



Natural



Wetlands consultant Ed Hauser (left) and superintendent Brent Palich take in the view at Sand Ridge Golf Club.

The picturesque Sand Ridge Golf Club was built and is maintained to function in harmony with the environment

STORY AND PHOTOGRAPHS BY
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From atop a grassy knoll, standing amid the tall fescue and timothy hay near the Sand Ridge Golf Club's fourth green, the view looks like a painting. If Norman Rockwell were here, he would promptly set up his easel and get to work on a watercolor.

In the distance, the emerald-colored third fairway, etched neatly with bunkers and lined precisely with stripes created from fairway mowers, appears impeccable, like newly laid carpeting. Several sprinklers whirl water toward the dark-green bluegrass rough. A pond, its calm surface shimmering in the sun,

Wonder

borders the fairway against a backdrop of billowy trees under a big, blue sky dappled with a smattering of clouds.

Brent Palich, superintendent of Sand Ridge, located in rural Chardon, Ohio, stands silently with his hands on his hips and studies the chromatic scene with squinting eyes on this blazing-hot August day. Palich turns his head from side to side to gain a panoramic view.

"I don't have a favorite hole on the course, but this is my favorite view," Palich remarks.

It's not the only marvelous view the course affords. Such scenery dominates the environmentally sensitive landscape at Sand Ridge. What makes the sights so engaging is the naturalness associated with the course. The land rules the golf course, not vice versa.

Sand Ridge occupies 300 acres, 150 of which are wetlands. The course, which opened in 1998, was designed and constructed to function in harmony with the environment and is maintained with the same intent by Palich and his crew.

"We always think of the environment first," Palich states firmly.

Sand Ridge is a member of Audubon International's Signature Cooperative Sanctuary Program, which means the course was planned, constructed and is managed with a primary focus on environmental quality. The course staff worked with Audubon International, a not-for-profit environmental education organization, to achieve the designation. Sand Ridge was the first golf course in Ohio and the 10th in the nation to receive full Audubon International Signature status.

If the golf industry wants to showcase a course for its ecological prowess, Sand Ridge could take center stage and shine. The course is home not only to 18 holes but also to an assortment of plants and wildlife. The course is also the origin of two popular rivers in northeast Ohio — the Cuyahoga and the Chagrin

— their headwaters begin in the same wetland and flow opposite each other.

Abundant plant life grows in the wetlands, which include marshes, ponds and streams. The seasons dictate when certain plant species bloom so the look and color of the wetlands change throughout the year. No non-native wildflowers and plants have been introduced to the property, not even annual flowers.

Wildlife includes rabbit, squirrel, wild turkey, coyote, deer and many bird species. A black bear was spotted on the course this past summer.

The club also has no swimming pool or tennis courts. Adding to the course's backwoods feel is the lack of housing on the property. There are no busy streets nearby, meaning the course is spared the obnoxious sounds of whizzing cars and rumbling trucks.

In fact, Sand Ridge, located about 30 miles from Cleveland, hardly resembles the parkland-style courses that dominate the region.

"We get frequent comments like, 'I feel like I'm not in Ohio,'" says Peter Conway, Sand Ridge's president and son of the club's owner, Bill Conway. "The course really has more of a Low Country Carolinas feel to it."

It wasn't Bill Conway's dream to build a golf course. It just worked out that way.

Conway is chairman of Fairmont Minerals, one of the largest producers of industrial sand in the country, including production of top-dressing and bunker sand. In 1992, Fairmont acquired 500 acres of land near its sand-mining operation. The hope was the company could mine the land, even though Fairmont officials knew it was composed largely of wetlands.

The company was able to mine about 200 acres, but that left 300 acres for ... what? At a board meeting discussing the topic, Conway says someone joked that "we could always build a golf course." But there were more

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Wetlands and native grass are abundant at Sand Ridge.

'It wasn't a dream [to build the course], but I got excited about it once we got into it.'

BILL CONWAY

OWNER

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curious looks left on people's faces than laughs.

So the company's leaders checked into the realm of constructing a course. They surveyed the golfers in the community about the idea. Would they join another club?

"The answer was, 'Yes,' provided it was absolutely first rate," Conway says.

A first-rate golf club meant only two words to Conway: Tom Fazio. So he phoned the famous architect to see if his firm was interested in designing it. Fazio said "yes" and surveyed the property with one of his top men, Tom Marzolf, who was placed in charge of the design.

