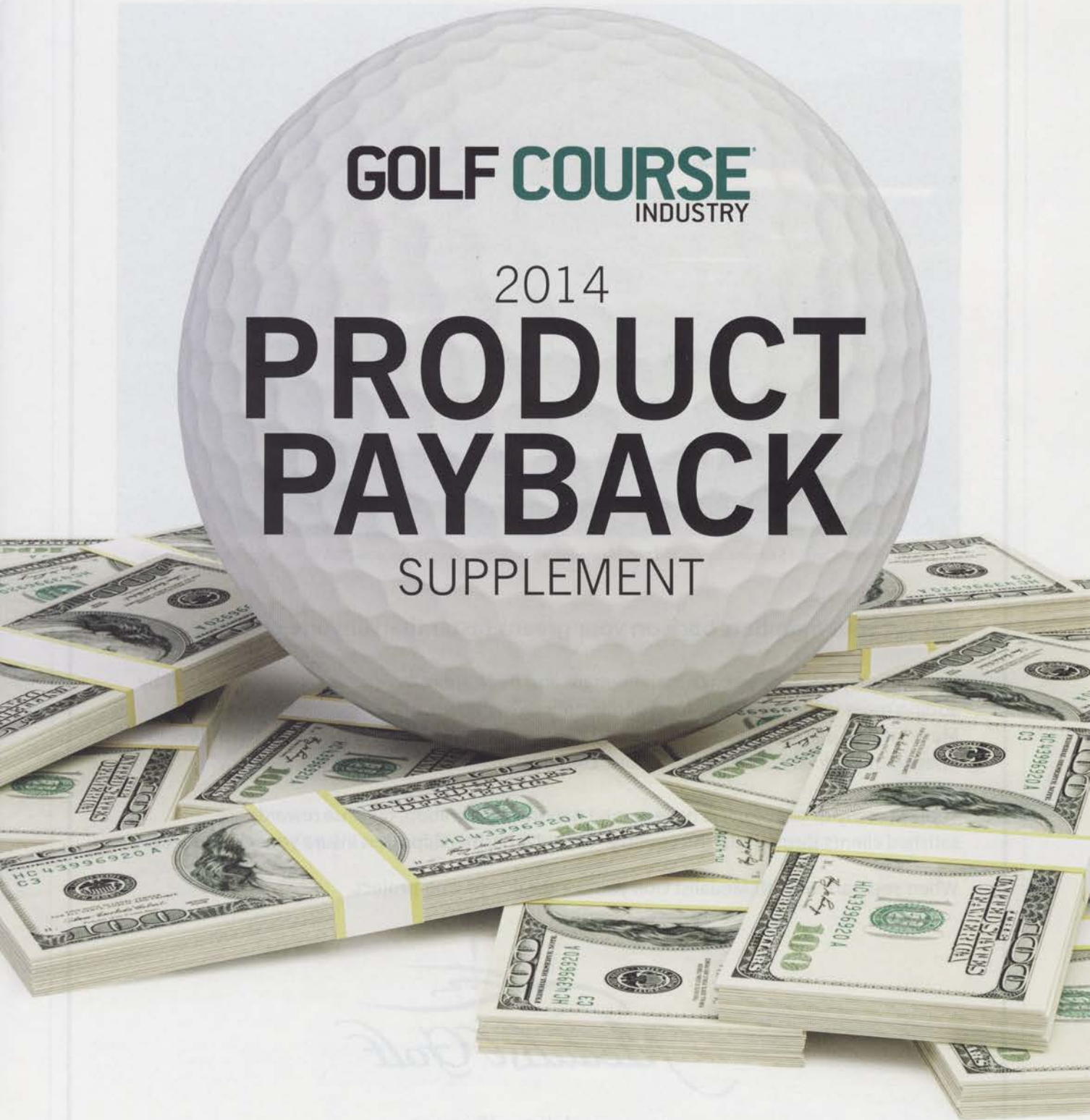
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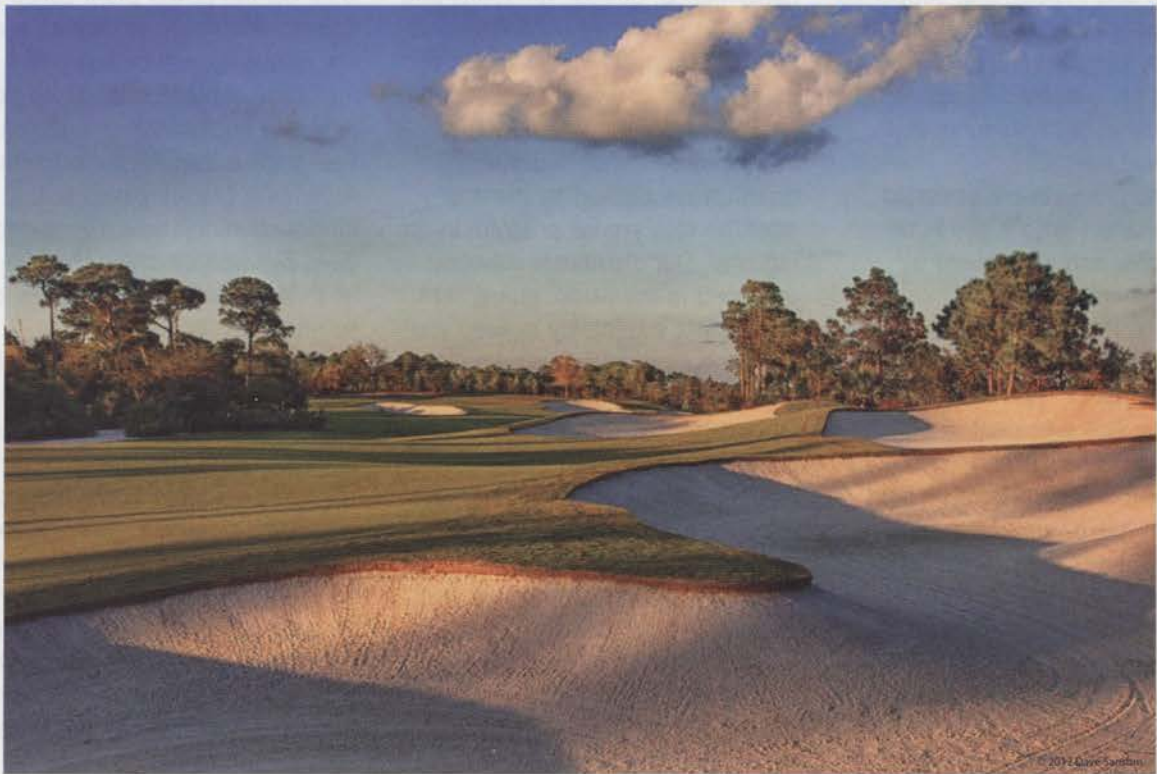
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## Redexim North America: Breaking Barriers To Better Turf

