Questions Golfers and Course Officials FrequentlyAsk of the USGA

(Editor's Note: The following is a collection of questions that golfers and course officials frequently ask of the USGA Green Section staff.)

Golf Course Maintenance and Agronomics

At a recent Green Committee meeting our golf course superintendent suggested closing the course for one day a week to accomplish essential agronomic practices. Will this really help?

Closing the golf course on a regular schedule is a good way to improve course conditioning when important agronomic practices cannot be performed due to heavy play. Important preventative maintenance can be done in a time-

ly manner, and worker productivity improves significantly. For example, productivity can drop by as much as 40% when the maintenance staff encounters golfers on the course because they are obligated to step aside and wait.

Our greens were in great shape and now our golf course superintendent ruined them by punching holes all over them. I think she is being overprotective of them and just too stubborn to change her ways. Is this aeration all that important?

Aeration is an extremely important maintenance practice. Although it results in a temporary disruption of the green, aeration improves water penetration into the soil, reduces soil compaction, stimulates turfgrass root growth for a healthier plant, helps control thatch build-up, and improves overall growing conditions. Aeration generally is done once or twice per year, and sometimes more often if certain problems exist.

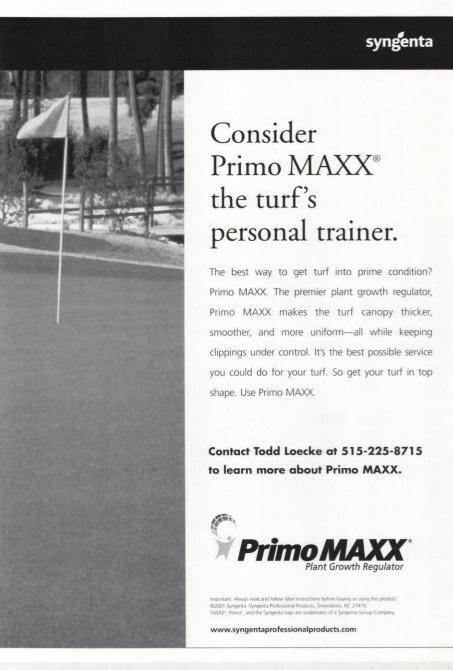
Think of it like going to the dentist for your twice-yearly check-up. The same holds true for aeration. You can skip a visit to the dentist, but you will contribute to problems over the long term. You can skip one of the semiannual aerations, but this can result in a faster turf loss. Your superintendent isn't being overprotective. She is doing exactly what should be done to ensure long-term turf heath.

What is the Stimpmeter and how

does it work?

The Stimpmeter is a 36-inch long, aluminum tool used by golf course superintendents to make a standard measurement of the relative speed and uniformity of their greens. A Stimpmeter reading is actually a distance measurement in feet and inches.

At one end is a ball release notch that is designed so that a golf ball will always be released and start to roll when the Stimpmeter is raised to an angle of approximately 20 degrees to horizontal. The basic steps to measure green speed start by rolling three golf balls in one direction on a level area of the green. The three distances are measured and averaged. Using the average stopping point of the first *(Continued on Page 22)*



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three golf balls, this step is repeated along the same line, but in the opposite direction. The distances obtained in steps one and two are averaged, resulting in the Stimpmeter reading for the green. The longer the distance, the faster the green. A reading of 8 – 9 feet is considered a medium to fast speed for day-to-day play.

The Stimpmeter is a helpful management tool for the golf course superintendent in providing smooth, consistent putting surfaces, but is not intended for course-to course comparisons.

I've played a lot of golf courses and have seen hole locations all over the place. What is the USGA's recommendations regarding hole locations?

The USGA frequently receives requests for guidelines with respect to selection of hole locations on the putting greens, particularly during competitions. There are no rules regarding hole locations, so there is no such thing as an "illegal" hole location. However, we do have some guidelines.

Many factors affect selection of hole locations. The first and most important is good judgment in deciding what will give fair results. Do not be tricky in locating holes. There should be enough putting green surface between the hole and the front and the sides of the green to accommodate the required shot.

In any case, it generally is recommended that the hole be located at least five paces from any edge of the green. If a bunker is close to the edge, or if the ground slopes away from the edge, the distance should be greater, especially if the shot is more than a pitch.

