less water than six inches ... but it holds it much closer to the surface. Therefore, you will have varying moisture levels in bunkers.”

Gary Myers, manager of golf course maintenance operations at Walt Disney World Resort in Orlando, Fl., echoed Gradoville’s comments that pricing is a consideration but playability is king.

“Playability is the main component, and a supply that isn’t going away,” Myers says.

Myers says his choice of sand is guided by neither the ownership nor membership but rather the USGA recommendations. When he started working at his multi-course facility, different courses were using different sands. Two of the courses had changed from the original sand, but after some testing, he concluded that the original sand was the best product, so those two courses reverted back to the original sand.

In Gradoville’s case, the membership was the primary driver of the sand decision. Several clubs in his area had had good success with sand that was 50 percent crushed marble and 50 percent desert tan.

“The sand plays well, and we tried it in a few bunkers. Our members liked the way it played, so we installed it in all 75 of our bunkers,” he says.

Gradoville often hears from members that “the sand across town is better than ours,” and Moore says that’s not uncommon. In fact, it’s evidence that you just can’t please everyone.

“You’re the owner and you play somewhere else and you like their sand and you come back and say, ‘I want their sand.’ The end user golfer bases their decision not on technical data but on the sand they played somewhere else,” says Moore. “But when sand goes into a bunker, it evolves. It will play differently that day than it will a month later or six months later or two to three years later. It gets contaminated with stuff from the air, mixes with the underlying soil, etc. So it’s almost impossible to buy exactly the same sand someone else has unless you buy it a few months after they did.”

Still, Gradoville lends a respectful ear to members and tries to adjust his maintenance based on their comments.

“Many times, it’s just a matter of moving sand or adding new sand to high-play areas,” he says. “The bottom line is that we normally hear that the sand across town is better than ours, and when the members of those other courses across town play our course, they like our sand better than their own.”

CONSIDERING SAND COST

By Bob Lohmann

To flash or not to flash, that is the question. Whether it’s aesthetically pleasing enough to show golfers some sand, when every superintendent knows that it’ll mean more work, especially after a rain event.

More and more, we’re seeing superintendents address this question not exclusively via bunker design, or even bunker-lining products like Klingstone or Sportcrete, but with the sand itself. Spending money on sand with enough angularity to hold its shape, to hold its place better on the bunker face, even after a downpour, is ultimately a time-and-money-saver, especially if you’ve made the aesthetic decision to flash golfers a bit of sand.

We just redid the bunkers at Indian Creek Golf Club in Elkhorn, Neb., where superintendent Jim Nedrow and his owners spent top dollar on some high-angularity sand from Arkansas. This stuff is quite white, though color was a secondary consideration; they wanted to mitigate clean-up after rains. Well, Jim and his team couldn’t be happier with the results. He reports no clean-up at all after big rains, whereas pushing the old sand (a less-angular local sand) back up would have taken them a couple days each time.

Chalk up some of that to the Sandtrapper lining, but Jim feels the sand upgrade has also had a huge impact. He hasn’t run the numbers yet to see if the cost of the sand will ultimately be paid for by the savings in sand-pushing labor. The new bunker style requires more handwork on the banks, after all, and one must factor in the cost of the liners and transport from Arkansas. But it’s been a huge time-saver, and here’s an interesting addendum: Jim used to send two guys out, one on a machine and one with a rake, as part of their regular bunker-raking rounds. Now he sends two guys out with rakes only and it takes them less time. They only rake the top half-inch, to keep the sand firm. And there is an aesthetic payoff: the new bunkers are great-looking and Jim feels the white sand really does set Indian Creek apart from the competition in Greater Omaha.

Different situation at Mt. Hawley Country Club in Peoria, Illinois, where we renovated the bunkers about 7 years ago. We made a conscious decision to flash the sand up, so that golfers could see the bunkers on their approach and tee shots. At the time, the USGA had recommended a variety of sand where the angularity better held itself in place. But Mt. Hawley was not in the position to foot that bill, according to superintendent Pete Clarno, CGCS.

“We actually placed four different types of sand in a test bunker, so that members could give us their feedback,” Pete recalls. “Ultimately, the board went with the more economical sand and it’s been okay. It’s increased our bunker-repair time after rains. Part of me thinks, if we did it again, it would be more economical to roll down the faces on the bunkers and then use the cheaper sand.”

