

WHY IS LYNX[®] THE EASIEST IRRIGATION CONTROL SYSTEM IN THE INDUSTRY?

Simple. You helped design it. The Toro[®] Lynx[®] Control System delivers Precision[™] Irrigation easier and more intuitively than ever before. But don't take our word for it. See what superintendents are saying at toro.com/leaderboard.

The Leader in Golf.



Simplified decision making with Dynamic Drilldown.

With NSN[®] Connect, Lynx is with you when and where you want.

Integrated Turf Guard[®] soil sensor helps you save water.

Flexible and editable map simplifies irrigation control.



Lynx[®] Control System
toro.com/leaderboard

©2012 The Toro Company. All rights reserved.



Count on it.

SHELTER FROM THE

Having a formal response plan in place will ensure the safety of your staff and golfers when storms threaten.

BY STAN AWTRY

KEN MANGUM, CGCS, doesn't need to be told about the dangers of severe weather. The director of golf courses and grounds at the Atlanta Athletic Club was on the course earlier this year when lightning struck a tree 30 feet away.

"I know how dangerous weather can be," Mangum said.

"The weather can blow up on top of you before you know it," added Dustin Elwood, the senior superintendent of golf and grounds maintenance at the Jimmie Austin Golf Course in Norman, Okla. Elwood once sought shelter in the back room of a pro shop while a tornado powered through the facility, coming within 100 yards of his cramped sanctuary.

Have a management plan

Because of the unpredictability of severe weather and the danger it poses to a superintendent's staff, grounds and equipment, superintendents know how important it is to have a plan that guides their actions in the critical moments before and after thunderstorms. Planning takes on more significance when you consider that maintenance crews are often spread across hundreds of acres and operating heavy machinery when a storm threatens.

Severe weather can come on quickly, giving superintendents little time to react. "You'd better have a good idea of what you're going to do. You've got to have a game plan," Elwood said. "Especially when you've got 20 or 30 guys out there working."

Bob Dugan, president of Thor Guard, said planning is the key to avoiding the destruction storms can cause.

A hand is shown in the foreground, reaching out towards a bright lightning bolt that strikes a golf course in the background. The sky is dark and stormy, with multiple lightning bolts visible. The golf course is green and appears to be in the distance.

STORM

GOALS OF A STORM MANAGEMENT PLAN

While every severe weather management plan should be customized to account for variables such as the size of the facility and its maintenance staff, all plans should include the following steps, according to Thor Guard President Bob Dugan.

- 1 Define roles.** The plan should define the roles of key personnel so they know their responsibilities in the event of severe weather.
- 2 Recognize the threat.** While each department head at the course should be knowledgeable of severe weather's early warning signs, one person should have primary responsibility for recognizing the potential for weather-related problems. Today's most advanced lightning prediction systems monitor electrostatic potential to determine cloud-to-ground lightning probability. At a certain threat level, these systems issue audible and visible warnings through remote horns and strobe lights.
- 3 Communicate the threat.** If a severe weather threat has been identified, those responsible for golf, grounds and maintenance, aquatics and special events should be notified. They should be given as much advance warning as possible in the event that personnel and equipment need to be moved quickly to a safe area.

- 4 Take action.** After the potential for severe weather has been recognized and communicated, weather systems should continue to be monitored. If the facility is equipped with a lightning warning and prediction system, make sure that the superintendent and other department heads have access to the same information available in the pro shop. If the facility does not have such a system, managers should suspend activity at the first sign of lightning or the first sound of thunder and move people to a safe area indoors.

- 5 Review and update.** A severe weather management plan should be reviewed and updated on a regular basis by senior managers and staff. Managers, staff and guests should understand that the facility observes strict guidelines regarding threatening weather conditions in the interest of personal safety. —SA

"A carefully designed and effectively executed plan can lessen the potential for injury as well as reduce possible damage to property and equipment," Dugan said. "In some cases, the plan will mean the difference between life and death." Dugan feels so strongly about the importance of planning, his firm developed a framework for courses to follow during storms (see sidebar.)

"A clear understanding of roles and responsibilities helps to eliminate what can be chaotic moments marked by indecision when severe weather threatens," Dugan said.

Clubs in the TPC network adhere to that belief, too. Mike Crawford, director of golf course maintenance at TPC Sugarloaf in Duluth, Ga., goes through a portion of his facility's plan weekly and covers the entire safety plan over the course of a season.

"Part of our safety training is a lightning safety lecture,"
Continued on page 24

Seeking Shelter

Bob Dugan, president of Thor Guard, with Wayne Kappauf, superintendent at Island CC in Marco Island, Fla., standing near one of Thor Guard's lightning detection systems.



Continued from page 23

Crawford said. "It's part of our profession. You don't need to be in a dangerous situation or put yourself in a dangerous situation. It's not good for you and it's not good for your family."

Know the signs

When it comes to recognizing the threat of storms, facilities should err on the side of caution, Mangum said. Atlanta Athletic Club ceases on-course work when lightning is spotted within five miles. "Common sense goes a long way," Mangum says.

Technology can go even further in warning of an approaching storm. Lightning prediction systems can issue a warning before lightning is detected.

Facilities that rely on the Weather Channel or other public services should remember that those computer modules may be at least five minutes behind the actual weather pattern.

Elwood brings in his work crews when the National Weather Service sounds an alarm or when lightning is spotted within six miles. Workers at TPC Sugarloaf are taught to immediately seek shelter when the lightning siren sounds.

"We try to make sure everybody understands what the sirens mean and what they're supposed to do when they hear them," Elwood said.

The sirens at TPC Sugarloaf are typically loud enough to be heard throughout the facility, even for those operating heavy equipment or wearing ear protection. Once the threat has been identified, key members of the crew are notified.

