

A large, light-colored photograph of several purple lupine flowers on green stems, arranged in a row across the top half of the page. The flowers are in various stages of bloom.

Texas PRIDE

by Rob Thomas

The City of Arlington employed comprehensive, sustainable resource-management principles when designing, building, and then managing Tierra Verde Golf Club.



Operating a golf course and remaining environmentally conscious can go hand in hand. In fact, it's a message city officials from Arlington, Texas, with assistance from Audubon International, have been consistently communicating to its community.

With three courses already under the city Parks and Recreation Department umbrella – the nine-hole Meadowbrook Park built in the 1920s, Lake Arlington built in the 60s and Chester W. Ditto built in the 80s – Arlington decided in the 90s that a fourth course would be an asset, but Mother Nature mustn't be harmed. The result... Tierra Verde Golf Club became the first golf course in Texas and the first municipal course in the world to be certified as an Audubon Signature Sanctuary.

The Audubon International Signature Program is an environmental education and conservation assistance program created to help landowners and managers follow comprehensive, sustainable resource management principles when designing, building, and then managing new developments.

The city brought on Audubon International and the Texas Parks and Wildlife Department to offer guidance on sustainable design, says superintendent Mark Claburn. The firm of Graham and Panks International – comprised of former PGA Tour player David Graham, designer Gary Panks and lead architect Gary Ste-

The course design provided a more mature-looking course and the native areas allow the golfer to remove themselves from the "Metroplex feel" of many courses in the Arlington market.

“The initial desire was to preserve the environment,” Claburn says. “We only utilize about 100 acres of the 260-acre plot, with wildlife corridors throughout the course.”

– Mark Claburn, Tierra Verde Golf Club



phenson – teamed with the group and drew up plans to make that happen.

Audubon International Signature and Classic Program Director Nancy Richardson worked closely with city officials and course architects to ensure Tierra Verde was designed to maximize and preserve native areas – such as a wooded creek corridor and existing plum thicket – and minimize managed areas.

“I spent a day with officials from the City of Arlington before construction began, as well as with the golf course architect, Gary Stephenson, working on making sure that any drainage from the golf course was being filtered through buffers to clean up the runoff,” Richardson says. “This was a time-consuming process trying to protect water quality without impacting the artistic design of the course. In the end, we were able to ensure that all runoff was filtered and water quality on the property was protected and even improved over time.”

LOCATION, LOCATION, LOCATION. Though blessed with excellent features and terrain, this land almost wasn’t chosen to host the course, Claburn says. Because of its distance from the heart of the city and major freeways, the former ranch, which was used by many as a hunting ground, almost became an industrial park.

“There was a lot of pressure to put the site elsewhere, but ultimately the current site was the best location for the course with the topography and a majority of the land being undisturbed,” he says.

Adjacent to Tierra Verde is the Martin Luther King Sports Center. With baseball and softball fields, and a nature trail, this gives the entire complex almost 360 acres of combined green space.

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about 100 acres of the 260-acre plot, with wildlife corridors throughout the course.”

FINANCIAL BENEFITS. The environmental focus has had financial benefits for the course, and the golfing public, as well.

“The design has allowed us to remain competitive during this economic downturn,” Claburn says. “We haven’t had a significant price increase because we were designed to be efficient and sustainable.

“We save money on labor, fuel, fertilizer and water due to the design, [too]” he adds.

Richardson can understand why some may balk at consulting Audubon International during the design process, but encourages them to investigate by talking with program members about the financial benefits.

“Through the Signature Program, we work with the developers of land,” she says.

“Developers go through a long process in getting approvals for their project, so I believe in many cases they see Audubon International as another hand on their project wanting them to do more than they are already required to do by government agencies or the local community. But this program helps design a facility that will save in maintenance and operational costs down the road.

“I’m not sure why a golf course owner/operator would not want to save money on operational costs,” she adds. “Audubon International programs can definitely help them to do that.”

COMMUNITY. Golfers and wildlife aren’t the only ones benefitting from Tierra Verde. The community also enjoys the fruits of this labor.

“We tour about 200 people from the community a year through the facility and inform them about our practices and how they can



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The second hole at Tierra Verde Golf Club.

incorporate those into their location,” Claburn says. “Additionally, the golf division is an enterprise fund within the city. We don’t receive tax payer dollars. We are funded by the patrons – including paying for facility operations, land, design and construction. So we provide the city with a sustainable asset that provides entertainment, green space and improves land value surrounding it.”

Designing a course with increased attention on the environment can come at a price, however. While some funding was provided by the other courses – a portion of each greens fee goes toward paying for Tierra Verde – the majority was paid by borrowing through a bond program. Claburn says the course will retire its initial debt in 2017.