I’m not in the habit of quoting people as they paraphrase my own thoughts, but I’ll make an exception for Pete: “It’s like you’ve always said, Bob — whatever new sand you put in there, the members seem to hate it. When the silt builds up and the new sand firms up, they love it! Then, over time you get too much silt, they don’t drain properly, the bunkers get mucky and they hate it again.”

Ain’t that the truth.

Bob Lohmann, ASGCA, is founder, president and principal architect of Lohmann Golf Designs and a regular columnist and contributor to GCI.
SMART CONTROLLERS

Smart controllers automatically adjust irrigation system schedules based on weather factors or soil moisture levels. These smart controllers are all the rage in landscape irrigation, but if you think about it, smart controllers have been available for golf course irrigation systems for decades.

Let's look at the weather-based controllers first. Weather-based controllers in golf course irrigation systems are nothing new. Ever since weather stations have been available, they have aided in the operation of golf irrigation systems. Initially, they just provided you with an evapotranspiration rate (ET) that would then be manually entered into the control software and the runtimes automatically adjusted based on the ET rate or you just used it to help you determine runtimes. As golf course irrigation central control systems have matured and technology advanced, stations have become more accurate and reliable, and some superintendents let the computer automatically set runtime based on the ET readings from the weather station. Additionally, it seems each year the central software is updated or the latest and greatest new golf irrigation control system is released which allows you to utilize more than just ET inputs, but also temperature, humidity and wind.

Soil moisture sensors have been around for more than half a century, but they have been accepted in the golf market only recently. With new sensor technologies soil moisture sensors have entered the market quickly and aggressively. Like weather stations, at first the soil moisture sensors were independent of the central control system and had their own software program, much like pump station monitoring used to be. But again, technology has advanced and central control software has updated so soil moisture sensors – if the right ones are purchased – are able to fully interact with the central control system and automatically adjust the run times of the specific sprinklers they are assigned to control.

As familiar with weather-based or soil-based systems as you may be – or as good as both of these smart-type systems are – they are different. Whereas the weather-based system will water to a certain ET if irrigation is needed, the soil-moisture-based system can be programmed for both a high and low setting (see figures). This means there is no irrigation if the soil moisture is above a certain level and will only water to a certain point if the soil moisture indicates irrigation is needed. As a result, the soil-moisture system can maintain soil moisture within a specific range.

“The central computer cannot get fired, but you can.”

However, this technology and control does not come without a cost. Weather stations have become mostly standard on an irrigation system and there may be more than one weather station. Their one-time costs are not significant, but they do need to be maintained to be accurate. Because they are new, interactive soil-moisture sensors are at this point pretty expensive. The big decision is how many to install. To do all 18 greens, tees and fairways – or even just 18 of each – is cost-prohibitive. As a result, it is difficult to have a fully interactive system. You can move the sensors around, but then they will not be interactive.

It is important to understand this technology completely and what it is doing if you are going to rely on it. The central computer cannot get fired, but you can. I have always been a believer that the weather station should never be allowed to set runtimes without oversight, but with soil moisture sensors I am not so sure. Once you have determined the optimum soil moisture range, why not let the system automatically keep the moisture within that range. It's certainly something to think about.

A soil-moisture-based system can be programmed for both high and low evapotranspiration settings.
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There are more factors than cost when deciding between commercial- or consumer-grade handheld equipment.

by Andy Klein
Commercial-grade or consumer-grade?

This is the most basic choice when deciding to purchase handheld power equipment for golf course maintenance. As every maintenance property is different, it is important to first evaluate which type of equipment will better fit your operation to determine the best buy.

At Kansas City Country Club, spending the extra money upfront to buy commercial-grade power equipment is the best choice since we are a park-style golf course that has approximately 2,500 trees on the property. As a result, a large amount of time is spent on leaf clean up, trimming and maintenance of our tree inventory. Having a reliable and durable fleet of handheld power equipment is vital to completing the day-to-day maintenance at our club.

Our fleet of power equipment consists of approximately 10 backpack blowers, 10 string trimmers and seven chainsaws. We try to stay consistent with the same brand. Generally speaking, we try to get three to five years of use out of each piece of equipment and replacement is determined by when the repair cost exceeds 40 percent of the equipment cost.

