



CHARTING A NEW COURSE

Renovated campus golf course prioritizes water conservation

When visitors arrive on the Texas A&M University campus through New Main Drive, they are guided by the stoic administration building towering ahead and flanked by draping post oak trees. To their right stands Bonfire Memorial and to their left the campus golf course wraps green around Aggieland's southeast corner.

For a portion of 2013, the usually picturesque course was nothing but dirt, mud, creeks and trees, in the middle of a total overhaul. But it began taking shape this fall and re-opened Oct. 26.

Previously managed by the university, the course is now managed by Houston-based Sterling Golf in what Texas A&M officials called a "novel public-private partnership." Landscapes Unlimited planned the landscaping, and Jeffrey D. Blume, a 1989 Texas A&M graduate, developed the new course design. The numerous improvements include water-efficient practices and technologies.

Starting from scratch

According to Sterling Golf, its vision for the renovation was not only to develop the best on-campus course anywhere but also to represent the turfgrass expertise Texas A&M is known for among agronomists worldwide.

Another Aggie, Dave Elmendorf, class of 1971, will serve as the course general manager, and Carter Hindes, class of 2006, is Sterling Golf's director of agronomy.

Starting with a clean slate for the new course gave the developers a big advantage in improving it, Hindes said. "When you get to start a construction job from scratch, you get to put all the pieces in place," he said. This entailed removing the previous turfgrass and the old irrigation system and redesigning all 18 holes. Renovated in just 12 months, the new course now includes water-efficient

turfgrass, a new reservoir and two new holes for turfgrass research and education.

Managing for profit and conservation

Water conservation is critical to the course because it is profitable as well as environmentally sound. In drought-prone states like Texas, many in the golf industry are preparing for future water restrictions by efficiently managing water and land, and using alternative water sources. The campus course management is following similar strategies and prioritizing water management and conservation, Hindes said.

Because the course is public and sells affordable rounds for students and staff, instead of running on memberships as a private course would, its business model includes both keeping the course attractive and saving money through water-efficient practices, Hindes said. There's a perception of golf courses as water-wasters, he said, but many superintendents work hard to conserve water.

"One big improvement we've made is that the turfgrass we selected for the fairways, Celebration Bermuda, is much more drought-tolerant than other varieties used on golf courses," Hindes said.

Because Celebration is an aggressive variety, it can handle drier conditions and recover from dry periods quickly, he said. To help the grass thrive over time, the landscapers capped the fairways' original, hard soil with sand before planting the turfgrass — improving soil aeration and allowing water to move better in the soil.

Another feature keeping the course both good-looking and efficient is the addition of native grasses in the roughs, which provide an attractive color contrast with the fairways and don't need irrigation once established.

“These will be taller grasses, in the out-of-play areas, where nobody will be hitting anything — well, they won’t be trying to hit it there at least,” he joked.

Another major improvement is the use of new water sources. “Before we renovated the golf course, it was relying on well water and, as a back-up, potable water,” Hindes said.

“We’ve built a 2–3 acre reservoir in the creek that now collects the water that comes off the cooling tower on campus, as well as runoff from the course. So, we’re able to use that water for irrigation. The goal is that once the golf course is grown-in, we will use only that water, and then the well water for back-up.”

Using the latest technology

Those alternative sources of water will be used efficiently, thanks to the course’s new irrigation system. Produced by Hunter Industries, it includes efficient rotor heads, uses evapotranspiration rate data and can be controlled from anywhere by Hindes, using computer software. The new system’s pipes are all high-density polyethylene, or HDPE, he said.

“It’s similar to gasoline pipe, leaks are minimal, and 20 years from now those pipes will still be intact,” Hindes said.

Exactly 1,183 irrigation heads cover the course, each individually controllable. In drier spots, the volume can be turned up, while wetter spots can be turned off or down. “It doesn’t sound like much, but multiply that by 1,183 heads, and you make a big dent in water used,” Hindes said.

An average person may not know, he said, that a course’s irrigation is intrinsically linked with the way the course plays, which keeps superintendents busy.

“We’re constantly out here checking the greens to see how the irrigation and fertilization levels are affecting how the course plays,” Hindes said. “We have to make sure the course produces revenue, plays well and uses resources efficiently.”

Sterling manages six courses and follows the same philosophy on each.

“Our owner and our CEO are good golfers and like courses to run fast and dry. Overwatering is just not acceptable. I’m the same way; I like the course

to run fast. That’s the way golf should be played. We think that drier is both better for the game and healthier for the turfgrass.”

Over the summer, Hindes said, establishing the new turfgrass required extensive irrigation, and the intense heat was a challenge. “It’s unfortunate, but when you grow Bermuda grass, you just have to establish it when it’s hot and dry because it’s a warm-season grass,” he said.

The course also now features a fertigation system, which distributes liquid fertilizer products throughout the course and is just as precise as the irrigation system — allowing for each spot on the course to get just the right mix, amount and timing of nutrients, Hindes said. Sterling’s chemists examine soil and water tests to determine exactly what is needed where, he added.

Staying ahead of the curve

As droughts and population growth strain water resources, the golf course industry is prioritizing water efficiency and turning to new water sources such as reclaimed water. The campus course is a microcosm of these trends, using new technologies and alternative water sources.

“It is the future, there’s no doubt about that,” Hindes said of reclaimed water use on courses.

Sterling Golf was founded four years ago, and the company has never been in business in Texas during a nondrought year.

“If somebody calls us about buying or managing a course, the first question we ask is: Where’s your water coming from?” he said. “If they pay for potable or well water, it’s hard for us to justify that expense. Golf is a business, and we have to have affordable water to make it work.” 💧

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Some information taken from TAMUtimes news releases.



Background: the Texas A&M University campus golf course mid-renovation. Right: Cater Hindes, Sterling Golf’s director of agronomy. Photos by Leslie Lee, Texas Water Resources Institute.