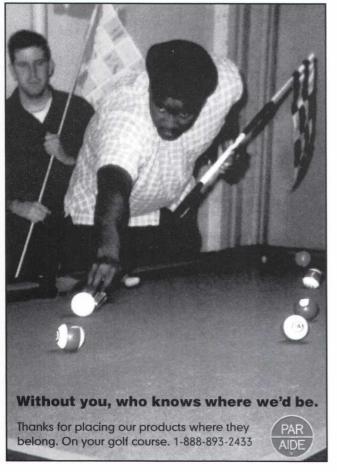
An area two to three feet in radius around the hole should be as nearly level as possible and of uniform grade. A player above the hole should be able to stop the ball at the hole. Consider the condition of nearby turf, especially taking care to avoid old hole plugs that have not completely healed.

We have bentgrass fairways and I'm confused as to what to do with my divots. Are we better off replacing the divot or just filling the scar with the sand/seed mix that's provided?

If the divot has some soil attached and hasn't been blown into a hundred pieces, it will heal quickly if it is replaced immediately. Be sure to replace the divot (green side up!) and step on it to establish contact with the soil below. If the divot cannot be replaced, then the sand/seed mixture should be used in the scarred area. Golfers who take the time to replace a divot properly or repair divot areas help keep the fairways in good condition for their fellow golfers.

What are the USGA's recommendations when selecting sand for bunkers?

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DRIVE FOR THE "U" PROGRAM

The Drive for the U is a program designed for in-kind donations to the University of Minnesota Turfgrass Research Center. All donations are tax deductible and will help to build the research center into a top notch facility. Contact: Paul Eckholm, CGCS, Heritage Links Golf Club. epeckholm@msn.com

Company/Person	Commitment	Value
Glenn Rehbein Companies	Site Survey	OPEN
Turf Supply Company	Product	OPEN
Hartman	Construction Services	OPEN
Paul Eckholm, CGCS	Rotary Mower	\$200
Plaisted Companies	Materials	OPEN
Eureka Sands	Materials	OPEN
GreenImage	Sprayer	\$1,000
DTN Weather Services	Satellite System	\$1,500
Rick Fredericksen, CGCS	Vacuum	\$800
Rob Panuska	18 Cups	\$325
Century Rain Aid	6 Irrigation Heads	\$950
Miltona Turf Products	Turf Maintenance Tools	\$325
Paul Eckholm, CGCS	Reel Maintenance	OPEN
Hydrologic	Irrigation Materials	\$2,000
Gill Miller Inc.	Design Services	\$3,500
E-Z-Go Golf Cars	Workhorse	\$5,000
E-Z-Go Golf Cars	Workhorse	\$3,500
Bonestroo & Assoc.	Design, Construction, Services	OPEN
Twin City Seed	Bentgrass Seed	\$400
Simplot Partners	Fertilizer Products	\$5,000
North Star Turf	Two Mowing Units	\$33,819
North Star Turf	Top Dresser	\$7,495
MTI Distributing, Inc.	Three Mowing Units	\$48,423

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The USGA has never had specifications for bunker sands. The article "Selecting and Handling Sand," Green Section Record, November/December 1983, provides general guidelines regarding the sand's particle size, shape, composition, color, and other factors that will be helpful for the initial selection process.

Remember, a sand's playability is subjective. It is a good idea to develop a test bunker so that several of the potential sands can be installed and sampled by the golfers. The test bunker should be used for several months before a final decision is made. This will help form a general consensus that will be useful in the ultimate selection of the sand. Keep in mind, bunker sand becomes firmer over time, as it becomes contaminated with soil and organic particles.

Should bunker rakes be placed inside or outside of the bunker?

There is no set rule as to where the bunker rake should be placed. It is recommended that rakes be placed outside bunkers and in positions where they will be least likely to affect play. Other considerations, such as golf course maintenance and the size and design of the bunkers, will impact the final decision made at each course.

Our golf course is developing a master plan for renovating the course. The proposal includes the removal of many trees around the greens and tees. I hate to see even one removed. Is it normal to remove so many trees?

Many golf courses implement tree-planting programs that result in over-crowded trees. As the trees mature, they dramatically affect the way the course plays and create increased shade and reduced air movement around the green and tee areas. This condition results in weakened turf that needs more irrigation, fertilizer, and pesticides to grow. Good turf needs good growing conditions, and tree removal is an essential part of master plans on many older courses.

COMMITTEES



Is the proper terminology Green Committee or Greens Committee?

In almost all cases of using the word 'green' in golf terminology, the use should be singular; green fee, greenkeeper, Green Section, green committee.

I'm a new member of our golf course Green Committee. Where can I get information about my responsibilities in this position?