A big key is to have a fixed budget line to replace equipment to ensure reliability of the fleet of power equipment.

A qualified mechanic on staff at your course is essential when dealing with the preventative maintenance that is involved with keeping commercial grade power equipment working as long as possible. Our mechanic has been in the mechanics industry for more than 30 years; he prefers commercial grade equipment because in general, it just lasts longer than residential-grade equipment. Commercial-grade equipment is built specifically for everyday use where residential is designed to be used daily, while residential equipment is designed to be used a few times a week.

Another plus with commercial equipment is that it often has more serviceable parts and replacement parts can usually be easily obtained through local licensed service dealers. These dealers generally require certified mechanics be on staff to help out with any issues with the brands they carry. Residential grade equipment is often constructed with a lot of molded parts and can be much harder if not impossible to service.

Preventative maintenance for a mechanic is also easier when dealing with commercial grade equipment. The main repairs are usually in two groups, mechanical and operator use. The mechanical portion includes filters, spark plugs and other expendables that will usually last a season with an occasional light cleaning. Blades, bars and chains need to be checked periodically depending on use and replaced when necessary. The second group of maintenance is dependent on the operator. It becomes a struggle to keep equipment running properly if you have an operator who is abusive to and who does not take proper care of the equipment. Examples include a broken throttle cable or deteriorated fuel line, this type of breakdown happens maybe a couple times a year on a 1- to 2-year-old piece of equipment. Costs can be minimized by performing quick inspections during the busy season and more detailed inspections in the off season which will give you a more intense look into your equipment.

When the equipment is no longer economical to use we try and reclaim parts that can be used on our other pieces of equipment. If this cannot be done then the item is recycled or discarded. When your fleet is of the same brand it can be of benefit to save some used parts off of an old machine and also gives the facility the ability to use up parts inventory on the remaining equipment that is still in use. This is another way to keep expenses to a minimum on your inventory.

GCI

Andy J. Klein is assistant superintendent at Kansas City Country Club in Mission Hills, Kan., and is a frequent GCI contributor.

Keys to handheld equipment

Evaluate what equipment best fits the requirements of your course.

Will a qualified mechanic be on hand to maintain the equipment? Are parts readily available? If no to either of these questions, then perhaps a one-season, “disposable” unit is more appropriate.

Replace a unit when the repair cost exceeds 40 percent of the equipment cost. Before disposing a worn out unit, evaluate any parts that can be recycled for future use.
Tracking tools

Assistant superintendent Brian DeVries shares a sure-fire way to account for who has done what with which tools.

We've all experienced the end-of-year inventory of our hand tools and asked ourselves the question "Where did they go?" A season in this industry almost seems insurmountable from the perspective of an oft-used hand tool. To help ease the pain and take out some of the perplexity involved with the end of the year order, I am thankful to have been exposed to a hand tool check-out system. When I was an assistant at TPC Summerlin in Las Vegas, one of my responsibilities was to ensure the upkeep and inventory of our hand tools through a simple check-out routine. I know many golf courses around the country use a similar practice for hand tools and other equipment around their facilities, but I want to account my experiences with this type of approach and highlight the benefits of its use.

How does it work? First, you need to locate an area in your shop where hand tools are easily accessible and hold known locations, i.e. hand saws go on this rack, hammers go on that rack. Make sure the locations of where tools go are also clearly labeled, maybe even add Spanish to these labels for any Hispanic workers on staff. We even used pictures for some of our larger tools. Next, devise a list of employees and assign them a number. These numbers correlate to tabs with that same number on it that the employee will use when he checks out a hand tool. For larger items like a shovel, rake, or chainsaw, have a check-out sheet, where the employee can sign out and sign in a particular tool. Now the hard part: ensuring that everyone is playing by the rules. When you send the crew out in the morning, make sure you or a key member of the staff is around to see that tabs are used to replace the hand tools, and check out sheets are being used for larger tools. Bottom line, make sure the crew understands the importance of the system, why you use it.

What are the benefits you ask? Well, it's a great way to track the use of hand tools. If the hammer is missing, but the number 13 tag is hanging in its place, we know who to has it. Additionally, if the chainsaw comes back and it's dirty, we can use the check out sheet as a log to look back at the users. Also, it could help keep inventory at satisfactory levels. When the crew knows where a tool came from and where it goes, it is much easier to maintain inventory and keep the shop organized. More importantly, the system as a whole gives the crew some sense of ownership and the need to take more care in the tools they use, for when they check out a tool, their name is attached to that tool, and it becomes their responsibility.

