FINESSING
THE FESCUE

The U.S. OPEN AT CHAMBERS BAY puts the spotlight on a temperamental turfgrass that holds much promise for the future. Starting on pg 12.

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Investing in PTM/ P 24
Classic cut or stripes? P 44
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TIME WELL SPENT

A new location for a 115-year-old event leads us to a superintendent of a neighboring course who introduces us to a former Ryder Cup participant. A memorable lunch ensues.

Ken Still begins the conversation by telling a visitor his time costs “a dollar a minute.” Fircrest Golf Club superintendent John Alexander knows what awaits and he grins, quickly making the visitor who traveled 2,400 miles comfortable.

Fircrest, which opened in 1923, is four miles from Chambers Bay, the eight-year-old course that will become the first Pacific Northwest venue to host a U.S. Open. The Western Washington courses might as well be separated by 5,400 miles.

Chambers Bay is a links course that can stretch to 7,600 yards. Fine fescue covers the playing surfaces. Fircrest’s fairways and greens are a combination of bentgrass and Poa annua and towering Douglas fir trees line the 6,600-yard course where Still learned the game as a caddie. “The greens are much, much better now,” Still says. “I’m trying to toot John’s horn.”

Alexander grins again, displaying the humble side superintendents possess. When you work for a publication covering the blue-collar aspects of the industry, you try to avoid hyping the glitz of professional golf. Yet there’s something different about a conversation with the 80-year-old Still, who bumped Arnold Palmer from the 1969 Ryder Cup team.

Still says people in his region “don’t understand the impact” of hosting a U.S. Open. The irony is Chambers Bay looks nothing like its neighbors. Our Pacific Northwest tour also included stops at Washington National Golf Club, The Golf Club at Newcastle, Inglewood Golf Club and Aldarra Golf Club. We didn’t see one turfgrass stand or hole that remotely resembles anything at Chambers Bay. “I hope people don’t have the impression that all of our courses are like Chambers Bay,” Still says. “It’s the only links course in the area, other than that one down in Bandon (Ore.).”

Before anybody considered building courses like Bandon Dunes and Chambers Bay, Still won three PGA Tour events. “When I got on Tour, hell, the grass … Golf courses were horse manure,” Still says. Alexander politely interrupts. “Well, I would add to that Mr. Still, the whole study of turfgrass science. In those days, there were probably some guys who were amazing at what they did, but it’s just like anything else,” Alexander says. “Is an automobile better now than it was in the 1950?”

This is a clubhouse conversation you never want to end. But the skies are clear and there’s a golf course to tour. Plus, the bill for Still’s time is creeping past $60.
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‘Environmentalists at heart’

Golf course architect Michael Hurdzan lauds the conservation efforts of superintendents.

By Rick Woelfel

Dr. Michael Hurdzan has devoted much of his life to the turf industry. Today he is one of America’s most respected golf course architects. Last month, he participated in a USGA symposium on golf course architecture along with fellow architects Gill Hanse, Robert Trent Jones II and Forrest Richardson.

Based in Columbus, Ohio, Hurdzan has been the managing partner of Hurdzan Golf Design since 2012. Prior to that, he had a 15-year partnership with architect Dana Fry. His design credits include Erin Hills ( Wis.), the site of the 2017 U.S. Open Championship, along with the renowned Militia Hill Course at Philadelphia Cricket Club, which will host the USGA Four Ball in 2020.

Hurdzan graduated from Ohio State and worked as a superintendent before deciding to make architecture his career. He is proud of the golf industry’s environmental record.

“They’re no question that almost all superintendents are environmentalists at heart,” he says. “They went into the business because they want to be outside. They want to be around nature and they have no interest in destroying it.”

Hurdzan is quick to point out that the industry has always been ahead of the curve on environmental issues. Even during his undergraduate days at Ohio State, he was reading Silent Spring by Rachel Carson, which warned of the dangers of pesticides. Hurdzan notes that in the 1950s products containing arsenic and lead were routinely used on golf courses; they were eventually outlawed.

Today, the issue is water. And with the summer of 2015 fast approaching, the golf industry is actively seeking ways to use less of it.

“Golf course have really led the way in developing the technology to save water,” Hurdzan says. “Everything from more efficient irrigation systems to the grasses that we use, to soil sensors. There’s no question that living plants need water and golf courses are able to do more with less compared to home growers and people that have irrigated front lawns.”
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Hurdzan notes that today’s strains of turfgrass need less water and nutrients than many golfers realize. “A plant is a pretty adaptable thing,” he says, “and it can get by with a lot less water, fertilizer and pesticide than we think that it can if we simply put it in the right condition.”

That will certainly be the case at Erin Hills, which opened in 2006 and hosted the U.S. Amateur five years later. Like Pinehurst last year and Chambers Bay later this year, Erin Hills will dispel the notion that a golf course must be green to be great.

“At Erin Hills, we simply put in a two-row irrigation system,” Hurdzan says. “Everybody else was putting in four rows. The middle of the fairways and everything else is going to go brown. We didn’t disturb the soil; all the grasses we used were fine fescue grasses that need less water and fertilizer. We didn’t till the soil. We simply killed the weeds so there was no loss of topsoil. Erin Hills is a good example of where you can apply all those principles and come up with a good golf course.”

This approach is getting a mixed reaction from the golfing public, which is not entirely surprising; Americans tend to prefer their golf courses lush and green. Hurdzan concedes that persuading golfers to accept turf conditions that are less than pristine isn’t easy.

“That is the challenge, frankly,” he says. “If you were to leave it up to the superintendents and the architects and the people who are administrators of the game like the USGA, there would be no problem. It’s just that golfers expect the golf course to be green. There’s some love affair with green and people are starting finally to come to the realization that water is a resource that we need to use carefully and one of the ways to do it is not use it in places where it’s not going to do any good. Golfers are our greatest challenge in being able to reduce the amount of water we use.”

Rick Woelfel is a Philadelphia-based writer and frequent GC&I contributor.

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**A NEW NEMATODE MINDSET**

The prevailing approach when battling nematodes was to hit them with one or two treatments a season and all would be well. However, as some superintendents can attest — often when the damage is already done — this method isn’t always the most successful or sustainable. Nematodes are hearty little buggers capable of withstanding extremes of both heat and cold, but they are manageable, says Syngenta’s Dr. Lane Tredway.

“Tredway proposes a season-long approach to controlling nematode populations and mitigating their damage to turf. He likens this new philosophy to managing fungicide pressure on a course.”

“There are a lot of similarities,” he says. “Even the best fungicides won’t eradicate disease from the soil. Nematodes are the same way.”

Turf is most susceptible to nematode damage at the root, especially when under environmental (heat, drought) or cultural (aerification) stress. Tredway suggests incorporating the fungicide product into the program to combat root stress and help protect the plant.

“When the root is wounded, the plant is more prone to infections,” he says. “Along with this root damage we see a lot of fungi — Bermudagrass decline, pythium root rot — coming in behind. A product like Heritage (a systemic strobilurin) performs the same function as Neosporin on a cut.”

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**FROM THE FEED**

We didn’t just ask select superintendents about preferred fairway mowing patterns for a feature story beginning on page 44. We asked our Twitter followers their preferences as part of our #Toro101 spring prep program.

- **Chris Tritabaugh**
  @ct_turf
  My preference is one direction tee to green. Can’t always make it work though. Then half & half. @ToroGolf

- **Joshua Hicks**
  @AlexandriaSuper
  I prefer stripes but on Bermuda that doesn’t work well...half and half works nice at our place

- **Matthew Wharton**
  @CGC2Greenkeeper
  If had resources & time prefer one direction like @ TheMasters. Currently half & half. @CGC1929. #oldschool #Toro101

- **Matt Wagner**
  @Wiggleses
  Straight, left to right, right to left, repeat. 50/50 when you need to save time.

- **Phillip Vines**
  @PhillipVines
  @GCilmagazine @ToroGolf
  Aesthetic: 1 direction, tee to green, with border mowed from green to tee #contrast.
  BMP: alternate mowing directions

- **Scott Wilki**
  @Ootanua
  one direction, tee to green. #nstripes

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THERE’S AN APP FOR THAT

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.

Various estimates put the number of apps at more than 2.5 million, up from about 800 in 2008, when software designed to run on smartphones and other mobile devices first burst onto the scene. Research giant Nielsen reports that 89 percent of consumers’ media time is now spent on mobile apps. As Matt Galligan, the entrepreneurial creator of several tech solutions, says, “The future of mobile is the future of everything.”

Among the apps available for download is one that allows you to summon up an instant dose of good luck (Lucky Spell), useful when dark clouds move over the course the morning of the member-guest; one that encourages you to get off the couch and to the gym (Gym Shamer); and one that teaches the finer points of sword swallowing (iSword). Hint: It’s not for everyone.

Superintendents are among apps’ biggest fans. Wherever I go, I see you peering into your smartphones. Since you’re out all watching cat videos, I began to wonder what are the most popular and useful apps among turfheads.

Bryan Stromme, Chicago-based regional director of agronomy for Billy Casper Golf, says he uses Evernote and Dropbox to store notes and large files. He relies on airline and hotel apps, including those from Avis and Southwest Airlines, in his travels and uses Beat the Traffic when he’s traveling by car.

Like many, John Cunningham, superintendent at Belleview Country Club in St. Louis, looks to his mobile device routinely for weather and climatological information, favoring Weather Channel and SunSeeker. Having hosted the 2013 Senior PGA Championship and preparing for the 100th PGA Championship in 2018, Cunningham calls on Duolingo to improve his second-language skills for communicating with his crew.

Whether tracking seasonal sunlight impacts via SunSurveyor or double-checking quantity conversions through UnitConverter, Jim Wyffels, the director of golf operations at Spirit Hollow Golf Club in Burlington, Iowa, swears by the information he pulls from mobile apps.

Michael Dermott, golf course superintendent at Oakdale Golf & Country Club near Toronto, uses supplier connections like Toro NSN Irrigation for remote access and Syngenta Greencast for problem-solving and field research.

Seeking work/life balance is a grail-like quest. In addition to the standard-issue resources available for completing work, Strommne lets CamCard and CamScanner process business cards and documents to allow more time for Netflix. He and his wife use AnyList to share and keep up with family and household chores.

For collecting and sorting the news of the day, two resources – Skimm and Flipboard – pop up on many handheld devices in the field. Each enables personalized news aggregation selected by the user.