Although the specific function of the Green Committee varies from golf course to golf course, the general scope of responsibilities is covered in the Green Section publication, A Guide for Green Committee Members. It is a good primer for Green Committee members, and can be obtained by contacting the USGA Order Department at 800-336-4446. Also, look at the articles available on the download page of the USGA Green Section Web site for additional information (www.usga.org/green/download/index.html). The Golf Course Superintendents Association of America is another source of written materials on this topic (www.gcsaa.org).

I'm a high school senior and I want to become a golf course superintendent. What are the best schools for this area of study?

There are good programs offered through many universities and colleges. Universities have traditional four-year degrees, often in agronomy or horticulture, and some offer two-year associates degrees in turfgrass management. There also are programs offered by two-year technical schools and community colleges. When investigating schools, ask about the program's reputation, type of skills learned, and the success of the graduates. A helpful publication is the College Guide, from the Golf Course Superintendents Association of America (www.gcsaa.org), which answers many of the important questions about turfgrass management programs across the country.

Occasionally, I see a product or business advertised as "USGA Approved" or "USGA Certified". How does a company receive such a USGA endorsement?

They don't. The USGA does not approve, certify, or endorse any product or service. In fact, any company or

> product making such a claim is likely to find themselves in contact with our legal staff.

What is a good way to keep up with the information that your Green Section agronomists are seeing in the field?

The Green Section continually updates the Green Section portion of the USGA Web site. One feature

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is the regional updates, written by the Green Section staff. The regional updates highlight what the agronomists observe during their Turf Advisory Service travels in each of the eight Green Section regions. The information is updated every two to three weeks and can found at: www.usga.org/green.

Green Construction

The game of golf has changed over the years. However, while most of the attention is directed toward equipment issues, changes also have occurred on the course itself most notably on the greens. Greens are mowed lower than ever before (often as low as 1/10 of an inch), must endure more traffic, and frequently are irrigated with poor quality water. In spite of these challenges, golfers expect and deserve high quality putting surfaces - ones that rival the championship courses they see on television - and they expect them on a daily basis.

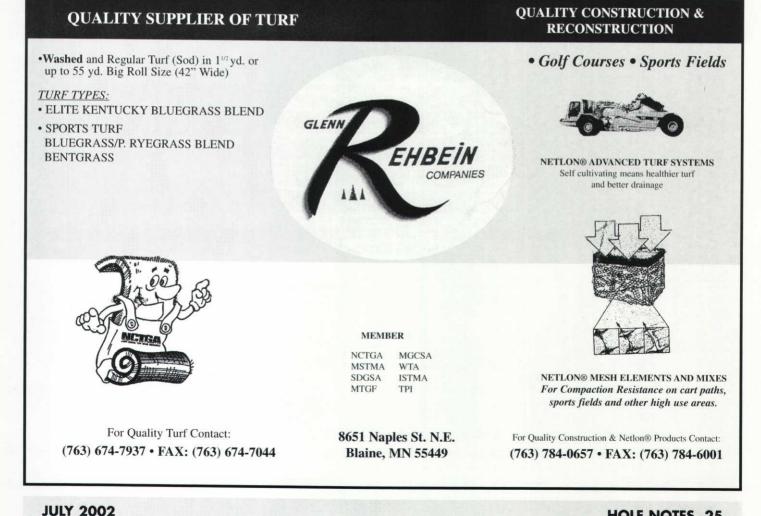
Many older greens simply cannot meet such high demands. As a result, greens all over the country are being rebuilt in record numbers. While this is an important investment in the future of the golf course, it is almost always a challenging time for the players who may have little idea why the project is undertaken. Here are some commonly asked questions.

How much does green construction cost?

The cost of green construction varies tremendously. The largest variables are the cost of materials, the architect involved, and the extent of the reconstruction process.

For example, to rebuild 19 greens will typically require about 7000 tons of rootzone mix (usually sand and peat). Largely dependent on trucking fees and local availability of the sand, the cost per ton might be as low as \$15 or it could be as high as \$45 - a \$200,000 variance. Along the same lines, a lesser-known, but very capable, architect might charge fees half as much as one whose name would be recognized nationally.

Finally, some reconstruction projects involve rebuilding the complete green site, including the bunkers and mounding surrounding the green. In these cases, the old green(s) is typically flattened and the new green built from scratch. In contrast, on many courses the decision is made to simply remove the old rootzone and replace it with one that drains. This is often referred to as shelling and is significantly less costly since no work is done to the surrounding areas and architectural input is frequently unnecessary. Given these (Continued on Page 26)





ON BOARD

Musing the Monthly Minutes

By Jack MacKenzie, CGCS North Oaks Golf Club

No doubt everyone's season is well under way and we are all enjoying the challenges our jobs offer. For these reasons the Board of Directors did not meet in the month of June. However, several important and news worthy events did transpire over the last few weeks.