"It wasn't a dream [to build the course], but I got excited about it once we got into it," Conway says with a grin. "What we ended up with is a routing plan that takes advantage of all the natural terrain of the land and utilizes the wetlands as a feature."

Because of the land's environmental sensitivity, Conway wanted to employ an experienced wetlands consultant on the project. He hired Edward J.P. Hauser in 1993. Hauser was known as a stickler for doing the right environmental thing, precisely the type of person Conway wanted for the job.

Conway recalls Hauser walking the dense forest of the property early in the project and waxing intelligently about wetland management. "He not only knew what he was talking about, but he loved the concept of trying

to utilize the land in a way that protected the wetlands," Conway says.

It was Hauser's job to provide a wetland delineation, which is to establish the boundary between wetlands and uplands or non-wetlands. Hauser advised the wetlands be avoided during construction of the course.

Hauser, a North Carolina resident, was raised in northeast Ohio and knows the area's wetlands well. He has performed more than 200 wetland delineations in the area, but Sand Ridge was his first major golf course project.

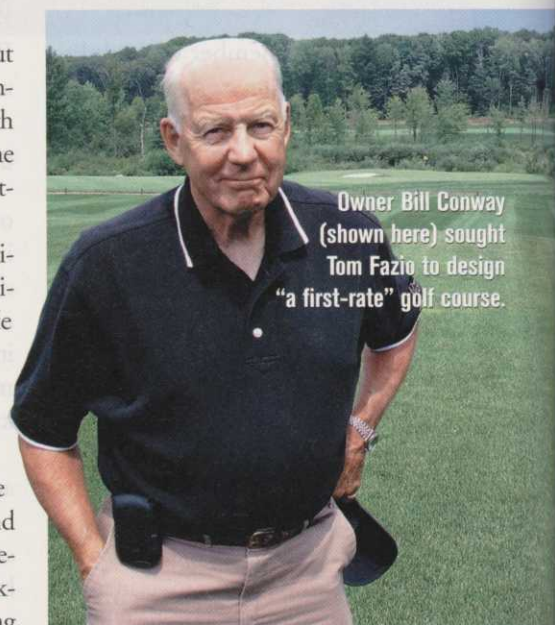
Hauser worked closely with Marzolf. "Many golf course designers want to change the land to fit their images of what they think golf courses should be," Hauser says. "We took the opposite approach. We designed the golf course to fit the surrounding environmental area."

Marzolf says he learned a lot from Hauser about wetland delineation. "He was a big help," Marzolf says. "We dropped back and did the science before we built the golf course to protect the site."

Hauser's initial goal was to restore portions of the wetlands to their original states. Parts of the wetlands had become choked with woody exotic invasive species, including buckthorn and thicket.

Scanning an area that was cleared of invasive plants, Hauser says it took about four days for four men, armed with chain saws and weed whackers, to remove them and their deep roots.

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Owner Bill Conway (shown here) sought Tom Fazio to design "a first-rate" golf course.

► The wetlands at Sand Ridge are now inhabited by colorful native flowers such as joe-pye weed.

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Hauser points to a swamp inhabited by a hoard of handsome native plants. He explains the area was formerly full of thicket. But on this day, white spiraea, a flowering shrub, is in full bloom. The same wetland supported dense blooms of yellow marsh marigolds in the spring, Hauser says, and the pink-flowered swamp rose had peaked only a month earlier.

The native plants, which require full sunlight, grow more wholly now because they're not covered by shade from the aggressive thicket. And because the plants yield flowers, more birds have flocked to the course. Hauser estimates that Sand Ridge is home to more than 100 species, including bluebirds, hawks, herons and owls. In essence, the building of the golf course in conjunction with the wetland restoration has rejuvenated the land, Hauser says.

"There's no question in my mind that we've increased the ecological diversity and wildlife diversity of the land more than twofold," he says. Hauser conducts all of the annual ecological monitoring and reporting as required



by Audubon International.

From the outset, the philosophy at Sand Ridge has been to grow the best possible turf — but only by using pesticides when necessary.

Needless to say, adhering to a detailed in-

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egrated pest management (IPM) program is the ultimate challenge for a superintendent. Palich has accepted it willingly. He has only been superintendent of Sand Ridge since February, but he's no stranger to the course. After graduating from The Ohio State University's Agricultural Technical Institute in 1998, he took a job as the course's spray technician under then-superintendent John Zimmers. Palich left Sand Ridge after 18 months to join Zimmers, who was named superintendent of Oakmont Country Club in Pittsburgh, as his assistant. After spending four years at Oakmont, Palich landed his first job as a superintendent at Potowomut Golf Club in East Greenwich, R.I. But when Jim Roney, who succeeded Zimmers at Sand Ridge in 1999, left the club earlier this year to become superintendent of Saucon Valley near Philadelphia, Palich was contacted about replacing him.