In addition to apps, supers are heavy users of other technology. Camera features imbedded within mobile devices get a heavy workout by superintendents. The ability to photograph field conditions, coloration irregularities, distribution of turf and soil conditions and to direct a visual record to trusted academicians is routinely cited by superintendents as one of their most valuable tools.

They also recognize the knowledge stored at top turf and agronomic schools and among respected scientists. Jared Nemitz, director of golf course and grounds at The Peninsula Club in Cornelius, N.C., taps into the Turf Pathology team at NC State when he needs immediate information.

The USGA Green Section is a treasure-trove of knowledge. Dr. Kimberly Erusaha, managing director, and her team of regional agronomists have seen thousands of golf courses and challenging circumstances. USGA Turfgrass and Environmental Research Online is a ready-resource for golf course operators needing deeper background and understanding.

What’s next? “Drones are already in use and I’m sure we are only scratching the surface of their use,” says Stromme. “The possibilities for operations and agronomy are limitless.”

At The Oaks Club in Osprey, Fla., superintendent Nick Kearns has tracked the progress of his Heron Course renovation using his own store-bought drone. In addition to following field progress and monitoring work, Kearns has provided regular town-hall updates and walking tours for members unable to walk the course while it is under construction.

Whether you’re a superintendent who began your career in pre-Internet days or part of the current generation that wouldn’t leave home without your smartphone, apps and other forms of technology make your job easier and you more effective.
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FINESSING THE FESCUE

The U.S. Open at Chambers Bay brings attention to a temperamental turfgrass seldom used on every part of an American golf course.

By Guy Cipriano

This has never been attempted. U.S. Open in the Pacific Northwest. Abandoned gravel and sand mine. Municipal course operated by a management company. In an industry where science aids turfgrass managers, what will happen at Chambers Bay, a vast property along the Puget Sound in University Place, Wash., next month ranks among the biggest agronomic experiments in American golf history.

The United States Golf Association is bringing its signature event to an 8-year-old course with fine fescue tees, fairways and, yes, even greens. There’s no guide to finessing fescue for a U.S. Open while supporting 35,000 rounds per year, and the volume of American-focused research on fine fescue greens is limited compared to other turfgrass varieties.

If such a thing as an American fine fescue cul-
ture exists, its origins can be traced to the system that prepared Chambers Bay director of agronomy Eric Johnson and superintendent Josh Lewis for their current positions. Johnson and Lewis work for KemperSports, the Illinois-based company that manages Chambers Bay, which is owned by Pierce County, Wash. KemperSports also manages Bandon Dunes, a renowned resort along the Oregon Coast 380 miles south of Chambers Bay.

Few considered the possibility of wall-to-wall fescue on an American golf course until businessman Mike Keiser combined with European agronomist Jimmy Kidd and his golf course architect son David McKay Kidd to bring bold, throwback philosophies to Bandon. Johnson arrived at Bandon Dunes in 2001 following a stint at Spyglass Hill, a famed course along California’s Monterey Peninsula with Poa annua and ryegrass playing surfaces. Lewis arrived at Bandon a year later. “There’s no fine fescue school or class,” Johnson says. “It’s on-the-job training.”

On a clear, 70-degree afternoon 52 days before the U.S. Open, Johnson and Lewis are discussing their maintenance practices. They are asked about the daily challenges fine fescue presents. The question is as open as the course they maintain. Johnson and Lewis are both temporarily stumped, a sign they are so focused on their work that it never occurs to them as something abnormal. “It makes it hard to answer that because both of us spent time at Bandon Dunes and this is very similar to that,” Lewis says. Johnson takes another crack at offering an answer. “I guess acreage-wise you would have to get away from a fescue golf course to find something else that compares,” he says. “We are a lot bigger than most average golf courses.”

The scope of Chambers Bay is startling. The view from the multi-use trail above the course makes the site appear large enough to fit 54 holes. USGA Green Section director of championship agronomy Darin Bevard made his initial Chambers Bay visit in November. “The first thing that went through my mind was the size of the place, just the acreage involved for maintenance,” he says.

Chambers Bay includes 35 acres of fairways and the tees and greens average 21,041 and 8,700 square feet, respectively. Merion Golf Club, the site of the 2013 U.S. Open, had 18 acres of fairways with average tee and green sizes of 3,000 and 6,000 square feet, respectively. USGA executive director Mike Davis succinctly calls Chambers Bay “a bold site.”

**WALK THIS WAY**

A bold decision made by a politician led to Chambers Bay becoming the first wall-to-wall fescue course to host a U.S. Open. Pierce County purchased the property, which rests along the Puget Sound, in 1992. At the time, 165 million tons of gravel had been mined at the site.

The site also featured large amounts of sand, a valuable commodity in the golf industry. Multiple Pacific Northwest golf course, including the Tom Fazio-designed Aldarra Golf Club in nearby Sammamish, Wash., sit atop sand mined from Chambers Bay. A solid base of sand means good drainage, which increases the design options for golf course architects.

Easy access to sand, Championship course. Stunning scenery. Politicians looking to leave a legacy. Climate with year-round golf opportunities. The success at Bandon Dunes. It’s no wonder Pierce County received proposals from more than 50 golf course architects. The list was trimmed to five finalists, and Robert Trent Jones II unveiled its plans for a links course during an interview on Jan. 20, 2004.

“We explained that the reason why the site was so special was because it had all the ingredients to create a true links experience,” says Jay Blasi, an RTJII at the time. “First of all, you are in the Pacific Northwest, which is really the only spot in America where you can have true links in terms of the maritime climate. And the site itself was a former sand and gravel mine. A golf architect’s greatest natural resource is sandy soil. The sand in the big pit was a gold mine, and you couple those two things together and you have the opportunity to utilize fescue and get the firm, fast playing conditions.”

Lulls in activity are expected when politicians are the developers in a golf course project. Construction at Chambers Bay didn’t begin until the fall of 2005, and earlier in the year Pierce County executive John Ladenburg made what Blasi, who now operates his own architecture firm, calls “the biggest decision” in the creation of Chambers Bay: prohibiting carts. Fine fescue and carts mix as well as dry 100-degree days and bentgrass. Ladenburg sacrificed revenue in the spirit of links golf. A decision to permit carts would have forced RTJII to revamp its design, Blasi says.

On the surface, a wall-to-wall fescue golf course should be an attractive option considering the industry’s increasing
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emphasis on resource management. For starters, fescue requires less water and fertility than other turfgrass varieties, according to Oregon State turfgrass specialist Alex Kowalewski.

Chris Condon, the superintendent at Tetherow Golf Club, a David McLay Kidd design in Bend, Ore., is maintaining a course with a fine fescue-colonial bentgrass blend on its playing surfaces. When Tetherow, which opened in 2008, was under construction, Condon maintained a bent-Poa course in Bend. He estimates that fine fescue requires half as much water, nitrogen and mowing/labor as bent-Poa. "That's kind of what I always felt," Condon says. "You take a course here in town and cut it in half, and that's what we're working with."

Bend, an inland city in the Central Oregon, is 260 miles from Bandon, and temperatures swell past 90 degrees in summer and dip below freezing in winter. Bend receives an average of less than 12 inches of rain per year. Summer can be tricky, and Condon says it's "one of the grasses you can't bring back in a couple of days." Fine fescue, in short, turns brown when the plant is stressed.

"The thing with water is you have to kind of have some realistic expectations," Kowalewski says. "Perennial ryegrass and fine fescue are two different things. One is like a work truck, one is like a BMW. One is going to look really nice if you fertilize and water it. The fine fescue, on the other hand, in the summertime, if it's not being watered, it will go brown, but when the rains return in the fall, it will green back up and look really nice."

Wear tolerance, building seedbanks and repairing divots are other dilemmas posed by fine fescue. Chambers Bay, the regulation layouts at Bandon Dunes, Tetherow, Ballyneal (Colo.) Golf Club and Gamble Sands (Wash.) are among the American courses with some form of fine fescue on fairways and greens. Cart usage is either prohibited or discouraged at most of the above courses. "Traffic is a challenge no matter what type of turf you are maintaining, but this one is probably longer recovery time than anything else," Lewis says. "You really have to be proactive."

Chambers Bay limits its mowing to once per week during even mild winters like this past one, and supervisors must regularly educate crew members about preferred
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driving routes and techniques. “You’re not going to see any tight turns or anything like that,” Lewis says. “Roller damage is a big one. You have to be extra careful around greens. You may not hurt the grass, but you are going to see the tracks.”

Building seedbanks requires rigorous overseeding. Chambers Bay uses red and Chewings fescues on its greens, and the staff overseeded putting surfaces 14 times in 2014, according to Lewis. Extreme caution was displayed during that past winter. The course never closed for an extended period, although play was limited and multiple greens were closed at various times.

“The irony of that is — and there has been a lot of talk about it — most golf courses at that latitude where we would host a U.S. Open, they would just be closed in the wintertime anyway,” Bevard says. “In that climate, it’s unique because you have a lot of weather days where golf can be played and it can be played comfortably, but the grass is growing, so you have a chance to wear the grass out. They have done a great job of limiting play and traffic throughout the golf course, and that helps a ton.”

While green height for the U.S. Open is still being determined, Davis says they should run between 12 and 12.5 on the Stemppler. Fairways will be cut at .500.

As far as the divots, there’s no easy solution. They take much longer to heal compared to ones on other turfgrass varieties. “You have to be patient,” Johnson says. “You’re not getting instant gratification

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**SWAPPING IDEAS**

So where does an American superintendent exchange information about fine fescue?

Chambers Bay’s Josh Lewis has found it at a place where no U.S. Open superintendent has dared to go: Twitter. Lewis has kept his popular @theturfyoda account active as he prepares for a course for a major championship.

“For me, it’s more about fescue than it is about the U.S. Open with the information that I put out there,” Lewis says. “I like to show people different ways of doing things, something that’s crazy outside the box. You don’t have to mow this grass at .095 to get it fast. We can mow it .200 and have greens rolling at 11. It’s just something different. It’s really sparked some interesting conversations and friendships.”

The pre-Twitter days also included some interesting conversations about fine fescue maintenance. Chambers Bay director of agronomy Eric Johnson was involved in the early grow-ins at Bandon Dunes and he remembers conversations with Jimmy Kidd and the agronomy team at Gleneagles in Scotland. The grow-in process at Bandon Dunes was refined with the construction of each course, and Johnson says the resort’s first superintendent Troy Russell and current director of agronomy Ken Nice were frequently seeking additional information about fine fescue. “Slowly over time connections were built,” Johnson says.

