

CASE STUDY 3

By Michael Zawacki

Going eau NATURAL

Cutting the number of irrigated acres of rough, introducing natural areas and upgrading sprinkler heads is conserving water at Indiana's Chariot Run Golf Club.

When superintendent Roger Meier arrived at Chariot Run Golf Club in 2005, the 18-hole Harris Entertainment resort property in Laconia, Ind., was irrigating 80 acres of tall fescue and bluegrass rough and 35 acres of bentgrass fairways.

The facility's water is supplied primarily by a rainwater-fed, 7-acre irrigation lake. When

that reservoir is depleted the course must tap into city water, an expensive fallback for which Meier budgets \$30,000 annually. Chariot Run is located in a transition zone in the eastern part of the state, so summer can be very dry or very wet.

"It was critical for us to take conservation measures and reduce our water needs," says Meier, who operates with an \$850,000 annual maintenance budget and oversees a crew of 19 in June, July and August. "There are no water restrictions mandated to us, but it's something my staff and I believe in for success at our club."

In 2006, Chariot Run embarked on an extensive bunker renovation and redesign project. The course hired architect Randy Hoffacker from RJH Golf Design, Louisville, Ky., for the redesign and it was Hoffacker who suggested changing grass lines and introducing a native mixture of fine fescue around the bunkers.

"Hoffacker is a big fan of golf course designers Coore and Crenshaw, and they do a lot of natural, rough-looking bunkers," Meier says. "That's where he got a lot of his ideas from for this project."

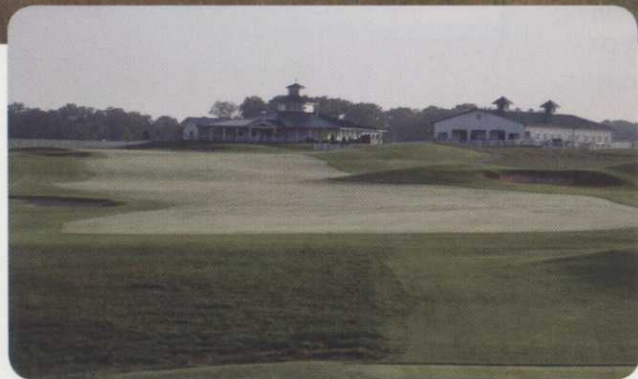
Making this change and allowing several acres of out-of-play areas to go "natural" reduced Meier's maintained rough acreage by about 55 acres.

In addition, they reduced the course's bentgrass acreage by converting its bentgrass driving range floor to tall fescue and they've started the process of reducing several fairways as well. "Our goal is to reduce our bentgrass fairways to about 27 to 28 acres," Meier says.

The property's general manager, though, needed to approve this plan before the transition could take place. Hoffacker assisted in selling the concept by creating a presentation that superimposed native grasses around a specific bunker, providing an accurate visual on what the final concept would look like. The budget for the bunker renovation/restoration project was roughly \$380,000.

One initial problem, though, was they couldn't find a sod grower who grew native grasses. "So we had four acres on the property that had been established with the native grasses when they built the site," Meier says. "We stripped that whole field using a 22-inch sod cutter and brought the cut and prepped grasses in so the construction crew from Professional Golf Services, based in Fort Worth, Texas, could lay it and redo the bunkers."

The native grasses are low-fertility and Meier has had some growing pains. "They're clump-type grasses and they don't spread like bluegrass does," he



Chariot Run Golf Club integrated native grasses during an extensive 2006 bunker renovation and redesign project. Before (inset) and after (top).





Chariot Run Golf Club's 13th hole as it is today with native grasses (left) and before the grasses were introduced (below).



says. "So we've actually had to do some plug-in in some places."

Outside of this issue, though, the positives far outweigh the negatives, Meier says.

"The advantage of having those grasses is that they're drought tolerant," he says. "You don't have to irrigate and put all of that labor and maintenance into those bunkers. When we changed all of those grasses it allowed us to reduce our maintained acreage of primary rough that we were mowing—the turf-type tall fescues. We estimate we've eliminated about 55 acres of turf-type tall fescue that we were mowing, irrigating and fertilizing."

Reducing the facility's irrigated acreage from 126 to 76 acres allowed Meier and his crew to identify, cap and remove 150 irrigation heads from these original sites. In addition, Meier installed 48 quick couplers (about three to four per hole) to aid in hand-watering and is in the process

of installing more efficient part-circle heads around tees, rough perimeters and green surrounds. "We changed a lot of the grass lines — hills that used to be maintained we let them grow natural," he says. "We then tied those lines into areas where we could convert a full-circle head into a part-circle head and really target specific areas and use half the amount of water."

Altogether, Meier estimates the project has reduced the course's water consumption by about 30 percent.

"This is one of the toughest places to grow grass," Meier says. "So it can be a real challenge because we're growing all bentgrass from tee to green."

"It's a unique course and it's something that you don't see everywhere," he adds. "It's rated one of the second toughest in the area because of the native grasses, but people love this course. I've had people tell me it's the closest to Scottish golf as you're going to get." GCI

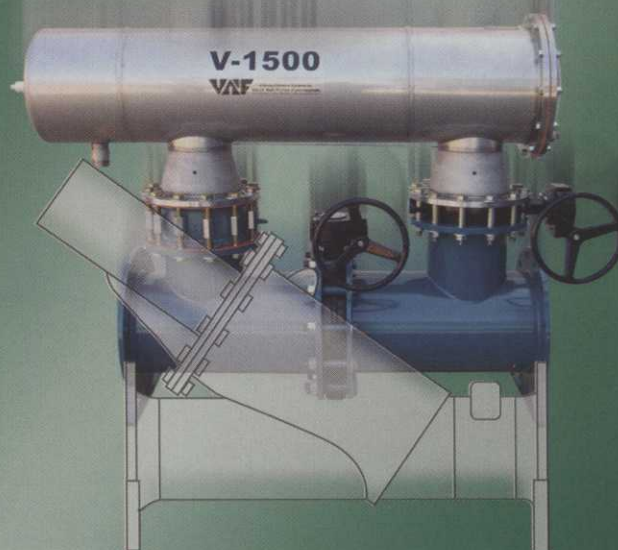


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