He jumped at the chance.

Fretting about and taking care of the environment are two of Palich's job responsibilities. He does them both through his IPM plan.

The IPM plan begins with the club's chemical building, which is self-contained. If there's a liquid chemical spill from a sprayer in the building, the liquid funnels into a pit where it can be pumped safely back into a sprayer. Chemicals can't leak from the building.

Speaking of chemicals, Palich uses as little pesticide as possible. He has implemented several maintenance tricks to keep use to a minimum.

For instance, Sand Ridge's bentgrass greens are built on sand-based soil and the perimeters of the collars can take a beating from greens rollers and greens mowers that turn on them. To keep that turf from weakening and fading, Palich and his crew lay quarter-inch 4-foot-by-8-foot sections of plywood on the top of the collars. So mowers and rollers, instead

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of turning around on the grass, can change directions on the plywood, which disperses the equipment's weight and protects the turf as well. Because there is less stress on the turf, there's less chance of disease occurring. That means fewer fungicide applications.

Yes, laying down the plywood can add nearly 90 minutes to mowing time. But the course reclaims the cost by not having to spray fungicides and the environment benefits from the process, Palich adds.

It's just one of the proactive approaches the club takes to minimize pesticide use. Another is the science involved with the strip of ryegrass grown between the outer edge of the bentgrass fairways and the inner edge of the bluegrass roughs. The ryegrass, which is more susceptible to disease than bentgrass and bluegrass, acts as a bellwether to turf maladies such as pythium and dollar spot.

"Disease on the ryegrass will

occur before it does on the bentgrass," Palich says.

So Palich and his crew watch the 6-foot-wide ryegrass strip closely for disease breakouts. If they see disease, they make curative fungicide applications to the ryegrass to stop it from spreading to the bentgrass and bluegrass. But they don't spray the bentgrass and bluegrass.

Alas, Palich and his crew only treat up to 1.5 acres of turf, which the ryegrass comprises. Without the ryegrass acting as a disease indicator, Palich and his crew would have to spray much larger areas of turf and use more fungicide to treat turf disease. The bentgrass fairways, for instance, comprise 30 acres.

Palich and his crew still spray preventive applications of fungicide, but not often. "We push fungicides to last longer here," he says, noting that the bentgrass (L-93 from Tee-to-Green) used on the course's greens, tees and fairways fares well against stress and certain diseases. "We use low rates of chlorothalonil about once a month on fairways."

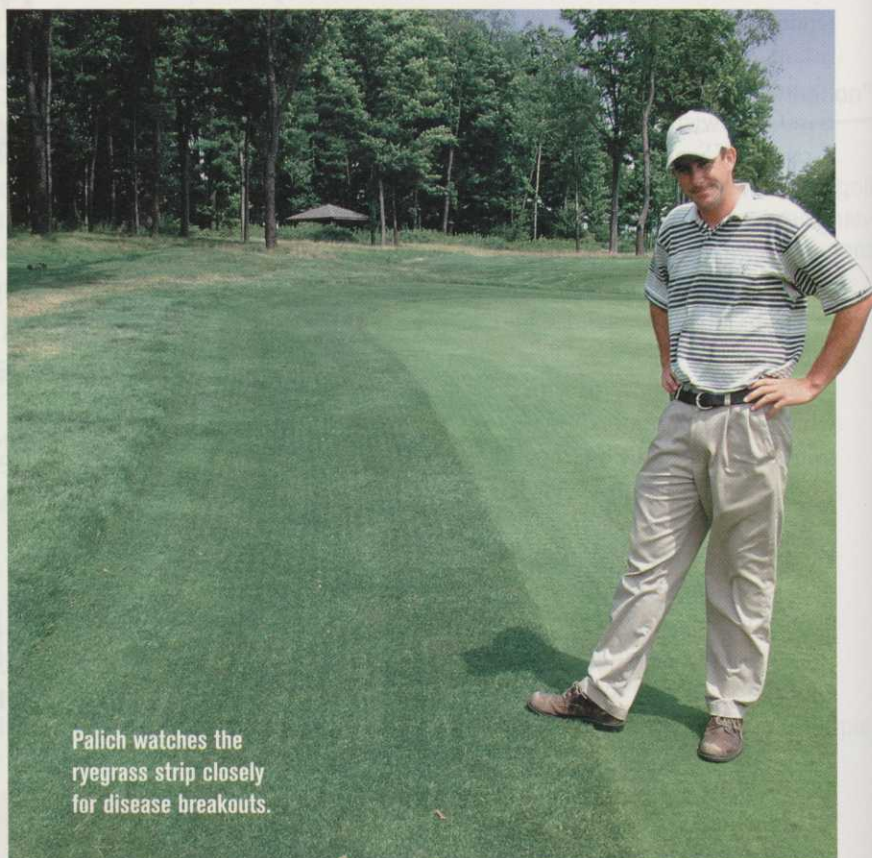
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Palich watches the ryegrass strip closely for disease breakouts.