Bandon Dunes has hosted five USGA championships since 2006. The USGA has never conducted one of its three biggest events – the U.S. Open, U.S. Women’s Open and U.S. Senior Open – on a wall-to-wall fescue course. USGA executive director Mike Davis considers a superintendent “the most important person at the U.S. Open.” The Chambers Bay duo is especially important this year because of the lack of fine fescue knowledge in the U.S.

“I have leaned very heavily on Eric Johnson and Josh Lewis,” USGA Green Section director of championship agronomy Darin Bevard says. “Those guys coming from Bandon have a lot of experience with fescue and they have educated me. I have talked to some others about it, but primarily it has been Eric and Josh who have helped me understand it. And to their credit, everything to date that they have predicted would happen in terms of recovery and everything else has certainly happened.”
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THE FESCUE OPTION
This marks the second straight year the U.S. Open could spark an agronomic debate. Chambers Bay doesn’t feature the history of Pinehurst No. 2, but it’s a walking-only course with a turfgrass variety that plays perhaps faster and firmer than anything ever experienced at a U.S. Open. Fine fescue blades are round, bentgrass blades are flat. Balls skid off fescue while they often stop on bentgrass.

Hard, brown turf covered Chambers Bay when it hosted the 2010 U.S. Amateur, which served as a trial run for the U.S. Open. Firsthand observations and data collected during the tournament resulted in modifications to 10 holes. “We learned a lot about Chambers Bay and its nuances,” Davis says. “We basically had the golf course too firm, even though we tried to take away some of that firmness before stroke play started. We didn’t quite get there – and we essentially flooded the golf course the evening when stroke play ended.” The U.S. Amateur is conducted in August, two months after the U.S. Open and area superintendents say June is a considerably wetter than August in the Seattle-Tacoma region.

Debates about turf removal, irrigation practices and brown turf providing acceptable playing conditions ensued after the 2014 U.S. Open at Pinehurst. Will similar conversations about fine fescue follow this year’s tournament?

“It will certainly raise more awareness with fine fescue, but I think the areas where it can be used and the circumstance under which it can be used will limit it,” Bevard says. “I don’t think it’s going to be a revolution where you see fine fescue all over golf courses, just because of the traffic issue.”

Oregon State started an in-depth fine fescue trial last year and portions of the study will examine wear tolerance. “It seems to be one of the grasses of the future because of its sustainable characteristics,” Kowalewski says.

The financial sustainability of golf facilities could be the biggest barrier to widespread wall-to-wall fescue use. The dreamers, builders and maintainers involved in Chambers Bay gambled by constructing a course where carts are discouraged and brown turf is sometimes encouraged. It’s a combination seldom seen in American golf.
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WHAT COULD POSSIBLY GO WRONG?

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@jeffreybrauer.com.

“What could possibly go wrong?” While often said jokingly, when it’s your renovation project (and money) on the line, the question becomes quite serious.

A recent NGF/Sirius Golf Advisors study of municipal golf course renovations in the Dallas area showed all but one produced positive return on investment. The average statistics proved overwhelmingly positive, but an individual project’s financial success ranged from marginal to spectacular. Anyone considering renovation probably wants to avoid either negative or marginal returns.

Yes, things can go wrong. As NGF notes, the most successful renovations bring together everything extremely well to “re-brand” themselves as totally new facilities with better image and experience, driving golfers to their course. There are also some well-known examples of courses that don’t renovate well, don’t meet expectations and struggle financially. (Of course, the most spectacular of these make the non-golf news....) And, there are many other renovations that simply don’t do as well as expected. Based on my observations and those of other experts, here are some fairly common pitfalls.

POOR MANAGEMENT, MAINTENANCE AND CUSTOMER SERVICE
Creating the desired re-branding requires excellence in design, design engineering (drainage, irrigation, paths) maintenance, marketing, management and customer service, to justify the higher greens fees you will need. If the new design is great, but maintenance and service haven’t improved, it may appear to golfers as “the same old place.”

To create a new mindset among golfers, you need to create a new mindset among your employees, which is not always easy. Falling back into poor maintenance practices and deferred capital spending (which forced the renovation you just completed) happens far too easily.

FAILURE TO ADVERTISE/MARKET/RE-BRAND
Even the best renovated courses require extensive marketing to be successful. A new and improved product means nothing without “pre-opening buzz.”

OVER SPENDING
There are several very well-known news reports of municipalities grossly overspending – with budgets of $10, $20, $30 million or more, which most in the golf business know cannot be paid back on a stand-alone basis. Some local governments ignore this or are convinced their project has “intangible” community benefits that they are willing to subsidize.

Golfers do pay more for better golf, but they have their limits. For stand-alone financial success, your market analysis can’t overestimate new revenues and your architect can’t be extravagant. Golfers won’t pay for “gold plated” (or probably even brushed aggregate) cart paths, no matter how nice. In general, every penny counts in both actual cost and added value.

JJ Keegan of Golf Convergence Inc., a Colorado-based consultant, sees few projects spending over $4 million that “pencil out.” In addition, he notes that many fail to plan for near future capital expenditures, reserve funds and contingency, etc. It pays to be conservative, and keep contingencies.

UNDER SPENDING
Many public course budgets started out “tight,” only to tighten up even further, as the budget is slowly diverted to things outside the original golf construction estimates, or simply lost to inflation when projects are delayed for years, without inflationary budget increases.

While typical of many budgeting processes, this result in reduced improvements, while revenue expectations remain unchanged. Naturally, the financial projections are harder to meet. Many renovations are initiated to “catch up” on decades of deferred capital spending. If your renovation inadequately fixes your problems, the deferred spending cycle starts again, with too much of a head start.

The best performers in the NGF study spent $2-5 million. Lower budget projects seemingly didn’t fix important problems, much less improve image. Spending too little is not the same as spending wisely.

(BRAUER continues on page 65)
Stress reduction claims should originate from a research department, not a marketing department.

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More companies, products and recognizable names are involved in Precision Turf Management. But is the industry closer to widespread adoption?

The answer is complex. Devices such as soil moisture meters have transitioned from a curiosity with a few dozen users to a go-to water management tool deployed by thousands of superintendents and irrigation technicians. If you’re operating a course in Arizona, California, Nevada and Texas and you’re not regularly collecting soil moisture data, a drought becomes more difficult to endure.

Soil moisture data, coincidentally, led to an influential Pennsylvania superintendent embracing the correlation between data management and input levels. Merion Golf Club, where Matt Shaffer has overseen the golf course operations since 2002, had entered a dire situation as it prepared to host the 2005 United States Amateur, an event with the potential to bring an even bigger prize to suburban Philadelphia.

“It was really a critical championship to Merion with regards to whether they could get the U.S. Open eventually,” Shaffer says. “It was one of the worst summers Philadelphia had seen in years. It was brutally hot and wet. It was overly disgusting. Quite honestly, we were in trouble.”

Shaffer leaned on his mentor, Paul Latshaw Sr., who referred him to Walt Norley and his underground soil moisture sensors. In Shaffer’s words, Latshaw “badgered” him to place a few sensors below
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Merion’s turf. “I was just blown away off the bat,” Shafer says. “I was thoroughly convinced I knew how wet the greens were, I was thoroughly convinced I knew the soil temperature, when in fact, everything was wetter and everything was hotter than I originally thought.”

Merion immediately altered its practices, venting turf late in the afternoon and mowing at the coolest time of the day, which happened to be 3:30 a.m. The sensor data also hinted at when turf was ripe for diseases. Norley left the golf industry, but recently returned to launch OnGolf, a cloud-based platform providing actionable analytics and recommendations to superintendents. Shafer has joined Norley as OnGolf’s co-founder. OnGolf has agreements to integrate its technology with multiple PTM-related companies.

Plenty has changed in the golf industry in the past decade, and Merion hosted a successful U.S. Open in 2013. Shafer added former Atlantic City (N.J.) Country Club superintendent Dave McDonald as project manager in 2008. Data collection represents one of McDonald’s primary responsibilities. The data he analyzes helps Shafer make decisions on inputs.

Trinity Forest Golf Club director of grounds Kasey Kauff is making decisions on inputs before golfers step on his course. Trinity Forest, a Bill Coore/Ben Crenshaw design in Dallas, doesn’t open until 2016. But past experiences at Eagle Pointe (N.C.) Country Club, Atlanta Athletic Club and Country Club of Orlando convinced Kauff to implement PTM practices at Trinity Forest. With guidance from NuTec Soil owner Marcus Thigpen, Kauff has already collected soil samples using GPS mapping. The samples are proving that not all soils are equal, and the data will help Kauff determine future input levels.

“Anytime you are building a golf course you are moving dirt from here to over there,” Kauff says. “Well, that dirt might have been managed differently throughout the years before you were there, so now you might have mismanaged soil here and managed soil over there. Your soil is different throughout the golf course.”

PTM practices such as GPS mapping were met with skepticism when Thigpen brought his soil sampling methods from agriculture to the golf industry. Once superintendents are exposed to the technology and understand how to integrate it into their daily routines, skeptics are flipped into promoters, he says. Similar mentalities greeted Thigpen when he introduced GPS technology to farmers.

“When I started, people thought I was a nutcase,” he says. “Then other guys got into and people thought, ‘Well, there’s something to this technology.’ Then, it spread like a wildfire. There is not a farmer
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today that of any size that’s not using the technology.”

Nobody considers those selling PTM-related offerings to superintendents nuts-case. But two barriers to widespread adoption exist in 2015: cost and the perception it adds to a superintendent’s workload. GCI’s 2015 State of the Industry research indicates a rebound in golf industry spending, although Thigpen says the economic downturn from 2008-13 might have strengthened the case for PTM. “The slowdown actually helped us from the standpoint that people were looking to save money,” he says.

Companies involved in PTM claim upfront costs will eventually be defrayed because of savings created by reducing inputs. Shaffer, for example, says an annual subscription to OnGolf is the equivalent to one spray application. Turflux and GreenSight Agronomics are among the other industry newcomers with PTM offerings. Turflux offers GPS-guided sprayer systems and GreenSight Agronomics provides superintendent course images through self-guided drones. Toro also is entering the PTM market with the release of its GPS-equipped Toro Multi Pro 5800 sprayer.

An increase in PTM-related ventures isn’t a coincidence.