“Because of the extensive native areas on the course, construction costs were a little more... and construction took a few extra months due to the routing,” Claburn says. “There were some additional costs in building construction, as well.”

The return on investment is already being enjoyed, though.

“The geothermal heat and air, as well as other design features, saves about 80 percent on electricity over

a building with a similar footprint,” Claburn says of the clubhouse. “It utilizes the constant temperature deep in the soil to act as a free ‘heat pump/sump.’ There are 50 wells that go down 200 feet under the practice holes that take the 130-degree coolant water from the air conditioner system and runs it through HDPE pipes and circulates it through the underground wells like a radiator. This lowers our cost of air conditioning during those 100-degree summer days.

“The course design provided a more mature-looking course and the native areas really allow the golfer to remove themselves from the ‘Metroplex feel’ of many courses here,” he adds. “It feels like you are in the countryside.”

CHALLENGES. As expected, this process hasn’t been without stern tests to overcome.

“A large challenge we face is approximately 20 auto salvage yards that feed into our water shed,” Claburn says, which may explain why some preferred the industrial park to a golf course. “We added additional buffer areas and wetlands for the course to act as a biofilter for the increased pollution.”



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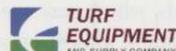


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Being limited on what chemicals are permitted can be difficult, as well. According to Claburn, they typically do not use any fungicides and only organic-based pesticides (Conserve, Spinosad). He does utilize herbicide, but limits the use through only chemicals specified in the natural resource management plan – changing the list as technology changes and products are improved.

In place of common chemicals, hydrogen peroxide proved to be enlightening. “We had a major dollar spot outbreak years ago and used fertilizer management, hydrogen peroxide and corn gluten meal to cure the disease,” Claburn says. “This is when I really became a believer in what we were doing.”

Citing generational differences, Claburn says the environmental efforts have been received with mixed reviews. Most of the older golfers could not care less that Tierra Verde is maintained primarily via eco-friendly organic

future environmental concerns and problems are built into the design,” Richardson says. “It is the time to work with the development team and come up with a product that protects water quality, conserves water, limits maintenance, restores, enhances and creates wildlife habitat on a large scale. It is also the time to lay out a management regime that will cut costs when compared to traditional facilities.”

Existing courses can still benefit from The Audubon International Cooperative Sanctuary Program (ACSP), however. There also is a new program that falls between the ACSP and The Signature Program, called The Classic, which is aimed at existing golf courses that are undergoing a renovation.

While there are things Claburn would change about the process – such as focusing more during construction on the removal of invasive, non-native plants like honeysuckle, privet and mimosa

“We believe you can’t throw anything away because there is no ‘away.’ We preserve wildlife areas while being an asset to the community. It’s a new way of thinking and rethinking the way you do things.”

– Mark Claburn, Tierra Verde Golf Club

means versus harsh chemicals.

“We still do not have a lot of buy in by the majority of players, but we do draw some guests that appreciate what we do on the agronomic side,” he says. “But nearly all appreciate the sustainable design of the course because it is fun to play.”

THE RIGHT PROGRAM. Only new developments can register for the Signature Program. “It has a completely different approach, beginning with the design and making sure that solutions to

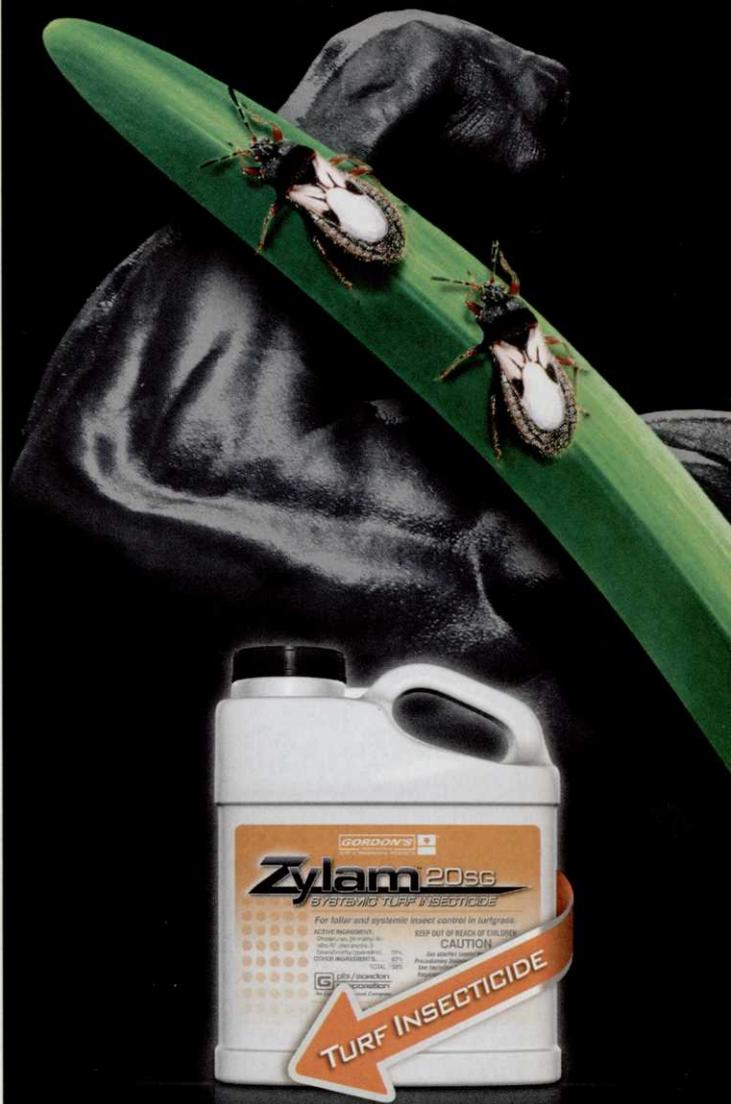
trees – having Audubon International working with his team isn’t one of them.

