

Saving Water, Pleasing Players

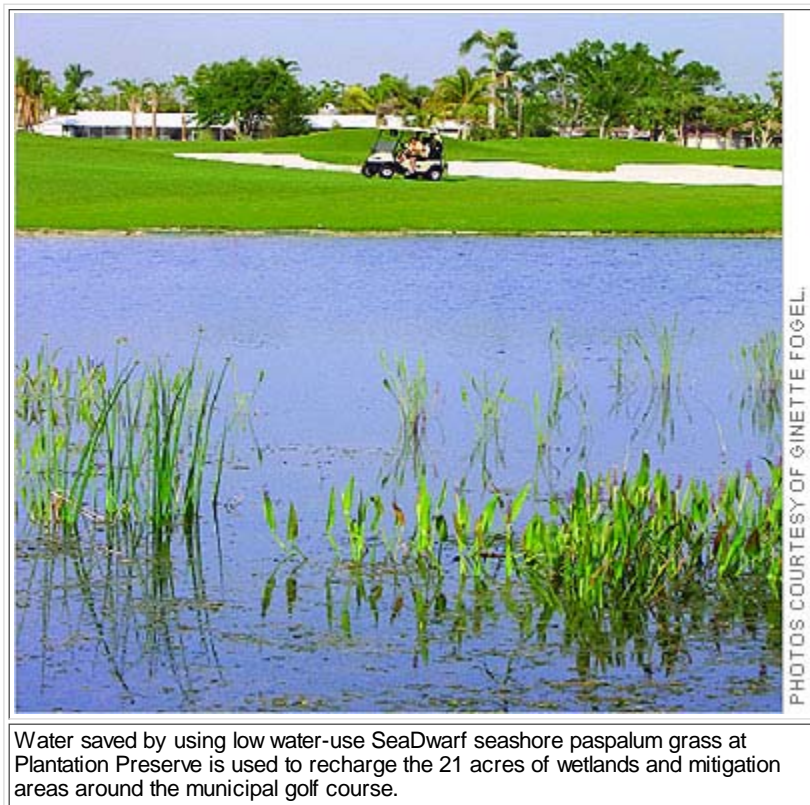
by Stacie Zinn

SeaDwarf earns water district grant for municipal course

When the city of Plantation, Fla., approached its local water board about building a new municipal golf course, the city's plan had an environmentally friendly twist. The course would be grassed 100 percent with a low water-use turf called SeaDwarf seashore paspalum. The South Florida Water Management District not only approved the course construction, the district gave the city a \$50,000 grant.

Why, in an era of water restrictions and drought, would a water board help pay for a new golf course?

"It was basically because in the grant application we were trying to demonstrate how, through the use of the SeaDwarf seashore paspalum, we were going to be able to conserve water," said Dan Keefe, assistant to the mayor of Plantation.



Water saved by using low water-use SeaDwarf seashore paspalum grass at Plantation Preserve is used to recharge the 21 acres of wetlands and mitigation areas around the municipal golf course.

By its very nature, varieties of seashore paspalum (*Paspalum vaginatum*) like SeaDwarf may require as little as half the water needed to irrigate bermudagrass. All 18 holes of the municipal course, called Plantation Preserve, were grassed wall-to-wall with SeaDwarf. Randy Jacobson, the golf course superintendent at Plantation Preserve, said he mows his greens at .1 inch, tees and fairways at .4 inch, and rough at 1.75 inches.

SeaDwarf is grown by licensed sod producers in warm-season states from California to Florida to South Carolina, as well as internationally.

The water savings made possible by grassing the entire 18-hole Plantation Preserve golf course with SeaDwarf on tees, greens, fairways, roughs and collars, have a made a significant impact on the project.

“The thing that we found, because it’s saltwater tolerant and also drought tolerant, was that at times, when we had the water restrictions this past year where we had to cut down 45 percent of our usage, you couldn’t tell it on our turf at all,” Keefe said. “It stayed green. We didn’t have any problems with it drying out or burning out or anything like that.”



In the first year the course was open, the SeaDwarf turfgrass at Plantation Preserve supported 55,000 rounds of golf.

Jacobson agreed with Keefe’s assessment of the grass’s lower use of water for irrigation.

“As time has gone on with being around this grass, I’m finding myself taking a lot of nights off that I probably wouldn’t have with bermudagrass, meaning I wouldn’t put any water on the grass that night. If it were bermudagrass, I’d have probably gone ahead and watered it, but with this grass, I’ve learned, after two or three days of watering, I can pretty much shut it off, even

under dry, dry conditions. It depends on the weather, but the grass does pretty good for [a] few days without water. After a rainfall, we won’t water for two or three days minimum, and we’re on basically sugar sand here, so we drain water real well. It just seems to hold on. It has a real deep root structure, a massive root structure, and it holds on,” Jacobson said.

During the 45 percent water restrictions, Jacobson said using Dispatch as a wetting agent, applied through fertigation, also helped to support the grass’s drought tolerance.

Even under severe water restrictions, Jacobson said the low water-use SeaDwarf on his course allowed him to direct water to other areas that needed it, such as wetlands.