“Superintendents accepted the data five years ago, but the difference is that people are willing to pay for it now,” says Winfield product manager Aaron Johnsen, whose company has unveiled its GeoTech Tool for satellite course mapping. Johnsen adds that the golf industry is in the “early-adopter stage” of PTM and estimates that less than 5 percent of superintendents are fully engaged in the practices.

Early adopters include:

■ Superintendents managing courses with water concerns. “Regions like Texas, Florida and California have been impacted by key drivers among other influencers such as water scarcity and it’s because of this we are seeing an increase in adoption,” Spectrum Technologies President Mike Thurow says.

■ Younger superintendents. OnGolf developed a program for early innovators, and they contacted superintendents in various demographics to determine potential reach. The results weren’t surprising. “Well, of course, it’s different,” Shaffer says. “50-year-old guys, it’s tough. 40-year-old guys, it’s like well … Guys in their 30s, it’s like, ‘I’m interested.’ Guys in their 20s, it’s like, ‘Where can I sign up?’ So, it’s a mentality issue.”

■ Superintendents managing courses with substantial budgets. “That savings of 5 to 10 percent for a course that has a $2 million budget … Whatever the percentage may be, that’s a big deal,” says Penn State associate professor Dr. John Kaminski, who recently jointed GreenSight Agronomics as its chief agronomic officer. “I think people are usually willing to use that technology.”

Kaminski’s fascination with PTM started in the late-2000s, when advances in
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data collection and mobile apps started offering benefits for researchers. Conversations that started last year with GreenSight Agronomics COO Joel Pedlikin, who has an aerospace background, led to Kaminski entering a PTM-related business venture.

Kaminski considers self-guided drones — and the images they collect — an important piece to helping golf solve its water issues, and Pedlikin says drones offer “big-picture” water data that can’t be collected on the ground.

“People are going to have to figure out a way to manage their water,” Kaminski says. “To me, that’s a no-brainer for people to get on board if you’re in an arid environment and you have to manage reductions in water. How do you cut back but still give the area that needs water, water? I think the technology is actually going to help these golf course superintendents that are struggling.”

And, according to Kaminski and others involved in PTM, the technology is becoming easier to use.

“Superintendents are overwhelmed with data right now and figuring out a way to have something sent to them and spit out to them in a way that’s understandable and actionable items come out of it is the key,” Kaminski says. “They can’t be staring at hundreds of pictures, saying, ‘What does this do? What does that do? They need something that basically prompts them and makes their life easier.’”

Other PTM applications also require minimal time investments, according to superintendents and company representatives. RTK (Real Time Kinematic) systems require circling a course once to establish a GPS map for spraying. Johnsen says learning to understand and use satellite images requires a “half-hour learning curve.” Kauff and his assistants at Trinity Forest needed just 45 minutes to learn how to create GPS maps based on soil samples.

Shaffer calls himself a “crisis manager,” and says data can now be arranged to immediately direct a superintendent to areas that need further exploring, thus eliminating the hours wasted studying parts of a course or operation with no problems.

“There’s going to be a lot of pushback and people are saying superintendents aren’t going to go out on the course anymore,” Shaffer says. “That’s not going to happen. But by the same token, they might be able to get unplugged for four hours for a soccer or lacrosse game.”

Guy Cipriano is GCI’s assistant editor.
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CUTS LIKE A KNIFE

Paul F. Grayson is the Equipment Manager for the Crown Golf Club in Traverse City, Mich., a position he’s held for the past decade. Previously, he spent 8½ years as the equipment manager at Grand Traverse Resort & Spa. Prior to that, he worked as a licensed ships engine officer sailing the Great Lakes and the oceans of the world.

The Crown Golf Club is a typical 18-hole course with a practice green and driving range. It’s located in a town with substantial tourist traffic, and is open to members and the public. As equipment manager, I run a small motor pool necessary for a course this size and, being typical, two of each kind of machine. Some of these machines have cutting edges that need to be sharpened regularly to maintain their efficiency.

SELF-SHARPENING REELS
Eleven of the 34 reels I take care of sharpen themselves. The technology has been available for about nine years, but I didn’t get them until about four years ago. The key to their success is the EdgeMax bedknife. The bedknife is set with a light pressure on the reel to continuously sharpen the reel. The bedknife takes off no more metal than I would backlapping and has the advantage of keeping the reel sharp continuously rather than going through the cycle of gradually getting dull until sharpened again. Minor dings in the reel are often cleared up by the bedknife before the machine in the shop. I plan to switch all the reels to the self-sharpening version. Next, I would like someone invent self-adjusting reels that automatically maintain the proper pressure between reel and bedknife.

REELS AND BENDORFES
A truly sharp blade has one flat face meeting another flat face at some angle with no rounded edge to reflect light between them; any reflection of light you see on the cutting edge is dullness that needs to be ground away.

The older, not self-sharpening reels require frequent backlapping and the bedknives require frequent face grinding to reveal a fresh edge. The backlapping, because of reels’ spiral design, causes the reels to become cone shaped over the course of the season. Spin grinding in the winter returns them to cylinder shape. Relief grinding thins the blades so less material needs to be removed when backlapping to find the new edge.

For greens mowers, I test the cut with a single thickness of copier paper. You should hear a clean, crisp cut all along the reel. For other mowers, I use two thicknesses of copier paper. Ideally, it would cut the first and hold the second, but adjusting a reel to do this takes about three times the amount of time as adjusting it for light contact. To save time, most people adjust the bedknives for light contact with the reel.

ROTARY MOWER BLADES
For the seven-deck Toro GroundsMaster 4700-D with high-lift, aggressive mulching rotary blades, if I wait until the blades are dull, it takes about 15 minutes of grinding per cutting edge to get a properly shaped edge. That is 3½ hours devoted to sharpening one mower’s blades.

The more frequently the blades are sharpened, the less metal you need to take off each time, and the quicker you’re done. The total amount of metal removed in a season is the same; you are just doing it in smaller amounts more frequently. The blade sharpening machine sales people recommend rotary blades be sharpened every eight hours of operation. This mower mows eight hours a day, five days a week, which means I should sharpen it every day. To prevent the mower from being out of service for any long period of time, I keep a second set of blades sharp that can be swapped out in about 15 minutes. Sharpening the dull set of blades can be done while the mower is out.

There are pencil sharpener-like automatic machines on the market to sharpen rotary blades; you put in a dull blade and take it out sharpened and balanced. The machines seem to be priced for large contract sharpening companies, not for small maintenance shops like mine. The compromise I have made is to use a 4½-inch DeWalt disk grinder to find the new edge with the blade clamped in a bench vise. Disk grinders are easier to control and faster cutting than the grinding wheel on the shops pedestal grinder.

OTHER EDGED WEAPONS
Other edged tools need sharpening, too. Sod cutters of various sizes are used for cutting sod. Cup cutters of regulation and novelty sizes need an especially sharp edge. The test is to drop them on the green, and they should stick like yard darts. There are loppers, hedge trimmers, chainsaws, scissors and chisels. In each case, the general goal of making the bright dullness line disappear is the trick.
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Drought. That word is a source of concern for a lot of people. Millions of Americans are being impacted by drought conditions and the number seemingly increases with each passing day.

But those in the turf industry have been dealing with the situation for some time. And while their solutions may not resolve every drought-related issue, a roadmap has been created that may be the golf industry’s route to survival in the months and years to come.

Dr. Leah Brilman has devoted more than three decades to turf research. She is presently the director of research and technical services for Seed Research of Oregon.

Brilman and her colleagues have devoted considerable time and energy to develop strains of turfgrass that will survive, if not thrive, in extremely dry conditions. But she says it’s only been in recent years that the industry has been paying attention.

“I would do some projects that looked at drought resistance,” Brilman says. “Then, it...
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seemed like nobody thought it was that important; it was important that [the turf] be dark green dwarf or high-intensity. And nobody would be willing to pay more or pay the same for something that was drought resistant.

“Early on in my career, it was kind of frustrating because even then I thought long term, this is where we’re going to have to be. So now people are starting to really pay attention.”

Murray Wingate is in charge of turfgrass sales for Lebanon Turf Products, which is headquartered in Lebanon, Pa, in the heart of the Mid-Atlantic transition zone. Wingate says the strains of turf that have reached the market in the last decade have been bred to survive in drought-like conditions.

more prevalent around the country, Wingate says superintendents are being more careful than ever.

“We’re probably just in the beginning stage of people who are thinking more about the drought tolerant component,” he says, “because of more prolonged drought periods. Before, it was primarily turf quality. [But] if drought tolerance isn’t higher on the totem pole, it is being thought about some more.”

With that in mind, golf facilities are increasingly seeking out strains of turfgrass that will survive and thrive in drier climates. Seed Research of Oregon and Lebanon Turf have joined forces with Mountain View Seeds in Salem, Ore., and multiple other players in the turf industry, including several academic institutions, to

“"I think those varieties have been out there for a little while now and people have experience with them. They look in terms of ‘How is this going to perform for me so I can use less water?’"

— Murray Wingate, Lebanon Turf Products

“The varieties that have come out over the last 10 years use less water than the varieties that were used 20, 30 or 50 years ago,” he says, “They have a package of things that were bred into them. They have better disease resistance and they are more drought tolerant.

“I think those varieties have been out there for a little while now and people have experience with them. They look in terms of ‘How is this going to perform for me so I can use less water?’”

Water is at the crux of all this. Increasingly, superintendents are searching for ways to use less of it, largely by choice, but sometimes by necessity. As this story was being prepared, the state of California was in the process of imposing mandatory water-use restrictions.

But those who maintain turf for a living have almost universally made it a practice to be judicious about their water usage. And with drought conditions becoming

launch the Alliance for Low Input Sustainable Turf or A-List.

This non-profit initiative is devoted to “Fostering development of sustainable turfgrass varieties and related products that perform their function with less maintenance inputs, thus benefiting the environment.”

In golf terms, this translates to developing strains of grass that will hold up not only under the stress of a dry climate but also under the demands of the sport.

“We still think the turf needs to be functional,” Brimman says. “If you’re on a golf course, it needs to use less water, but it also has to be wear-tolerant enough to take maybe 50,000 rounds a year. So you can’t sacrifice everything for drought.

“Breeding is a balancing act between multiple things. It can’t just be drought tolerant. It also has to have adequate turf quality and it also has to be disease resistant. If you get a disease like brown patch
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in tall fescue, I don’t care how drought tolerant it is, if it’s got brown patch, it’s not going to retain its drought tolerance.”