In my experience, I feel this type of system is fairly easy to maintain. The benefits of the numbered tabs speak for themselves and the check out sheet gives you a very useful log for some of the more expensive hand tools. I wanted to share this management tip to illustrate an effective way to help keep inventories at a suitable level. I hope other courses can see the benefits of the use of a check-out system. On a personal note, I have used this technique with great results in a practical setting. In short, it certainly has my stamp of approval, and is a method I will employ as I go forward in my career.

Brian DeVries is assistant superintendent at Cascade Hills Country Club in Grand Rapids, Mich., and is a frequent GCI contributor.
ALGAE EATER

A 2005 John Deere 220B walk behind greens mower groomer reel, which was mounted to an old push mower handle, is used to aggressively remove surface algae on a creeping bentgrass putting surface. The “spline end” at the snap ring groove was removed and a 5/16 x 1 1/4-inch bolt head was welded to each end of the shaft, with the threads facing outward. A John Deere Model #2776 housing was placed onto both ends of the shaft to hold the groomer reel in place. A handle from an old Sears manual push-type reel mower was in inventory. The handle was re-bent to the proper width of the groomer reel and the shaft housing was bolted to the handle. It took about 1.5 hours to put it together and all of the parts were used and were in inventory. George Heron, assistant superintendent, at The Members Club at Grande Dunes in Myrtle Beach, S.C., conceived the idea and Joe Corsetti, equipment manager, built it.

SAND LEVELER

A n old bent-up landscape scraper box and a piece of 4-inch square metal tubing extending out on both ends was mounted to the bottom for this leveling devise. This simple but effective idea is used to spread straight sand that is applied heavily on the Tifway 419 Bermudagrass driving range tee to fill the divots and to further level the tee on a weekly basis. The square tubing extends out about 2 feet on either side and a 45-degree angle was cut off with a torch on each end so it would not dig into the turf when making a turn. The leftover 45-degree pieces were then welded on both sides of the landscape box and to the square tubing for added structural integrity. The turnbuckle on the three-point hitch is adjusted so the square tubing leading edge is at a 5-degree angle so the sand works in better into the turf. All of the used materials were in inventory and it took about two hours labor time to modify. Robert Gamble, golf course superintendent, at the 36-hole Myrtlewood Golf Club in Myrtle Beach, S.C., conceived the idea and Scott Holman, equipment manager, modified it.
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The golf course superintendent immediately assessed the damage and took pictures. He sent that info out on a blog to his membership and within minutes they knew the course would be closed that day while drainage and repairs were underway. That blog had pictures and was updated during the day. The info on that blog was also uploaded to a set of talking picture frames in the pro shop and locker rooms. This eliminated the need for the superintendent to spend time communicating his message at the various points of contact. His time was better spent out on the golf course managing the processes necessary to get the course open and functional again.

Schedule a vacation and make it work for both your employer and family. I had only taken one summer vacation until I moved to California and then realized that with a well-trained staff I could actually get away almost any time of the year.

As a matter of fact, my employer suggested that I have scheduled days off and periodic vacations. He knew I would be much more productive that way and avoid burnout.

Cell phones allow us to stay in touch with our office, golf course and team while off the property. Every superintendent should play golf and check out the competition. This is much easier to do when you have the technology to stay in touch. The same is true when attending a baseball game or going on a family camping trip. We can actually check on the weather station at our properties and pump logs to have a greater comfort level that things went well on our days off.

DEVELOP A PLAN. Scheduling today is not the typical workweek it was decades ago. Flexible and rotating schedules are the norm, while golf course crews may work long days that can still be done with 40-hour workweeks for both the staff and management. A scenario that might work is that the assistant superintendent comes in at 5 a.m. and gets the staff started. The superintendent might arrive at 7 a.m. and stay until 4 p.m. while the assistant goes home a few hours earlier. Weekends with days off can be exchanged for a weekday for not only staff but management, as well.

The best summary I have is “While random activities are great, sometimes higher priorities with work tend to take precedence.”

BE HAPPY. Take the time to take a step back and evaluate your work and your life. What brings you happiness? Periodic evaluations of how you value your time and how you are spending it may reveal a lot. Be honest with yourself.