Of primary interest to me, the Scholarship Chairman, was the Scholarship Scramble. This year, Dan Hanson at the St. Cloud Country Club hosted the event. Kudos to Dan and the whole club staff from Lori Larson in catering to Art Martinez in the kitchen.

Congratulations are in order for all of the winners that day, but the true champions will be chosen later this year when the scholarships are awarded. I personally commend all who donated additional monies to the Scholarship fund through the purchase of Mulligans. And I would like to say A BIG THANK YOU to the hole sponsors and those who contributed to defer the cost of dinner.

Stepping up to the contribution plate twice were Hydrologic and Simplot Turf Partners. Also adding to the donations were Plaisted Companies and Brackets Crossing. Thank you all for your participation.

Another big contributor to the Scholarship Fund, in the form of the on-going Legacy Scholarship Program, is Steve Garske president of ParAide. Muchas Gracias!

Recently I played in the Research Fund Raiser. This year MTI Distributing invited me to play one of the finest-maintained tracts in the Twin Cities, my course, North Oaks Golf Club (maybe I'm a bit biased!). Besides strengthening friendships, MTI Distributing contributed \$1,140 to research. Thank you.

While both of these events were fun, the greatest gain for me was in the form of a thank you note from James Gardner CGCS, Superintendent of The Wilds Golf Club. James had played my course during the Research Event and took his professionalism over the top by sending my staff and me a letter of thanks. Even though everyday I try to motivate my staff by positive promotion, nothing beats a "congratulations on a job well done" note from another professional in the industry.

How many of you have sent a Thank You note recently? Two years ago my club hosted the Minnesota PGA Championship. I received and posted in my shop cards of gratitude from over twenty-five percent of the playing field. Talk about a professional group of guys! As superintendents let us take this lesson of diplomacy to the next level and send thank you notes for all of the functions we attend. And please do not forget the associate members who also donate of themselves so generously.

Hey Dan and staff, your course was awesome. My thank you note is in the mail!

- Jack MacKenzie, CGCS

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caveats, a very general estimation of the cost of new greens is that they will range from \$4 to \$7 dollars per square foot. In most cases, new greens will range from 6000 to 7000 square feet apiece.

How Long Will the New Greens Last?

This is much like trying to answer the question, "How long will your house last?" The answer to both questions depends on numerous factors. What kind of construction technique was used? How good were the construction materials? How high are the demands of the owners? Is the design still appropriate for those using the structure?

From an agronomic point of view, greens built according to the USGA Green Section's guidelines should last indefinitely if they are cared for properly. There are greens across the country built in accordance with these guidelines that are more than 40 years of age. In contrast, poorly built greens are likely to fail within a few short years, usually due to inadequate rootzone drainage.

Even greens that drain well are occasionally targeted for reconstruction. Many courses are much more heavily played now than when they were originally designed. Often, the greens are simply too small to withstand the increased traffic load and must be completely rebuilt to accommodate the new design.

The bottom line is that there is no fixed number of years of a green's life. There are golf courses in the country with greens that are over 100 years old and there are courses that rebuild the greens every 10 to 15 years in order to remain competitive with other facilities in the area. As a very general rule of thumb, it is reasonable to expect well-built greens to provide satisfactory service (both architecturally and agronomically) for at least 20 to 25 years.

How Long Will We Have to Wait to Play Golf Again?

There are two aspects of the project that must be considered. The first is the actual construction process. The second is the grow-in of the new greens following construction.

The complete reconstruction of 19 greens normally takes from 6 to 12 weeks depending largely on the resources of the construction company and weather conditions. Once construction is finished and the greens are planted, the grow-in process begins. Bentgrass greens normally take 14 to 16 weeks of good growing weather to get ready for play, while bermudagrass greens are a little faster, typically needing 12 to 14 weeks.

The key phrase that must not be overlooked is good growing weather. Ideally, bentgrass greens should be planted in the fall and bermudagrass greens in early summer. Although it is certainly possible (and often unavoidable) to plant at less ideal times, it will take longer for the greens to mature enough to withstand traffic.

Obviously, there is much more to building and growing-in greens than can be covered in this short response. A great deal of information can be obtained by calling any of the Green Section's offices or by visiting the Green Section's Construction Education Program Web site at www.usga.org/green/coned.