Kevin Morris serves as the executive director of the National Turfgrass Evaluation Program. Based in Baltimore, Morris oversees turfgrass evaluation trials for the United States Department of Agriculture. Morris notes more heat-tolerant grasses being used in cooler climates. In the Mid-Atlantic transition zone, tall fescue is becoming a viable alternative to Kentucky bluegrass.

“Tall fescue is being used much more in the Northeast and North Central Plains states than ever in the past,” he says. “It’s amazing how far north it’s being tried and even recommended by extension people. It’s too soon to tell if it’s going to be a lasting trend, but it’s definitely being used farther north than would have been 20 or 25 years ago.”

Morris is also seeing the increased use of Bermuda and Zoysia grasses, which are more commonly found in warmer climates, in lieu of bentgrass. It would not be totally unexpected to find a facility in the transition zone with Bermuda greens, for instance.

On the West Coast, Brilman has seen positive results with new strains of creeping bentgrass. In the East, Rutgers University is conducting its own ongoing series of trials with bentgrass.

Brilman notes that because of differences in the climate, a methodology that works in one part of the country will not necessarily be successful in another.

“In the East, most years, they get summer rains,” she says. “So what we want for something that is more drought tolerant is often something that will stay green longer or will green most of the time. It won’t go totally dormant, and then, as soon as it gets another rainfall, it bounces back to full greeniness. So you can almost make it persist without irrigation in some areas.

“In the Western U.S., it doesn’t work that way. Even in Oregon, we get rains in the winter, but we get no summer rains ... We will go at least 100 days without rain. And in most of the rest of the Western United States, they don’t even get as much winter rain as we do, so there is always going to be irrigation required. So what you’ve got to ask yourself is: How little water can you apply and still maintain that functional turf?”

Brilman says over the past five years or so she has noticed a growing trend toward super
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intendents in her part of the country using moisture meters on their putting surfaces. “They really know how much moisture they have in that green,” she says, “and whether they should irrigate instead of automatically turning it on and having it cycle X number of times during the week. It makes them better water stewards on their greens.”

Turf-related decisions have wide-ranging ramifications for superintendents. Apart from the issues related to drought resistance and durability, they must be conscious of their bottom line.

Tracy Mathis, the superintendent at Lulu Country Club outside Philadelphia, has embraced Regenerating Perennial Ryegrass, or RPR for short. Mathis first encountered this species when she was working in the Carolinas a few years back. It was first introduced in the U.S. in 2010 and in Europe two years later, where it is used in a number of soccer stadiums.

Mathis uses RPR on her roughs and fairways and finds it an effective countermeasure to drought and stress-related issues when a quick recovery is needed. “This particular rye was producing pseudostolons,” she says, “and reproduced a heck of a lot faster [than traditional ryegrass]. Their growth shoots emerge from auxiliary buds at the base of each plant. They root down and they can also produce another plant. This trait is not usually observed in regular ryegrass.”

Mathis is particularly impressed with the strain’s durability. “It’s very wear-tolerant,” she says. “Just like any other rye, it generates really, really, quick. It actually fills in a bigger area because of the fact that it can grow laterally, which ryegrass is not known for.”

Mathis points out that RPR, which is extremely heat and traffic tolerant, is particularly useful at venues with bentgrass fairways plagued by heat stress. “In the heat of the summer, there isn’t time to see if bent is going to fill in quickly,” she says. “You need it to fill in those scars quickly. The fact that it will grow laterally allows it to fill in a bigger area in a very short amount of time. It’s also very affordable.”

For Mathis, RPR proved effective. Every superintendent, of course, is dealing with their own unique circumstances. But thanks to some forward-thinking researchers and turfgrass scientists, they have the tools they need to deal with those circumstances.

Rick Woelfel is a Willow Grove, Pa.-based writer and frequent GCI contributor.
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YES, NO OR MAYBE?

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

With new course construction, there is usually a clubhouse built at some point. The irrigation is pretty straightforward as it is installed by whoever ends up doing the clubhouse landscaping — in most cases an outside contractor. The big decision is whether it has its own water source and/or control system or does it come from the golf course. It’s usually the same, but this doesn’t always hold true for large projects. The clubhouse often has its own supply, but if it’s your water, it should be under your control, regardless of whether you maintain the clubhouse grounds.

Courses often improve the clubhouse irrigation when the course irrigation system is upgraded. This may include the pool area, entrance, and tennis courts. The key question becomes, do you let the golf course irrigation contractor install the landscape irrigation system? In most cases, I would say no and for the same reasons I would not let the landscape irrigation contractor install the golf course irrigation system — a lack of experience. Just like landscape contractors are not familiar with installing golf systems, the golf course irrigation contractor, in most cases, is not used to installing small landscape irrigation systems. You may have had a great experience with your irrigation contractor, but that was not a landscape, it was a golf course.

Let’s look at the bigger issues. Most landscape contractors have never installed pipe greater than 2 inches and most golf contractors have never installed pipe less than 2 inches. Landscape contractors deal with two wires, both the same type; one wire per zone plus a common. Golf contractors use as many as 72 sprinkler wires, plus at least one common per controller, power wires, communication wires and possibly a shield wire. Other wires for special equipment, such as fountains and aerators, might also be included. Golf course contractors know how to ground and wire splice. Landscape contractors — for the most part — don’t. Then, there is the issue of thrust blocking … need I say more?

Price is the other big issue. Golf contractors figure their labor costs like they’re installing for golf. As a result, the landscape irrigation system is double or more what a landscape contractor charges. Part of this is they never seem to get the materials right. They use swing joints as opposed to swing pipe, they use HDPE pipe in small sizes instead of PE pipe. They overdo it with fitting type and strength and put the pipe in too deep. No wonder the costs are high. It is impossible to get the price on the landscape irrigation from the golf irrigation installer.

Recently, I worked on three different clubhouse projects. One was a private course building a large clubhouse. The second an existing private course getting a pro shop, tennis courts, cart barn, parking, pool house and clubhouse addition with new landscape, but the landscape had been installed before the irrigation. The third was irrigation for existing clubhouse landscape at a public course. The new and existing landscape projects were getting controllers. The third expanded several existing course controllers. All were to communicate with the course’s central control system and were receiving water from the course piping system.

The new clubhouse project irrigation was extensive. The cost from the golf irrigation contractor was almost as much as the cost of the 18-hole system! Basically, the contractor used inappropriate materials, was installing too deep and had too much labor (6,000 hours). Just doing the materials correctly was a $125,000 savings. On the course with the installed landscape, they asked the golf irrigation contractor last October to provide a clubhouse price from an irrigation design plan. They are still waiting.

When doing clubhouse and landscape irrigation on your course, weight your options so you get a well-installed irrigation system from an experienced landscape irrigation contractor at an economical price.
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Mow money or eye candy? 
Superintendents weigh the merits and examine the debate between classic cut and striping.

By Jim Dunlap

While many golfers and superintendents prefer striping’s visual appeal, the economic realities of today’s golf industry lead superintendents toward the “classic cut,” called by others the “half-moon” or “saddle cut” mowing pattern. There are other techniques, including “contour” mowing which produces a curved striping effect as mowers follow a fairway’s twists, turns and slopes and the “push-pull” strategy which involves “pushing” mowers from tee to green and then “pulling” them from green to tee to produce a uniform look with no striping. Some superintendents even interchange their mowing techniques at different times of the year, due to agronomic, labor, weather or course traffic conditions. For most courses, however, it’s a matter of preference between the classic cut and striping methods. More frequently the economic advantages of the classic cut or half-moon technique are tilting the decision in that direction.

Paul Carter, CGCS, superintendent at The Bear Trace at Harrison Bay course in Harrison, Tenn., was fairly certain switching from striping to classic cut a year-and-a-half ago would relieve the strain on his maintenance budget, and after the first season of the change, he had the numbers to prove it.
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“We started the classic cut last year after striping before, and we saved 312 man hours for the year,” Carter says. “We also saved 811 gallons of diesel from the year before and had a huge reduction in our carbon emissions. There was also a big savings in time. We start mowing two hours before the first tee time and we never got caught [by golfers]. We’d finish by 9:30 or 10 with two mowers, where with stripes it would take until 12:00 or 12:30, and we’d get caught by play on the 12th or 13th hole, so guys would have to sit on the mowers while people played through. Now, I can have them start on other jobs because they’re through so early.”

In Atlanta, Carter’s friend Ralph Kepple, CGCS, at East Lake Country Club, is not surprised at Carter’s numbers, although his own reasons for preferring the classic cut are more about aesthetics and tradition than economics.

“We’re an old classic Donald Ross golf course, so I feel it fits because of how they used to mow in the old days with those old gang mowers,” Kepple says. “When we were mowing stripes, we were beating the rough up for the Tour Championship with all that turning around. And, personally, I don’t think striping looks all that good to my eye. Another advantage [of the classic cut] is the center line you get helps the average golfer’s alignment. Not so much the pros, but regular golfers like our members.”

Another Georgia club which hosts an annual tournament of some note is Augusta National Golf Club, where Justin Sams, the superintendent of the Aults Club in Roland, Ark., spent five years on the maintenance staff. While he is aware the majority of clubs don’t have Augusta’s maintenance budget and can’t afford a

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fleets of mowers and operators to do the one-color perfection Augusta presents every April, he brought the Augusta disdain for striping with him to his job.

“When I took this position in May 2012, stripes were 100 percent burnt in,” Sims says. “I changed that right away. We switched to the half-moon look, up one side and down the other. We mow an infinite number of patterns. We never mow the same direction back-to-back. I’m 100 percent against burning in lines for striping. It’s hard on warm-season turfgrasses like Bermuda or zoysia. Grass grown laterally if it’s burnt in over and over, grows laterally rather than vertically, and makes for a poor lie, too.”

Over long periods, that lateral growth creates what one superintendent calls “leggy” turf, with blades extending laterally across the surface. That was what Sims found when he arrived at the Alotian Club. “When I got here, they were mowing at a little less than an inch,” he says. “Oh my God, you could make the grass stand up to around 2 inches because it was growing laterally. The first time we mowed with the classic cut, we almost needed a hay baler to pick up the grass.”

Sims admits some people like the look of striping, and he occasionally has his staff mow stripes into certain parts of the course for either a change or to relieve traditional mowing patterns, but he tries to avoid striping on back-to-back days. If required, Sims has his operators mow in the opposite direction to avoid burning in the stripes. “We have 100 acres of fairway,” he says. “It would take us two to three days to stripe it all.”