**R**edexim North America is a leader in the design and development of professional turf equipment produced specifically for aeration, seeding, top dressing and environmental maintenance. With marketing operations in over 50 countries in the world, it has the largest range of equipment in its sectors, supported by a worldwide network of authorized distributors.

The Redexim North America corporate office is in Fenton, Mo., with its parent company and central engineering base in Zeist, Holland, with sister companies in England and in Australia, supported by manufacturing in the USA, UK, Holland, Italy and Hungary. The Group's philosophy is to supply to each market with products that meet local needs.

"These products are designed to withstand vigorous use in all conditions, and are backed by a distribution network that can handle technical, parts and service back-up that is the best available in the industry," said Paul Hollis, executive vice president of Redexim North America. "Investment in new product development and research into finding better methods of grounds care/maintenance is a major objective of Redexim North America to ensure that we remain the world leader in meeting the specialist needs of the turf and ground care markets."

Redexim North America was formed as a corporation in Pennsylvania in 1997. For 17 years prior to that, Redexim equipment

had been imported by a sales agent in the Scranton area. "Since the beginning, we have experienced tremendous growth in the company, expanding into synthetic turf and other markets, while staying with our core philosophy," Paul said.

"We lead the way with products like Verti-Drain, Verti-Core, Verti-Seed, Verti-Quake, Verti-Knife, Over-Seeder, Easy Spread, and Turf Tidy. These unique and trend-setting machines are the most advanced turf management tools on the market, recognized for performance, quality, durability and customer satisfaction. All Redexim products pass the toughest test of all – the test of time.

"The quality construction and advanced design of Redexim products are backed by the best after-the-sale service program in the industry. Our distributor network, the finest in the world, guarantees spare parts availability to keep your equipment running. Redexim North America has become a leader in golf course and turf management equipment by supplying the best machines money can buy, and by listening to the people who use them. Forging strong relationships with customers, built on trust and respect, is essential to our promise of quality."

Paul went on to say, "Innovative design, craftsmanship, and heavy-duty construction make Redexim products the standard of quality in the turf management marketplace.

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need – machinery that performs well, saves time and offers value. The market-leading range of Verti-Drain's and other fine equipment have outsold and outperformed all competitors for over 30 years."

Redexim products have been used by golf course superintendents in the four major championships, and by sports turf managers in championship venues for the NFL, MLB, NCAA, IOC, FIF, UEFA, and the World Cup.

In the coming year, Redexim North America plans to launch its walk-behind power plant called the Carrier, which can work with seeders, aerators, verti-cutters and a multitude of other small three-point mounted equipment. In addition, Paul told us that Redexim North America is planning the exciting introduction of a new high-speed deep-tine aerifier called the Bullet in two sizes later this spring or summer.

"While we have no crystal ball to foresee the future, our hopes are that we see the world economy to pick up and strengthen existing revenue streams. Further expansion of our factory-direct store, Redexim Turf Products, as an alternative to conventional distribution is on the drawing board, as well as additional investment in our agriculture division, Tortella North America, while the agriculture market continues to be booming," Paul concluded.

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# U.S. Battery: Are Automated Watering Systems Worth the Investment?

## How to determine if an automated watering system will pay for itself

By Fred Wehmeyer, Senior Vice President/Engineering U.S. Battery Manufacturing

**A**lmost anyone who performs maintenance on golf cars knows that flooded lead-acid batteries also require routine maintenance. After charging, the most important step is maintaining proper electrolyte levels in all battery cells. Most operators agree that using a single point watering system makes it much easier and quicker to perform this task. Even though it may seem like a luxury, can a single point watering systems actually be cost effective?

One way to determine if watering by hand or with a single point watering system is the most cost effective method, is by first knowing how often the batteries must be watered and calculating the time and cost it takes to water the entire fleet. You can compare your fleet's own numbers, but on average, medium to heavy use golf courses should water their fleet's batteries at least once per month to maximize their performance. Watering batteries manually takes about 15-30 seconds per cell. Typically this involves removing the vent caps on each battery and visually inspecting each cell. If they need water, then the process includes filling each battery cell up to a 1/4-inch below the bottom of the fill-well with a watering pitcher or water caddy

(assuring the cells are not overfilled) and replacing the vent caps.

For a 48-volt golf car, this process takes approximately six to 12 minutes per car. Multiply that times an average 100-car fleet and watering once per month translates to 120 to 240 hours per year. Then figure in your cost for labor to maintain the fleet; on average it's about \$15 per hour for a technician. In this case, the maintenance costs average \$1,800 to \$3,600 per year.

On fleets with single point watering systems, the maintenance time is reduced down to one or two minutes per car for any size battery pack, because no vent cap removal and replacement is required with a watering system. For the same 100 car fleet, watered once per month, the maintenance time per year is reduced to 20 to 40 hours at a cost of \$300 to \$600 per year. That's a reduction of \$1500 to \$3000 per year, or \$7500 to \$15,000 over a five year life expectancy of the batteries.