Sand Ridge sports many good views thanks to its naturalness.

Like other superintendents in his region, Palich battles *Poa annua* continually. Palich's plan of attack begins in the rough. He knows that if *Poa* gets in the rough, it will soon contaminate the fairways and greens.

"We have a thick Kentucky bluegrass rough that we water and fertilize," Palich says, explaining that a healthy rough has no room for *Poa annua*.

If *Poa* does reach Sand Ridge's greens, it's not treated with a herbicide. Palich's staff uses 1-inch diameter pluggers to remove it. "We're able to keep up with it, but we have to stay on top of it," Palich explains.

Palich is proud to report that Sand Ridge, which is just completing its eighth season, has never applied herbicide on its greens to treat *Poa annua*.

Palich and his crew also watch the course's fairways closely for *Poa*. While they treat it chemically, they do so sparingly and use cotton balls dabbed with a glyphosate herbicide.

Overall, herbicide use is kept to a minimum. Broadleaf weeds are spot-sprayed by maintenance staff members who carry hand-held spray tanks.

Would Palich like to use even less pesticide than he already does? You bet, but it's not always his decision.

"We have a membership that expects tournament conditions every day," he says, noting that most members don't have a high threshold for lost turf caused by agronomic problems.

Palich is big on organics and biostim-

ulants for fertilization, such as calcium- and potassium-based products. He only makes two light applications of inorganic fertilizer a year on the greens. He uses no inorganic fertilizer on fairways. He prefers organics and biostimulants because he says they re-energize the turf rather than make it grow substantially.

Water management is also a key component of IPM, and Palich manages water use on the course like Tony LaRussa manages the St. Louis Cardinals — steadfastly. Over-watering leads to more disease, Palich says, which can lead to more fungicide use.

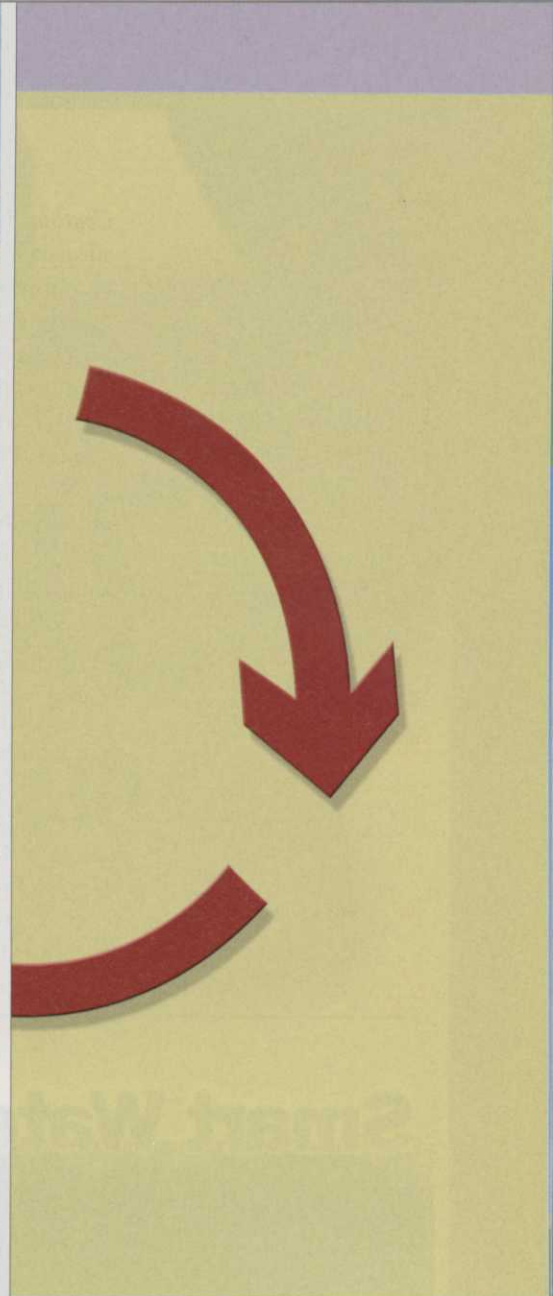
"We err on the drier side and tend to do a lot of hand-watering in the rough," he says.