For Justin VanLanduit, superintendent of Briarwood Country Club in Deerfield, Ill., the decision to classic cut has been an economic necessity. Seasonal labor shortages and tight equipment budgets tilted the balance toward the classic-cut approach.

“We used to stripe everything, but in the spring and fall when we didn’t have a full staff, we could do it with...
two mowers, but when you're down three to four guys because it's hard to find labor and qualified labor during the busy season, it's hard," he says. "We're only 18 holes, but if we wanted to stripe the whole course in the right amount of time, we'd have to send out four mowers. Those are $50,000-$60,000 these days, so if we go to the classic cut, we can eliminate at least one mower from the budget. And, if you have four machines, you need four operators. I would say that from what I'm seeing on Twitter or hearing at the GCSAA show, at least 30-40 percent of superintendents have recently gone to the classic cut."

Courses don't have to host televised events to advocate the striping approach. Memberships and boards, and some superintendents, simply prefer the look and will accommodate the additional budget expense. Others may be unaware their preferred stripes may be costing them

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Another advantage the classic cut provides is the center line that helps the average golfer with their alignment.

money and creating some conditioning issues.

Superintendent Garrett Turner burns stripes into fairways at The Reserve at Moonlight Basin in Big Sky, Mont., for the majority of the club’s short golfing season, although he takes steps toward the end of the season to mow in the opposite direction and restore vertical turf growth.

“I never cared for the half-moon look,” he says. “We used to mow 12 to 6, 8 to 2 and 10 to 4, but now we mow in two different directions, depending on the shape of the fairway, like whether it’s a dogleg or not. We mow tee to landing area and then landing area to green, and switch the next time. If we had the resources, I’d mow all the fairways in the same direction all the time, but we don’t.”

Matt Kregel, superintendent at The Club at Strawberry Creek in Kenosha, Wis., has a different reason for adopting the striping pattern at the links-style course built in 2004-05. It’s a rationale based on the same more efficient productivity that leads other superintendents to go with the classic cut. “The fairway lines go everywhere, kind of darting in and out,” he says. “A few years back, we tried the traditional or classic cut, but we found it wasn’t quicker, and it actually took more time to mow the 45 acres of fairway on our 18-hole course, so we went back to striping. We consistently burn in lines, whether we start from the left or right side of the tee or go side-to-side. If we want to get rid of some of the grain, we’ll go side-to-side, and the way our course is laid out, that doesn’t really slow us down.”

The grain Kregel mentions is brought up in mowing pattern discussions on both fairways and greens. Augusta National mows everything in one direction, alternating during their season with green-to-tee and tee-to-green patterns, Sims says, then for The Masters mows everything from green to tee to create the one-look perfection for TV. Some theorize they create grain to go against the players and mitigate the length advantage of some of the Tour’s bombers. Several superintendents, however, scoffed at the supposed added roll created by tee-to-green mowing, saying any advantage can be measured in inches or a foot or two, rather than yards.

While the amount of turns required to create the striping pattern, whether vertical-horizontal or diagonal, especially those in the rough, are cited as major factors in time, wear-and-tear and, inevitably, expense, the classic cut approach can run into some of the same problems if repeated regularly. East Lake’s Keple, who is otherwise a big fan of the classic cut, admits a frequent diet of that pattern creates turf compaction at the edges of the rough and the greens surround edges where the mowers turn, and will be doing some deep tine aeration to correct that this season.
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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 or on Twitter @TimMoraghan

I’m writing this column while watching the last round of the Masters, the event that says a new golf year has begun. In professional golf, the future looks to be in good hands. Thank you, Jordan Spieth and Rory McIlroy. And thank you, Tiger and Phil, for still making a case for the “old guys.”

I’m looking forward to many spirited battles between the generations.

Looking at our world — “real” golf and the work we do to keep it fresh, interesting and safe — I’m feeling pretty good about where we are and where we are heading, but I’m also wary. All is not perfect and we need to stay aware. Whether you are a “young gun” or an old fart, I suggest keeping the following in mind as you get ready for the new season.

WATER

The use and lack of it will be our biggest concerns for years to come. Look at the terrible drought conditions in the West, especially California, and you can understand why golf courses and other major users of irrigation will be under the microscope. Which is why the smartest thing we can do with water is to use as little of it as possible. Even though courses account for less than 1 percent of the water used in the U.S., we will be very visible targets. Be prepared.

Many of our fellow superintendents will be severely tested trying to make the best of a difficult situation. They will face water restrictions that could affect how they do their jobs, even if they keep their jobs. And all this while it’s their members and guests who are washing their Ferraris and taking long, hot post-round showers.

THE AURA OF AUGusta

Speaking of water always gets me thinking about Augusta. I admit I love almost everything about the Masters: the history, traditions, competition, much of the design. However, it’s agronomic Disneyland, and about as far from reality as our industry can go. It will always be that way. With its unlimited resources — money, labor, equipment, chemicals — Augusta National can afford to be, well, Augusta National. Unless you have the same deep pockets, you shouldn’t even try.

If you’re in the Northeast and your course is just coming back into view (has the snow melted yet?), bear in mind that you can’t have Augusta-like conditions in a month, and probably not by season’s end, either. Nor do you want them. Trying to keep up with the Bobby Joneses is impractical, expensive, not very good for the turf long-term, and, let’s be honest, most of your golfers aren’t good enough to play it or appreciate it.

When someone on your green committee asks why the course doesn’t look like Augusta, ask right back when they’re going to quadruple your maintenance budget. And even then it might not be enough.

ONLINE AGRONOMY

I’ll bet that at some point in the next few months, one of your members/golfers will say to you something like this. “Hey, Bob, you know those brown spots on the 12th green? Well, I went onto the Internet and found out how to fix them.”

How will you respond?

In this age of WebMD, online legal and marital advice, and everything else just a click away, you have to be ready for the “Internet savvy” golfer who thinks whatever they read on their screens is the gospel truth. Especially if they think it will make their golf course better.

“Super and golfer, put your ego aside. The only time the course should play hard is during the club championship or some other day (a special outing, hosting a local event) when low-handicappers outnumber duffers.”

I suggest you thank Mr. Google for taking the time and trouble to look into the problem, and say that you’ll do some more research, too, but, in fact, you’re already well aware of the problem and working on it. (If you’re not, that’s another issue.)

But also say that while the suggestion could have some merit, reading about course maintenance on the web is a little like practicing self-surgery: That is, there’s more to the solution than just getting some simplified information. And even if the writer is an expert in agronomy, he’s not dealing with the specific situations you face at your course, anything from water restrictions to geography to tight
budgets. Ask your helpful member if all the Internet advice in his business is dead solid perfect.

Do it politely, but also make sure to get across that you’re the expert. Then fix the problem.

IT’S SUPPOSED TO BE FUN
Something else I think of when watching the Masters is that the only way I’m getting a green jacket is to buy one. I’m just not that good. And neither are the golfers at your course.

Both superintendents and golfers should remember that the game is supposed to be fun. Take a good, hard look at how your golf course is set up. The priority should be the enjoyment of those who play. Super and golfer, put your ego aside. The only time the course should play hard is during the club championship or some other day (a special outing, hosting a local event) when low-handicappers outnumber duffers.

Course setup has a huge effect on how golfers feel about the course and their games. You want people to play at a reasonable pace, score reasonably well based on their abilities, and have fun. Happy golfers are happy customers (or members), which keeps the superintendents happy, too. And employed.

Ask the pro when the good players are coming. On every other day (the vast majority of them), make the course fair and fun, not hard. And be sure to educate your staff so they get it, too.

NEW YEAR, OLD PROBLEMS?
It’s a new golf season, and just like on Jan. 2, time to look back and think, “What can I learn from last year?” Your job is hard enough without repeating last year’s mistakes. So what did you learn — good and bad — from last season that you need to remember this year?

Take a few minutes every day to review processes and procedures that worked, and those that didn’t. Make

notes, stay informed and maintain regular communication with your staff and club management.

Perhaps the most important thing to remember is that you are not alone. But you only get the benefit of others’ assistance — their knowledge, hard work and camaraderie — if you keep them in the loop and part of the team.

It’s a new year: Make the most of it. GCI
CONSTRUCTION

PULL THE TIE

DETERMINE WHEN AND WHY TO RENOVATE AND OVERCOME ANY INTERNAL APPREHENSION ABOUT ENGAGING ON A COURSE IMPROVEMENT PROJECT.

by Larry Hirsh
While almost every club today is faced with the issue of course renovation, pulling the trigger on that project has never been so difficult.

It used to be simpler: the reasons for renovation piled up (irrigation system, bunker drainage, turf conditions on the greens), money was amassed or financed, and all underperforming course elements were addressed as part of a comprehensive renovation. Those days are gone. Course issues continue to pile up, naturally, but club finances and prevailing market forces now oblige clubs to peck away at these upgrades, one or two at a time—while always keeping the course open (and revenues flowing).

We’ve talked in this space before about the need for superintendents to compile and maintain long-term course maintenance plans. A major reason why: To chart and prioritize course elements in need of upgrade. In this age of selective renovation, this has never been more important.

But let’s take things a couple steps further, because any such long-term maintenance plan must be considered in light of the club’s position in the local marketplace. This is information that superintendents, general managers and board members often operate without. Put simply, if your bunkers don’t drain well, but every other club in the market has the same issue, correcting this problem isn’t so pressing. If all the bunkers at competing clubs make yours look sick, that equation is changed.

When one lays these competitive, market factors on top of a prioritized list of course-upgrade imperatives, it brings into focus what should be done, when it should be done, and why.

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CONSTRUCTION

This is a more sophisticated, efficient way of assessing your course renovation needs. Most clubs simply do not have an intimate knowledge of their competitive marketplaces. Up until now, this is an area of operational context in which they have not invested.

These more nuanced assessments of renovation reinvestment needs also require an additional understanding of course value and course component value — what a new set of regrassed greens will actually mean in terms of attracting/keeping members, raising or maintaining green fees, etc. This understanding cannot be achieved without market analysis, either.

Let’s assume the superintendent has created and curated a long-term maintenance plan for a private club. In other words, it’s been established what the course needs in terms of renovation, and the order of projects has been prioritized. As such, the remaining questions facing club leaders are the classic “who, what, when, why & how” inherent to any storytelling guide.