Also, consider that the expected life of a watering system is somewhat longer than five years. Many fleet managers who utilize watering systems claim they can get 10 years out of them with a moderate level of maintenance and

replacement parts. Adding all the numbers up, the cost of a typical watering system is approximately \$100 per car, and the cost for the 100 car fleet is approximately \$10,000. With this level of investment, a golf course could expect the payback period to be three to seven years with extended battery life as a bonus.

It's obvious that for larger fleets, the upfront cost of a watering system can create a significant savings in the long run. Since not every fleet is the same, you'll have to calculate your own numbers to determine what's best for your application. One thing is certain however, proper watering can significantly increase battery life which in turn can yield substantial annual savings. To find additional resources on battery maintenance and ways to increase battery efficiency and service life, visit U.S. Battery's website at [www.usbattery.com](http://www.usbattery.com).

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**Wiedenmann:**

## Core Recycling – Is it worth the cost of the machine?

**Paul Brown, Course Manager at Fulwell Golf Club thinks so.**

**F**ulwell Golf Club schedules two weeks per year, typically one week in May and one week in August, to aerify the greens, tees, and collars with hollow coring tines. Brown uses ½" x 2" hollow tines at about 1½" spacing. In May 2013, it took seven people to do the job and they completed 18 greens and three tees for a total of 2 acres. In addition, Brown used 55 tons of sand to top dress the greens. The process took 5 days.

In June 2013, Brown purchased a Core Recycler by Wiedenmann. When he completed his aerification that August, he did so with 3 full-time staff members and 1 part-timer. They completed 20 greens, 72 tee boxes, and 2 acres of collars with 20 tons of top dressing sand. The process took 5 days.

Here's how he did it. Brown's greenskeeping team hollow cored the fine turf and left the cores on the surface long enough for them to dry out naturally. Then they brought in the Core Recycler. Its sweeping head unit gently removed the cores and transferred them to the separator unit, which consists of four revolving screen drums with individually adjustable inclination angles. The coarse organic components such as thatch were separated from the sand. More than half of the material was returned to the soil through the drums, and the

organic matter was collected in the container. At this point, one person blew off the debris and another brushed in the good parts of the recycled cores. Finally, a top dressing of sand was applied and brushed in to fill any remaining holes.

"In a very short time, we've found the Core Recycler to be indispensable," Brown says. "We were stunned at how much it achieves relatively effortlessly. We more than doubled our output using half the team we did before and we hardly broke a sweat. Before the new machine, we only ever budgeted to hollow core in maintenance weeks. Knowing the Core Recycler's capabilities now, I see a huge opportunity."

He adds, "Going forward, we know for a fact that if you aerate greens on a more regular basis, the soil biology improves. Just the fact that you can 'churn' soil then recycle it by topping it back up and keep moving back down towards the canopy adds benefit. It's all very positive. I am guessing the more you hollow core and recycle and keep churning the soil backwards and forwards through its profiles, it will lead to things like fertilizer inputs dropping and irrigation requirements dropping."

Brown sums up his thoughts on the Core Recycler. "We're recycling easily 50% if not 60% of the cores back into the surface. If you look

at some of the bigger clubs who set aside a budget of \$15,000 - \$20,000 a year on top dressing alone – they've got big savings to make. Not to mention all the additional work it can be doing. After four years, the Core Recycler is effectively paying you to work!"

Where the Fulwell team will make savings in their maintenance week:

- 125% improvement in output
  - Up to 233% savings on staff
- Instead of deploying seven team members for five days, Fulwell averaged 3.5 people on each of the five days. Next time around, Fulwell will manage this task with just 3 staff. This means that the new "coverage" will take the equivalent of 15 staff days, e.g. 5 days x 3 staff. Without the Core Recycler previously that would have taken them 35 staff days. Therefore Fulwell will be able to deploy their team to deal with other maintenance tasks.
- Previously the exercise required 55 tons of sand @ \$60 per ton = \$3300. Now, with the Wiedenmann Core Recycler, it cost only \$1200. The saved top dressing costs were then used to increase the size of the project.