The course also uses several buffers to protect the wetlands. Most are at least 20 feet wide and are comprised of various layers, including natural vegetation, tall meadow grass and waste bunkers. Long waste bunkers are located strategically along wetland areas to act as buffers. They not only catch errant-shot balls that could bounce into the wetlands, they also keep fertilizer and other chemicals from running off into them during heavy rains.

"They are a great feature to the golf course from an aesthetic point and a playability point," Palich says of the bunkers. "But they were put there for the specific reason to prevent runoff from going into the wetlands."

Palich admits that a more-than-

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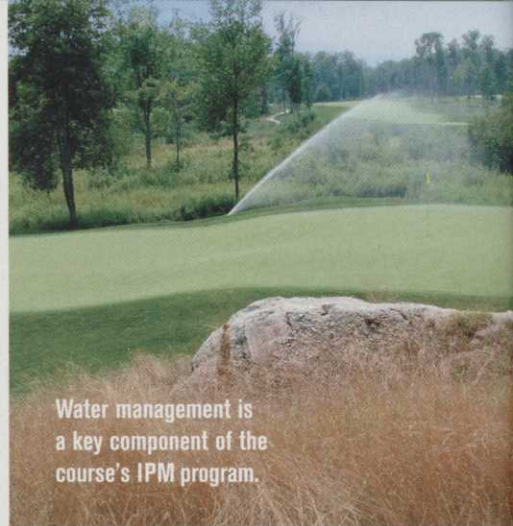
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adequate maintenance budget allows his staff and him to perform many of the maintenance-intensive tasks to maintain and conserve the course as best they can. His crew contains up to 30 people in the summer. "We need everyone," Palich says, "because there's a lot of handwork."

Speaking of the crew, most don't take the outdoor office they inhabit as a workspace for granted. Gavin Johnson, Sand Ridge's irrigation tech, grew up in England and says the course's setting is "completely unique" to any course he has seen.

"I don't think you'll find anything back home that's anything like this — a course intertwined with wildlife and wetlands," he says. "I look forward to waking up every day and coming to work."

Sand Ridge has 350 members and Peter Conway says most are supportive of the course's quest to preserve the environment. "Most of the members treat the environmentally sensitive areas with respect," he says.



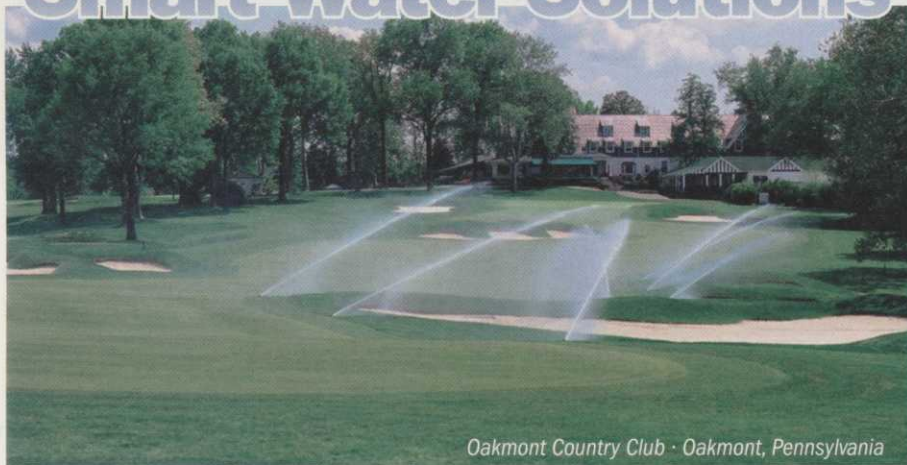
Water management is a key component of the course's IPM program.

The scents, sights and sounds that one experiences at Sand Ridge are markedly different than at many courses. Driving through the property in a utility vehicle recently, Palich watches a golfer pluck berries from a bush near a cart path and eat them.

Such encounters make Palich cherish his job even more. While he's only 28 years old, Palich is already talking about retiring from Sand Ridge.

"I don't ever want to leave," he says softly but affirmingly. "It's just such a special piece of property." ■

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