

# Case Study #2

■ MAINTENANCE

## Sand on Steroids

Soil amendment bulks up sand-green drainage capacity

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### Problem

Sand-based greens wouldn't stand up to the high traffic expected on Capitol Hill GC, and the drainage capacity needed to be maximized.

### Solution

Adding Profile to the sand underpinning the greens resisted compaction from foot traffic, increased green drainage and inhibited the creation of a thatch layer.

John Yancey, who would soon become the superintendent of Capitol Hill GC, a 54-hole facility in Prattville, Ala., surveyed the site of his future golf course in the fall of 1997. The construction crew had just started clearing the site, and the course slowly took shape.

The course planned USGA specified sand-based greens, but Yancey wanted to ensure the greens drained well. He was skeptical that sand-based greens alone would fit the bill.

"Sand by itself doesn't hold moisture well over time, and it compacts pretty easily, which hurts the overall health of the greens," Yancey says. "We were looking for something that would accentuate the posi-

tives of a sand base while adding desirable characteristics such as nutrient and water retention."

Yancey says he had read about a product called Profile a couple of years before the first greens were grown at Capitol Hill in 1998. He thought it might be an appropriate soil amendment that would meet his needs. He researched the product and called upon fellow members of the Robert Trent Jones Golf Trails' group of eight courses in Alabama to see if any of them used the product. He found several of the other courses were using Profile as a top-dressing. The superintendents at those courses were impressed with the results.

### The problem

Yancey hoped supplementing the greens' sand with

**Profile was added to the greens at Capitol Hill GC to improve drainage, withstand heavy traffic and prevent the development of a thatch layer.**

Profile would increase the drainage potential and nutrient retention, which would not only increase root mass, but would also maintain better overall turf health. Concerns about compaction and thatch also drove Yancey to supplement the sand for the greens.

"My experience has always been to take a long-term approach, and we were projecting that Capitol Hill would be a high-traffic course," Yancey says. "The owners wanted greens that would stand up to the traffic."

Yancey says he also installed a Sub-Air drainage  
*Continued on page 91*

## Case Study #2

*Continued from page 87*  
system that sucks carbon dioxide and water from underneath the greens, which required his greens both to drain well and to avoid compaction to maximize the system's efficiency.

So Yancey investigated Profile, which is engineered from a blend of minerals, primarily silica and illite clay. The mineral is kiln-fired to protect its stability, and when added to soil it combines the porousness of sand—leading to good drainage—with the retention qualities of clay.

Profile won't decompose to produce the excess organic matter that can lead to thatch, says Mark Fields, gulf region project manager of Profile Products LLC. The product also encourages faster grow-in and creates deep and massive roots.

Fields says Capitol Hill also had the added challenge of producing sand greens that contained two different varieties of grass—bermudagrass and bentgrass. Eighteen holes are bentgrass and 36 holes are bermudagrass. The course had to find a product that would accommodate both species and meet USGA specifications.

### The solution

Working with Profile, Yancey and Sun Belt Construction Co. determined an 85 percent sand to 15 percent Profile mix would work best to create the green complexes they desired.

"It's important to make sure the sand and Profile ra-

tios are exact because you can inadvertently cause the problems you're trying to solve if the ratio is off," Yancey says. "It's a little more expensive than peat supplements, but it doesn't have a lot of the organic problems that peat can create, especially with thatch."

Fields says his company will work closely with a course to determine the right ratios of Profile for the sand it's using. Profile will sometimes recommend a different sand to a course if it would create better greens, he says.

"In some cases, the course doesn't know what's available locally, so it imports sand from halfway across the country," Fields says. "That can drive up construction costs, so sometimes we can save them money with our local contacts.

"We can make any sand better, but it takes some research to find out which ratio will work best for your formulation," he says.

Last year, with just two of the 18-hole configurations open, Capitol Hill did 30,000 rounds of golf, Yancey says. The greens have done everything he hoped they would in resisting the strain of so much play.

"The greens held up well under all the rounds that have been played here, and we believe that the planning that went into their subsoil has a lot to do with that," Yancey says. "The long-term outlook is great." ■

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