For see Paul Brown's full study on the Core Recycler or for additional information about Wiedenmann's Core Recycler, please visit [wiedenmannusa.com](http://wiedenmannusa.com) or call 912-790-3004.





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**Pat Jones** is editorial director and publisher of Golf Course Industry. He can be reached at [pjones@gie.net](mailto:pjones@gie.net) or 216-236-5854.

## WNTKC

The most important yet elusive attribute a good club can have these days is a clearly defined culture.

I'm not referring to your "niche" that defines your facility's marketing or your "reputation" that defines how others perceive your place. I'm talking about the internal touchstones that define how you operate, make decisions and create strategies to ensure the viability of the club for years to come.

These cultural anchors can be clearly defined in a formal mission/vision statement that leadership develops and adopts through some kind of planning session. Lots of facilities go through this process. It's sometimes very useful but it is equally likely to be an utter waste of time if participants have their own agendas, there's no clear direction or the whole thing gets bogged down in the minutia of what color the drapes should be in the clubhouse. The result can be a notebook full of strategy, objectives and tactics that sit on a shelf and gather dust.

At the best clubs, the culture is just innately understood by key managers and volunteer leadership. Over the years, I've observed that this synchronicity of purpose occurs most often when a club is led by one individual...a benevolent dictator who has a single-minded vision for how things should be and the authority to make it so. Typically this is an enlightened owner, a passionate and wise "president for life" leader, or a general manager with a rare ability to steer a board like a great captain steers a racing yacht.

Sometimes it's even a golf course superintendent.

A superintendent buddy of mine who's been at the same club for more than a decade recently sent me a mysterious text late one night. It was a pic of a piece of notebook paper with some letters scrawled on it: "WNTKC." I figured the cryptic message was intended for someone else or he was just drunk texting random crap to random people. Baffled, I replied, "WTF?"

A few minutes later he texted back and reminded me that we'd talked about this acronym before in the context of how he interacts with his board and green committee. Whenever the group was heading the wrong way or a dumbass idea started to gain traction, he'd listen patiently and when the speaker was done, he'd say these simple words: "We're Not That Kind of Club." He's used it so often it's become an acronym that everyone understands: WNTKC.

In short, he's one of the keepers of his facility's culture. When something starts to lead the culture in the wrong direction, he quietly reminds them that the idea might be fine elsewhere but doesn't fit into the core values of their club. It's like throwing a penalty flag for misdirected ideas. Sort of like when you miss a turn while driving using your iPhone and Siri chimes in and says, "Recalculating route." It keeps everyone on track.

I think it's a very useful phrase if, and only if, you're in a position to use it. Before you try, answer the following questions:

- Have you been there for at least five years?
- Has your boss or the other key leader in your club given you a clear sense of what really matters

within the facility?

- Are you 100 percent confident the person will take your gentle reminder constructively?
- If not, is your resume up to date?

That said, one of the most important things any trusted super, pro or GM can do is help the leadership stay focused. Seems like it's really critical at facilities where members may belong to multiple clubs and think some cool thing their club in Florida does will be just as cool at their club in Jersey. Everyone has well-intentioned but idiotic ideas and often they're just trying to be helpful. Sometimes they have an agenda. Tread lightly when the latter is the case but be prepared to whip out WNTKC and to defend it.

Some may think it's a bit "uppity" for staff to remind a member about the values of the club but I suggest it's incredibly important in an era when there are far too many facilities without a good sense of their business niche or a vision for what their club should be. There are times that WNTKC simply has to be used to protect the members from themselves.

My pal has used the phrase often enough that all he has to do is write the acronym on a piece of paper and slide it across the table during a meeting and his chairman will immediately get it. The fact that they're not "that kind of club" has become part of the culture of the club. I suggested he even hand out sleeves of ProVs with WNTKC printed on them as a gentle reminder to all of his leaders of what kind of club they really belong to. After all, what you're not is part of what defines what you are. **GCI**



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