“I’d say for irrigated turf, we’re probably 30 percent under our permit number, but then that 30 percent gets gobbled up with trying to keep water in the wetlands and we’ve got 21 acres of mitigation out here. So, we use it in other areas to keep our wetlands thriving and support our wildlife,” Jacobson said.

The turf’s resilient condition during the drought generated some questions from the public.

“It was beautiful even during the drought, and a lot of people wondered how were we able to do it. Were we cheating or what was going on? But, it was just a matter that the turf was able to survive and thrive with the drought conditions that we had,” Keefe said.



Residents of all ages play the municipal course at Plantation Preserve in Plantation, Fla.

SeaDwarf can also tolerate a wide range in water quality, from fresh water, to reclaimed/effluent, even seawater under proper management. Keefe said Plantation Preserve is being irrigated with “surface water,” but, “there may be a possibility in the future that the city might use reclaimed water.” Grassing with SeaDwarf gives the city the flexibility to make the switch to an alternative water source, should city officials care to do so at some point.

Part of what makes SeaDwarf adaptable to varied water sources is its ability to withstand high levels of salt. The grass is so salt tolerant, in fact, that salt may be used as an herbicide.

“Right now, we use a salt water mixture to control weeds on the golf course, so we don’t really use as many chemicals as a normal golf course would. The (water) district, of course, was thrilled that we were able to demonstrate this,” Keefe said. “I’m sure that salt is cheaper than

a chemical and environmentally it certainly is better.”

Jacobson explained his program for using salt to kill weeds.

“Salt is about 50 percent of our herbicide program. I actually use table salt. One of our fertilizer people, there’s enough paspalum down here in South Florida, is selling it in 50-pound bags, so I buy it by the ton. We pretty much mix it the consistency of seawater and spray it out with a backpack sprayer. It’s like 8 ounces per gallon of water,” Jacobson said. “Salt does pretty good on everything except the sedge, and then some of the tougher weeds like goosegrass, it really does hurt it, but it doesn’t take it out all the way unless you stay on it. So, we’ll supplement our herbicide program with some Dismiss for the sedges, Manage for the sedges and Dismiss also works for goosegrass.”

In divot tests, SeaDwarf has shown to heal twice as fast from sports-related wear than bermudagrass. Keefe said he’s seen evidence of that at Plantation Preserve.

“The golf community has really responded to playing at Plantation Preserve. In the first 12-month period, we did 55,000 rounds, which is quite a bit. We were projecting maybe about 40,000 or 42,000 rounds. We’re busy in the winter and we’re busier in the summer (normally the slow season in Florida), and it’s just amazing the amount of people that play here. And again, because of the turf that we have, we feel we can do that many rounds. It doesn’t show wear and tear, and you know, people enjoy playing on the turf.”



SeaDwarf is used tee-to-green on the golf course at Plantation Preserve in Plantation, Fla.

Keefe said because the grass has held up to so much play, he feels SeaDwarf would also make a good grass for sports fields.

“We’ve actually talked about it, and we’ll think about possibly trying to use it on some of our athletic fields, particularly the high-use ones like soccer or football. I know some cities have done that,” Keefe said. “With the success we’ve had at the golf course, we wouldn’t hesitate to do it. We’ve seen what it can do as far as its durability, its tolerance to drought, some savings we have on chemicals usage and how it’s good for the environment, too, which is an important element to think of when you’re selecting a turf.”

According to a June 2006 report published by Dr. Michael J. Healy, a turfgrass researcher based in Elberta, Ala., seashore paspalums create a highly playable golf course surface.



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“Unlike the bermudagrasses, seashore paspalum does not produce grain. It also stripes nicely. Golfers have commented that their golf balls seem to set up more on the surface of seashore paspalum than Tifway 419 when maintained at fairway mowing height,” Healy said in his report.

Jacobson said he’s now happy with the playability of the SeaDwarf turf at Plantation Preserve, even though he had some reservations in the planning stages. Prior to working with SeaDwarf at Plantation Preserve, he had only had limited experience with seashore paspalum on golf tees.

“I was really against it on the greens, but to my surprise, the greens have really performed beautifully and I fell in love with it for a greens grass,” Jacobson said.

Even though Plantation Preserve is a municipal course, Jacobson routinely measures his greens to roll “between 9 and 10” on the stimp meter. He double-cuts once a week and rolls once a week.

“Then, if we have something a little bit special, an event, we’ll step it up even more. I think we’ve done about 10.5,” Jacobson said.

Since Plantation Preserve opened in April 2006, Keefe said reaction to the golf course from city residents has been “extremely positive.”

“The residents who live around the golf course are thrilled with the way the golf course has turned out. The residents in the city who are golfers just think it’s magnificent to have such a beautiful course,” Keefe said. “The compliments that we get on the condition of the golf course are, of course, to the credit of the superintendent, Randy Jacobson, and his staff, but also we think it’s in large part to the decision we made on the turf.”

Keefe said he attributes the choice of SeaDwarf for the golf course in a way that was not necessarily expected—in the financial success of the golf course itself.

“Our goal was to break even and have some funds left over,” Keefe said. “After debt service and after paying all expenses, we cleared over \$400,000 in profit. We were extremely pleased with that.”

Stacie Zinn is a longtime contributor to Turf and serves as president of Environmental Turf.

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