WHAT
We’ve established the trusty superintendent has already produced an objective, up-to-date analysis of the club’s golf course components. Is the club engaged in ongoing maintenance and investment vis-a-vis its non-course-related facilities? If not, the same long-term analysis must be conducted to identify/prioritize those facility components that require attention. Such a study may well require professionals in market analysis, clubhouse design, agronomy or engineering disciplines. In short, a comprehensive facilities analysis will assess the property’s physical condition, as well as its potential positioning in the marketplace.

WHY
On one level, this is the easiest portion of any analysis. Internally, a club can see exactly why drainage issues are resulting in golfer dissatisfaction. Externally, a club is flying blind if it doesn’t have a comprehensive understanding of drainage issues (and a dozen more salient factors) at the clubs/courses with which it competes. Internal assessment is vital. Market understanding is vital. But without both, working together in tandem, clubs cannot make accurate calls on why this project should be done now, and why that one could wait. Which leads us to...

WHEN
Again, internally, the superintendent, the GM and the board should have a real solid understanding of what renovation project, if undertaken, would mollify the most dissatisfied members. Let’s say it’s the greens, which are full of Poa and need regrassing. When this established element overlaps with competitive imperatives (in the form of competing clubs whose greens are putting yours to shame), this becomes Priority 1 with a bullet — the project to undertake this fall, not next fall. I think you can see how a dozen course improvements on a long-term plan could be effectively prioritized when viewed through these two vital lenses.

WHO
This refers to the team that will implement the project, or has been involved in the planning: the club’s market/economic consultant, golf course architect, clubhouse/facilities architect, construction providers, the in-house maintenance crew. It goes without saying they should all be willing to work together and add their professional expertise to the long-term planning effort and the prioritization effort.

HOW
Here’s where it gets fun because “how” to fund these projects, even smaller renovations, can be tricky. Funding strategies represent a third layer of planning that must be laid across the club’s long-term plans, priorities and its thorough market analysis. Synthesizing this third layer also requires the cooperation and buy-in of your staff, in concert with all these vendors listed above in the Who section. For example, the green re-grassing project: Does it make sense to address greenside bunker drainage as part of this project? It will add thousands to the price tag, but those greens will be closed anyway for re-grassing, so golfers won’t be further inconvenienced. If the greens are re-grassed only, perhaps the club can cover the cost with a one-time assessment; if bunkers are added, perhaps financing will be required.

In short, the “how” is where the other elements of planning come together, where the rubber meets the road. Sometimes clubs will determine that they must be financially healthy in order to embark on portions of a renovation plan. Others take the view that it might take these renovations in order to achieve that financial health.

Each club is unique in this way. However, I wouldn’t want to make that call unless I had a thorough understanding of how my club compares to competing clubs.

More universal is the importance of “stewardship,” a word used more and more in the golf business these days. There is environmental stewardship, something superintendents embody, and have for decades. In today’s challenging economic climate, however, club stewardship has taken on equal, if not primary importance. If the club goes bust, that environmentally responsible golf course goes bust, too.

An immense amount of planning and preparation should go into efficient, responsible, “winning” club stewardship. Members must buy into this ethos. They must actively choose to pass on a better club to the next generation. Every club has its factions, obstructionists. This only underlines the need to have long-term renovation improvement investment plans in place for the course and all club facilities. These document are road maps, of course, but they also serve to create continuity from board to board, from generation to generation.

Just remember that planning documents are working documents — they are continually updated, as time passes, physical situations change and projects get ticked off. Markets change, too. And so clubs require up-to-date market analyses to allow effective interpretation of those plans from year to year.

Laurence A. Hirsh, CRE, MAI, SGA, FRICS is the president of Golf Property Analysts based in Philadelphia, and a frequent GCI contributor.
FIRST IMPRESSIONS
For years, I have heard that a ticket to the Masters is the toughest ticket in sports. But it is also one of the great bargains in sports. If you can get a badge with access to the four competitive rounds, it will only cost you $325. And if you are a GCSAA Class A or AA member, the club will give you a complimentary pass each day.

Wow! Imagine a large group (like GCSAA) getting a free pass to the Super Bowl or the World Series. It would never happen.

Now that I am retired, I go each year, and I am never anything less than impressed and overwhelmed by the golf course and the way the tournament operates. Everyone behaves and no one makes a scene or says anything inappropriate. There are no marshals or QUIET signs. There is no yelling or pushing or shoving, and if you park your portable chair at a green to sit in at a later hour, it will be there when you arrive back. It really is hallowed ground. If you ever get the chance to go, you will never regret it. And for all superintendents, a big “thank you” to Mr. Payne and all the club officials for their consideration and respect for golf course superintendents.

SECOND THOUGHTS
Dr. David Cookson received the USGA Joe Dey Award this year. No one could be more deserving than this guy. Over a half-century of passion, commitment and success didn’t go unnoticed by the USGA. He was a rules official at 90 USGA championships, including 25 U.S. Opens, served on three USGA committees, and was a force at the Evans Scholars chapter at Wisconsin. His gift of time and commitment to amateur golf in our state is unparalleled, all at a time when he was practicing medicine. In a video produced by the USGA, PGA Tour players Steve Stricker and Jerry Kelly both chimed in to explain how important Dr. C was to their careers. If you get a chance to watch it, it would be worth your time.

I just wish the USGA had asked a superintendent about Dr. Cookson and how he had a role in our professional development. Dr. Cookson lived across the street from our 15th fairway on the shore of Lake Mendota, although he belonged to a golf club across town. I worked at that club one summer and watched closely how he operated as a green committee chair. He was organized, met early every Monday morning and had a pleasant way about him. It’s not that he wasn’t demanding — he was — but he worked to understand our profession and appreciated what was reasonable and what was not. He was a defender when he needed to be, and an advocate when it helped.

I got to know him better and better as the years went by, and asked him to write a column for our chapter publication when I first started as the editor. He agreed, and we called it “A Player’s Perspective.” His pieces were submitted handwritten, were bold, yet reasonable, and were fun to read.

One summer, when I was the WGCMA president, I asked him to speak at the meeting that was held in town. This was back when we had lunch, golf and a sit-down dinner. A coat and tie was required. He joined us for dinner, gave his talk and afterward offered praise for our professionalism. “I didn’t know if I was speaking before an audience of bankers or golf course superintendents,” he said. It was a high compliment.

I mention this only because of that excellent video of Dr. Cookson and his career outside of medicine. There wasn’t one word about golf turf, superintendents, green committees, course management or Dr. Cookson’s contributions in our corner of golf. I thought it was a significant oversight, one that would have enhanced his award.

THIRD DEGREE
Speaking of chapter meetings requiring a coat and tie to attend, not too long ago at a chapter meeting held at the same private club, we had a sit-down dinner and a speaker afterwards. I looked around and marveled at how the times have changed. No one was wearing gym shorts or work clothes or a shirt with holes in it, but all variations of jeans and shorts and golf shirts was the norm.

While I cannot argue against that, I finally had to get up from my table and ask a dozen guys, “Is your head cold?” or “Do you wear a hat at dinner at home with your family?” My questions received a few dirty looks, but the hats came off and a number of members were glad I did it. You can only get away with that if you are “an old guy!”

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.
Just *roll* with it

There’s more to rolling greens than increased ball speed. Why you should consider adopting a rolling strategy at your course.
From the outside, looking in, golfers see a superintendent rolling greens and assume increased speed is the end goal. Experienced maintenance professionals know there are myriad advantages, however.

Turfgrass health is the greatest reward, says Rob Golembiewski, green solutions specialist at Bayer CropScience. “The agronomic benefits of rolling greens can include reduced turf stress, disease suppression and a smoother surface which ultimately translates into a healthier putting green with increased green speeds,” he says. Specific disease suppression includes dollar spot, anthracnose and microdochium patch.

As for the relationship between rolling and greens speed, there are a number of agronomic practices – height of cut, mowing frequency, fertility, soil moisture, growth regulator use and verticutting – that influence how big a difference rolling will have on the speed of greens, Golembiewski says.

If a superintendent elected to alternate mowing one day and rolling the next, the green speeds would essentially remain the same as just mowing daily, he says. However, the end result would be a healthier putting green since mowing, which can be very stressful on a turfgrass plant, is reduced to an every-other-day practice.

“By mowing daily and rolling three times a week (Monday, Wednesday and Friday, for example), a superintendent might expect to see an increase in ball roll distance of one foot or more,” Golembiewski adds. “If mowing and rolling occur on a daily basis, green speeds could increase as much as two feet. In my experience, rolling daily and mowing four times of week can deliver equivalent green speeds as mowing and rolling daily but also provide a healthier putting surface.”

Robert Pearsall, CGCS, has been the superintendent at Salish Cliffs Golf Club in Shelton, Wash., since before the course opened in 2012. He has seen the benefits of rolling in terms of reduced dollar spot pressure when conditions for the disease are favorable, as well as reduced mower stress and the ability to safely remove morning dew.

“Rolling the greens can be very beneficial to the overall quality of the turf,” Pearsall says. “With frequent mowing we are able to raise the height of cut of our greens and not lose greens speed. Slightly raising heights during the stressful months of summer can dramatically improve turf quality.

“We are able to roll on days we don’t mow and keep the same greens speed,” he adds. “Just taking one day off from the stresses of mowing will increase the health of the plant.”

A welcome by-product to golfers is pace of play, of course. “By mowing alone and not rolling, we would achieve green speeds around 10 feet,” Pearsall says. “With the addition of rolling we can improve speeds by up to 4 feet, depending on which roller we use and...
the frequency of the rolling. Rolling gives us the ability to control the speed of the greens depending on the desired need of the event. It also gives us the ability to make every green uniform and consistent.”

At Salish Cliffs, an amenity of the Little Creek Casino Resort, they use two different rollers—one is light weight (TruTurf Roller 550 pounds) and one is heavier (Tranzformer by Salso 2,600 pounds). “There are many factors that dictate which roller we use—from weather, recent cultivating practices and green speed we’re trying to achieve,” Pearsall says. “Both rollers are beneficial depending on the desired effect.”

Golembiewski cautions additional weight can do more harm than good. “There is an old thought that the use of heavier rollers will result in greater green speeds,” he says. “Research has clearly shown that lightweight rollers are just as effective as heavier rollers. It is not about the compaction of the surface, but rather the smoothness of the surface.”

Another risk, according to Pearsall, is rolling immediately after topdressing greens. If the operator is not careful, the abrasive sand may cut or tear into the leaf blade when they start and stop the roller.

With rewards outweighing risks and technology improved, rolling has become a common agronomic practice on greens over the past decade. And it is starting to be implemented on fairways, as well.