“It’s definitely worth it to provide a new way of thinking about doing things,” he says. “We believe you can’t throw anything away because there is no ‘away.’ We preserve wildlife areas while being an asset to the community. It’s a new way of thinking and rethinking the way you do things.” GCI

Rob Thomas is Cleveland-based writer and frequent GCI contributor.

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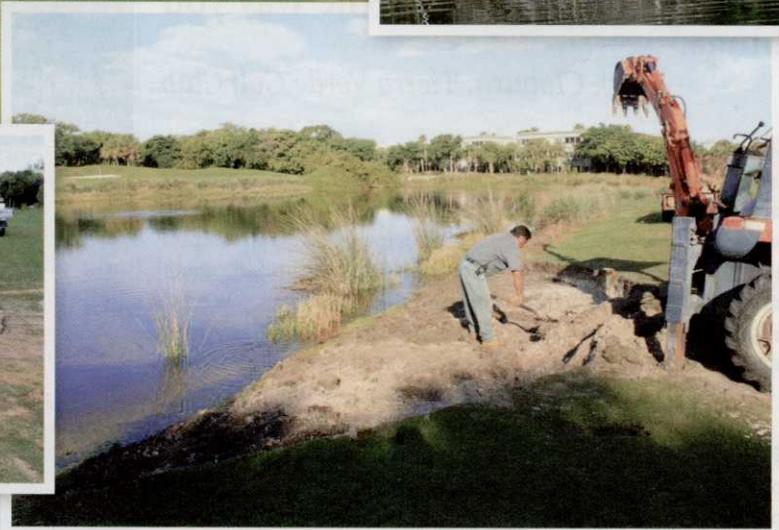
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Communication is key



When it comes to wildlife, the staff at The Sanctuary knows it can't isolate the club.

By Katie Tuttle

Located on Sanibel Island in Florida, The Sanctuary Golf Club is surrounded by acres of wildlife preserve. Because of this, environmental impact is always a concern to the course, as well as the community. In an effort to educate the community on the positive impact golf courses can have on the environment, The Sanctuary has focused their efforts on three separate areas.

GATOR BEACHES. When the course planted all of the lake banks with vegetation to create a buffer between the course turf and the water, they realized the construction eliminated the area where alligators often lay to sun. As a result, the alligators came farther out of the water to lay on the course, often interfering with the golfers. Around the same time, the island community was taking the stance that alligators could be removed from the island. This stemmed from the fact that in the past 12 years, there had been two deaths caused by alligators.

The Sanctuary's superintendent, Kyle Sweet, and his staff questioned this mentality. In the hopes of educating the community, they brought in Dr. Kent Vliet of the University Of Florida's biology department and hosted an event about alligators on the course. When they took Dr. Vliet onto the course for a tour, one of the first comments he made was, "What about creating some areas where you'd like the alligators to go, so they'll be away from the golfers? It would be better for the golfers and better for the gators."

And thus the idea of the Gator Beaches was born.

Sweet and his team created two areas on the course that took up 20 feet of land from the water's edge. Without changing the lake edge at all, they created easy-access beaches, bordered by dead palm logs to deter the alligators from climbing over and lying on the turf. Now, the alligators are

Construction on one of the gator beaches, that provided a place on the course just for the alligators, keeping them separate from the golfers and visitors to the course.