The best summary I have is a quick story that I share in my Time Management seminar. When your career is over and done, and you are near the end of your life, what would you want your epitaph to say?

Many of us would qualify for a headstone that says “He Was One Heck of a Golf Course Superintendent That Wished He Would Have Spent More Time With His Wife and Kids.” I would much rather have lived a life worthy of a tombstone that says: “He Was a Great Father and a Wonderful Husband.”

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PARTING SHOTS

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MAYOR MCTURF

One of the many pals I bumped into at last month’s Carolinas GCSA Conference & Show gave me a new – and hopefully temporary – nickname. We were chatting on the show floor and he was picking my brain about what’s going on around the industry. As always, I invented some credible-sounding information out of thin air and he eagerly... and foolishly... believed every word.

He said, “Dude...you know a lot of stuff... you’re like the Mayor of Turftown.”

Unfortunately, he spat that little gem out in front of a bunch of folks and soon perfect strangers were approaching me and saying, “Hey, I hear you’re the Mayor of Turftown.”

Well... har-dee-har-har.

My unease at having being elected Mayor McTurf (as one Golden-Arches-loving guy who’d had a couple of beers later called me) gradually evolved into a question in the back of my goofy little brain: What would I do if I was in charge of all of Turftown for a day?

Thus, by the power invested in me by a couple of drunks in Myrtle Beach, I hereby decree the following:

Henceforth, all turfheads shall live in peace and cooperation. For example, superintendent groups shall not throw their lawncare brethren under the bus when regulatory or legislative issues threaten to divide us. This happens all-too-often when cosmetic use restrictions, drought regulations or other proposed rules have the potential to divide us because golf can often get an exemption. I’m not saying you shouldn’t work hard against onerous regulations... I’m just saying we shouldn’t do so by pointing fingers at other turf professionals.

December 23 shall forevermore be known as “Official Crew Appreciation Day.” This shall be the day when the facility ownership provides them with a nice little bonus, a spiral-cut ham or some other token of appreciation in recognition of the other 364 days they work their butts off for $11.50 an hour. This would be a good day to distribute the dollars raised during your “Greenkeeper’s Revenge” tournament or other club-wide staff appreciation fundraiser. Residents of Turftown need to take better care of the folks who work for them.

“He said, ‘Dude...you know a lot of stuff... you’re like the Mayor of Turftown.’”

All citizens of Turftown are required to know the economic, environmental and social benefits of turfgrass. Everyone in the city limits should be able to recite the facts about these plants we grow any place, any time, at any opportunity. It’s like picking up litter and using your damned turn signal: It’s everyone’s job.

From this day forth, it is mandatory for residents who attend industry conferences to set aside time to visit with the trade show exhibitors. You say you don’t like wasting your time by going to the trade show for a couple of hours? Don’t worry, it’ll go away. And with it will go lower dues, affordable education, lobbying and everything else that industry helps to subsidize by buying booth space.

Turftown municipal taxes – in the form of a nice logo golf shirt from the taxpayer’s facility – shall be remitted annually to the Mayor’s office. Size medium, please.

Any superintendent who is considering crossing over to “the dark side” of industry sales must first spend a week shadowing a local sales rep. If you think it’s a cushy alternative to growing grass on a golf course, you need a reality check. There are more reps selling more different products out there than ever before, price competition is fierce and it’s not fun to be the new guy, no matter how well-connected and sales-oriented you think you might be. You have been warned by the Mayor.

Citizens who participate in fantasy football leagues are strictly prohibited from boring the living crap out of everyone with details. Anyone who violates the rule by spewing endlessly about their last-minute trade for Wes Welker will be confined to the Turftown Correctional Facility for 30 days and forced to watch gymnastics and ice dancing.

All citizens are urged to support their local Turftown businesses. Remember to buy from the companies that support our community, our chapters and our profession. They can be easily identified by looking at the ads in this magazine.

During my brief tenure as Mayor McTurf, I’ve tried hard to make Turftown a better place. Unfortunately, my scandal-plagued administration must come to an end due to some misunderstanding about donations to the “Mayor’s Las Vegas Fund.” So, with that, I resign as your leader to devote more time to my family and my real job.

Oh, you still have to pay those municipal taxes though! Even ex-mayors need new golf shirts.