“The challenge I see is there are many superintendents who implement rolling programs without an intended goal in mind,” Golembiewski says. “In other words, they might roll when they have some extra time or they roll Monday, Wednesday and Friday because that is what another course is doing. Superintendents should give the same consideration to rolling programs as they do any other agronomic programs.”

For Pearsall, the practice has increased in the short time the course has been open.

“At Salish Cliffs, we started out rolling on Fridays before the weekend to true up the greens,” he says. “Over the past three years since we’ve been open, we went to rolling almost every day during the growing season. This was done with the TruTurf Roller, which is considered a lightweight roller. The frequent light rolling was beneficial, but we found if we took a day off, we would lose some speed to our greens.”

That is why they purchased the heavier roller from Salso. “We found we could use the Tranzformer every other day and we did not have the drop off in green speed like we did with the TruTurf,” Pearsall says. “We use the Tranzformer for approaches and fairway landing zones, as well. We can do the fairway landing zone and green in almost the same amount of time we could before using the TruTurf for just the greens.”

Based on university research trials, to optimize plant health and green speed, in part, comes down to deciding what you are trying to accomplish on your course, Golembiewski says. “If the intent is to maintain existing green speeds where only mowing has been implemented in the past, my recommendation would be to alternate mowing and rolling,” he says. “If the intent is to maximize green speeds while limiting plant stress, my recommendation would be to roll daily and now four times a week. With this program, the superintendent always has the option to add in additional mowings or lower the height of cut slightly to increase green speeds for tournaments, club championships, etc.”

Roll back

Like anything, rolling greens isn’t without some degree of peril. “The greatest risk that exists from rolling greens is the potential for wear on the collars where the roller stops and starts,” says Rob Golembiewski, green solutions specialist at Bayer CropScience. “This is especially the case when there is very little room on the edge of the green due to bunker placement or steep slopes. Some golf course superintendents have started using mats in these situations to reduce the potential for wear injury.”

The possibility of compaction keeps Salish Cliffs (Wash.) Golf Club superintendent Robert Pearsall on his toes. “While rolling the greens alone is not too risky, there are some long-term risks that are inherent over a span of time,” he says. “The indirect effect of frequent rolling is air capacity and water permeability. Rolling every day with a heavy roller will compact the greens, making them more susceptible to a decline in turf quality, especially during the stressful months of summer. We counteract this by using our PlanetAir slicer every other week. The slicer is used to help reduce compaction by creating more pore space in the rootzone. If we have rain coming, we will slice the greens the day before to allow for infiltration.”
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**Travels with Terry**

Globetrotting consultant 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 superintendent 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.

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**DEW WHIP POLE & BALL MARK REPAIR TOOL HOLDERS**

This 2014 Toro Greens Master 3400 triplex greens mower is now equipped with a 3-foot piece of 1 ½-inch angle iron that was bolted to the ROPS mounting bolts. Four broom handle hanger clips were then bolted onto the angle iron. Monstaliner bedliner material was then applied on the angle iron for durability and rust prevention. Standard Golf Ball Mark Repair Tool Model #27200 at $96 and a Par Aide Whipping Pole Model #1040 at $60 are mounted onto the hanger clips for easy on and off that are secure during transport. It took about two hours to build and about $30 in materials. Steve Mathre, equipment manager, and Mike Turley, superintendent, at the Stone Creek Golf Club in Oregon City, Ore., devised this idea.

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**FAIRWAY MOWER BALL PICKER**

The driving range turf vehicle that used to push the 2005 Derone Innovator 3 gang ball picker was replaced with a retired 2001 Toro 5200-D 4WD fairway mower tractor. The lift arms, cutting units and hydraulic motor hoses were removed, the manifold ports were plugged and the solenoids were disconnected. The cage is made of 1-inch diamond pattern steel mesh, sheet metal is used for the roof and 3 feet by 2 feet plexiglass for safety for the windshield. The door, mounted on the left side only, is made with ½-inch square tubing. 1-inch diamond pattern steel mesh and a door latch. The seat base was modified to be easily removable to access filters and hydraulics. The turf vehicle’s original ball picker quick-release hitch was modified and welded to the front of the tractor frame. The metal work was finished with Monstaliner bedliner, as it is much more forgiving than paint. Two lights were placed on the cage’s roof and the wiring, on/off switch and dual lights were acquired from a local parts store. LED replacement lights are being considered for the future because they are much brighter. The 4WD tractor works excellent in slippery conditions, with great traction, especially on steep terrain. About $500 was spent on materials. Steve Mathre, equipment manager at Stone Creek Golf Club in Oregon City, Ore., worked on it in his spare time, which took about 40 hours. Mike Turley is the superintendent.
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(BRAUER continued from page 22)

S#?! you should have expected happens on schedule
(i.e., poor future planning)
Keegan notes that a common error is to think of reno-
vations as a one-time fix, “Golf courses are living
organisms,” he says. “When renovating today, you must also
consider cash flows in the future. You must generate suf-
ficient cash flow to fund future capital investments, to
preclude the need for unanticipated future borrowing,
which encumbers long-term financial prospects.”

As the ASGCA/USGA golf course life cycle charts
shows, some items – like well-built bunkers and liners
still need replacement every 5-7 years (with shorter life
spans if you skimp on drainage, liners and sand quality
to meet budgets.) If your project is something less than a
full rebuild, be sure to budget future revenues for ongo-
ing capital improvements.

UNEXPECTED S#?! happens with no schedule
Revenues can be affected by factors beyond your control.
One course re-opened after a wonderful renovation in
2003, but soon encountered a washed-out bridge. Three
years later, extreme heat killed their greens, and a two
years after that, a large pipeline was constructed across
the course. Each problem reduced rounds, and combined
with some poor management, hurt the course’s image
and revenues. Finally, in 2010, new management and re-
branding started a more sustainable uphill path, an un-
lucky seven years after success was supposed to have
started.

COMPLETE THE PROJECT LATE
Lost revenues are a big part of the financial equation.
Many projects fast track schedules to minimize them.
However, a realistic schedule, timed to ideal grassing
dates, and with reasonable allowances for poor weather,
and perhaps a contingency to sod more areas later in
thegrassing process are all good tools to meet your dead-
lines.

Starting the project late
Some owners lack urgency at the start of the proj-
ject, not realizing the first month of the project is as
important as the last. They delay signing construction con-
tracts for procedural or other reasons, often making
timely completion difficult, if not impossible.
An old saying goes, “A week delay early becomes a
month delay later; ... and a month delay at the end adds a
year to the downtime.”

So there you have it – the worrier’s guide to the worst
that can happen in golf course renovations. Your renova-
tion planning isn’t complete and thorough unless you
consider all the things that can go wrong. GCI

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INNOVATION DAY

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Last month, I escaped Cleveland’s dreary “spring” for Vero Beach, Fla., to attend a cool event hosted by Syngenta. By now, you’re probably aware of what took place at their Innovation Day but here’s a recap.

First, they wasted no time in introducing Heritage Action, a new formulation with the same extra plant health characteristics as Daconil Action. Not only a promising product with additional stress management benefits for supers, but clearly a smart move to continue the success of the Heritage product in its post-patent life. Also a sign the company is not going to roll over in the face of competition from new strobby products.

Second, they made Appear disappear. The pigmented phosphate fungicide had been introduced a couple of years ago and then sales were suspended because of a legal dispute. Apparently the lawyers made the Appear injunction disappear (Har!) and it’s back as a rotation product to help turf handle summer heat.

Third, they’re close to getting full registration for Avid to control nematodes. Syngenta’s Lane Tredway said that, when mixed with Heritage Action, the results are excellent due to a combination of knocking out nematodes and sealing off the root damage caused by stings and preventing further infection of the plant.

Finally, they reviewed two big earlier launches: Velista and Ference. Velista is, of course, a broad-spectrum SDHI primarily for dollar spot but also effective on a range of diseases in tank combos. Ference, quite simply, kills the crap out of annual bluegrass weevils when the timing and application are done right.

It was an impressive product briefing featuring many of their best science minds. It was also a statement to the industry that they’re going to continue the R&D investments they’ve always made and take full advantage of the active ingredient portfolio they gained from DuPont a few years ago.

My friend Dave Ravel, the head of sales for Syngenta’s professional group, asked me to stick around Florida for an extra day and do a state of the industry briefing for his team. As you know, I jump at any chance to flap my gums.

Some of you have heard me pontificate at length about the state of the golf market, the trends hurting/helping us and what our future may look at. Frankly, it’s nothing revolutionary. Here’s the very short version: “The market is shrinking incrementally and will continue to shrink until supply meets demand. Nothing suggests that demand is going to either skyrocket or plummet. However, there are big opportunities for clubs and facilities to succeed in the leaner, meaner business of the next decade.”

I knew my old boss Steve Mona would also be there to speak to the Syngenta group about We Are Golf and other initiatives under his direction at World Golf Foundation, so I added something to one of my slides almost as an afterthought:

STEVE’S ROLE: Help Grow the Game
OUR ROLE: Help Grow the Business

When I wrote that “our role” is to help grow the business, I meant not just GCI but also committed suppliers who are focused on helping superintendents and golf facilities succeed on an individual level. That’s a critically important distinction. Why?

As supportive as I am of big grow-the-game efforts, any course operator sitting around waiting for those national programs to drive rounds and revenues may be in for a long wait.

Yes, golf’s associations should aggressively promote golf as a fun, healthy, outdoor activity for everyone. But, the most important thing we (the industry) can do is help facilities develop new customers, manage themselves more professionally and make the cash registers ring more often.

Growing the game means spreading the word globally. Growing the business means finding smart, effective ways to get customers in the door locally (at your place) and keep them coming back because they’re satisfied with what you sold them. Honestly, overbuilding was only half the problem we created for ourselves in the 80s and 90s. The other half was lousy business management, poor marketing and abysmal customer service.

The Recession was a wake-up call. Those who were passionate about surviving and succeeding got their financial house in order and looked at new ways to make the total product more attractive ranging from course renovations to adding pools or changing membership structures. They created vanity outings, leagues, women’s group lessons, family nights...even footgolf and giant cups. In short, they got innovative. That’s why the number of profitable facilities has grown by 25 percent in the past three years.

Think about it: Innovation Day shouldn’t be the exclusive territory of a company like Syngenta. Innovation Day should be every day at your golf course. GCI
Great turf requires a balancing act.

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