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able to be out of the water and the golfers are able to play their rounds of golf; neither disrupts the other.

And it's not just alligators that take advantage of the areas.

"We have actually had nesting killdeer," Sweet says. "They've actually nested in there ever since we put it in. So you've got a killdeer nesting there, and then a big alligator just a few feet away."

One of the Gator Beaches is visible from the 17th green. Sweet says that when it was first constructed, he made sure people knew it wasn't going to be pretty. It was going to serve its purpose, even if it wasn't appealing to the eyes. Still, he was worried people might see it as more of an eyesore.

"I have heard no single complaint about that area," he says. "Because they understand what it's all about. It's been embraced and encouraged. People here get it, and that's not always the case."

With the positive response to the beaches, groups on Sanibel are now looking at the idea of adding similar beaches to the community. Curious people have contacted Sanibel-Captiva Land and Wildlife Conservation, which has directed them to

Sweet and The Sanctuary.

"Wait a minute, I'm going to go to a golf course and see what they're doing to help manage their wildlife?" Sweet says was the typical response. After a tour of the course, the community members are impressed. "It's really good to get feedback from the community like that," Sweet adds. "Plus it's always nice to take them on the course and show them."

WILDLIFE EXPLORERS. The adults on Sanibel aren't the only community members The Sanctuary is trying to educate. Over spring and Christmas break, the course offers a program called Wildlife Explorers for children and grandchildren of club members. The children are taken to the driving range, the tennis center, and the swimming pool.

Sweet decided he wanted to take that to the next level. "We've been Audubon certified for 10 years and I was trying to figure out a way to get kids on the golf course," he says. "To somehow involve kids with what we do here, and this thing fell in my lap. It was just like 'maybe we can take the kids out on a golf course tour' and it evolved."

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– Kyle Sweet,
The Sanctuary Golf Club

The course has been putting on these tours for kids for two or three years now and it has become a common part of The Sanctuary.

“We take the kids and we have these six-seater golf carts and we travel onto the golf course,” he says. “We take a board and [glue] on 24 or 25 [pictures of] animals that we normally would see on the golf course at any given time. Then we go onto the course and look for them.”

They almost always find at least 50 percent of the animals on the board during the time they’re out there, Sweet says.

“While we’re out there we may talk a little bit about environmental things, like water quality,” he says. “We may talk about mowing the grass; we may talk about pollinators, bees, butterflies and birds. It’s really kind of focusing in on the opportunity to take these kids and show them one more thing, one thing with them outside the norm. It’s just education; it’s exposure.”

Every course should try to offer a similar opportunity. “I’ve talked to people and they’re like ‘Oh, my members would just have a fit if I took a bunch of kids out there



Without changing the lake edge at all, they created easy-access beaches, bordered by dead palm logs to deter the alligators from climbing over and lying on the turf.

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Sweet: "We take a board and [glue] on 24 or 25 [pictures of] animals that we normally would see on the golf course at any given time."

riding on the golf course' and I say 'Well you're just not communicating it right. You need to let them know that it's important that you bring those kids out there on the golf course.'"

"I just don't think people communicate enough," he says. "I make it a point to make sure they know that this is something that's important for us to do as a club."

WILDLIFE BROCHURES. If these two projects make you wonder what The Sanctuary scenery looks like, Sweet has an answer for that too.

The Sanctuary likes to have booklets on hand to give to visitors to the course, highlighting the local wildlife. Last year the course decided to upgrade their wildlife booklets to create more of a formal, coffee table brochure approach. An employee went online and found stock photos of wildlife that could be found on the golf course. However, when Sweet looked at it, he wasn't pleased.

"Everything seemed to look different," he says. "This doesn't look like what we have. A warbler up in Cleveland, the photo is going to be different. They don't look the same; not like a warbler down here."

So Sweet and his 18-year-old son started taking his camera around whenever they were on the course. They collected dozens of animal and scenery images, continuously building their collection. Then they worked with an Atlanta company to create a layout for the brochure, which has now been distributed to people all over Sanibel, as well as mailed all over the country.

"It shows people that these are the things that you might see and it gets people interested in actually going and looking for them," Sweet says. "It's our wildlife. It's great because people can understand that that wildlife exists right here. We are a high-end maintenance course but we have this wildlife opportunity here because we're right beside a national wildlife refuge and we recognize it and we do our best to protect it; to manage for it if we can."

Every visitor to the course gets a booklet, and often he will have people tell him that, while they don't have their own copy, they've seen it at someone else's house, Sweet says.

"It's been a great outreach tool." GCI

Katie Tuttle is GCI's assistant editor.