Taking action

After the threat is communicated, the staff takes action. If the threat appears highly dangerous, crews are called back to the maintenance facility. If the threat appears less imminent, crew members may stay on the course, at a safety shelter.

Once action is taken, the staff continues to monitor the situation and take the appropriate steps to ensure safety. Only when the "all-clear" signal is sounded are crews allowed to return to their positions.

Managers should not be tempted to return a crew to the course before the situation has been resolved, said Greg Quinn, chief meteorologist at Thor Guard.

"Most people think it's safe to go back on the course once a storm has cleared the area. But studies have shown that 60 percent of lightning victims are struck under blue skies after a storm has passed," Quinn said. He added that 30 percent of lightning victims are struck under blue skies before a storm arrives in their immediate area.

Crawford points out a problem at the vast majority of courses. "I think our crews take (the threat of severe weather) more seriously than the golfers do," he says.

Keeping golfers safe while keeping their courses full may be golf course operators' most delicate — and critical — balancing act, according to Quinn.

"Operators want to allow golfers to stay on the course and not interrupt their rounds, but there comes a time when weather conditions and safety concerns override everything else," he said.

Mangum ascribes to the same philosophy. He has crews mark damaged trees with red paint to remind members of the serious nature of severe weather.

A facility's severe weather plan should be reviewed and updated regularly, according to the experts at Thor Guard. "If you've had a severe weather event, take a look at your plan and see what worked and what needs to be improved," Dugan advised.

Golf facilities also should make sure workers are aware of the plan and don't deviate from its guidelines. While no one likes stopping in the middle of a project to take cover, Crawford knows it's wise. He once was on the course when a nearby tree was downed by a bolt of lightning.

He was in a truck, but he shudders to think what might have happened if he'd been in an open vehicle at the time. "A little inconvenience is worth the trouble," he says. ■

“ OPERATORS WANT TO ALLOW GOLFERS TO STAY ON THE COURSE AND NOT INTERRUPT THEIR ROUNDS, BUT THERE COMES A TIME WHEN WEATHER CONDITIONS AND SAFETY CONCERNS OVERRIDE EVERYTHING ELSE. ”

— GREG QUINN, chief meteorologist at Thor Guard

Stan Awtrey is a freelance writer and former sports writer at The Atlanta Journal-Constitution. He lives in Atlanta.

YOU ARE INVITED TO
BENEFIT FROM THE



FREE
GIFT!



1 GREEN FREE GREEN UP

INTRODUCING 100% SOLUBLE AND 100%
AVAILABLE PROTEIN NITROGEN, SN 14!



*"It's the missing form of Nitrogen that
your Turf REALLY WANTS and doesn't have!"*



CONTROL

WITH SN14



100% TURF FRIENDLY FEATURES

- + CONTAINS 14% AVAILABLE NITROGEN FROM A VEGETATIVE SOURCE!
- + 100% SOLUBLE & WILL NOT CLOG DRIPLINES NOR CREATE BIOFILM!
- + WILL NOT CAUSE A SALT BUILDUP - NO NITRATES OR UREA AT ALL!
- + IMMEDIATELY FIXES DEFICIENT NITROGEN LEVELS THROUGH FOLIAR APPLICATION!
- + DOES NOT ATTRACT INSECTS, PESTS OR ANIMALS OF ANY KIND!
- + CONTAINS 17 OUT OF 20 AMINO ACIDS WHICH PROVIDES OTHER VITAL PLANT NUTRIENTS TO SOIL MICROFLORA!
- + THE ONLY FORM OF AVAILABLE NITROGEN THAT ALSO BUILDS SOIL TILTH & HUMUS!
- + LOW pH (3 to 4) DECREASES THE NEED FOR WATER pH TREATMENT!
- + COMPATIBLE WITH ANY OTHER KIND OF FERTILIZER OR MICRONUTRIENT!

OMRI®
Listed

REDUCE NITRATES AND OTHER INPUTS BY PROVIDING AVAILABLE NITROGEN TO YOUR TURF 24 - 7!

Call us at 866-591-5335 for more details
on how to get your FREE sample of SN 14
for treating your one "most challenged" green!

WWW.GOBIODIVERSITY.COM

biodiversity®
GROW SAVE PROTECT GSP



Coming Back *from* Katrina

NEW ORLEANS'
METAIRIE
COUNTRY CLUB
WAS BATTERED
BY HURRICANE
KATRINA. BUT A
NEW MAKEOVER
AIMS TO RETURN
IT TO ITS PROUD
SETH RAYNOR
ROOTS.

By Anthony Pioppi

THE IMAGES OF HURRICANE KATRINA still are fresh in our minds: People stranded atop cars in rising floodwaters. Homes lifted off their foundations. And the Louisiana Superdome packed wall to wall with people.

Like so many other Gulf Coast areas touched by Katrina, Metairie Country Club, located in the first suburb outside of New Orleans, did not emerge from the Category 3 hurricane unscathed. The golf course lost 70 acres of turf to the storm's floodwaters. But today, nearly seven years on, Metairie is on its way back.

It has a new clubhouse. Its greenside bunkers underwent a recent renovation. And membership is rising steadily, thanks to a healthy New Orleans economy propelled by the city's shipping, banking and construction industries.

Sandy waste

Metairie's Seth Raynor design is in the midst of its own makeover. Mature trees that died or were removed are being replaced not by more trees, but by sand waste areas. The material used to create those areas comes from

the greenside bunkers.

The project came about after a number of live oaks and other varieties of trees succumbed either to floodwaters, age or the renovation of the layout. The idea to introduce five sand features, comprising about 20,000 square feet, came from architect Ron Forse, who is overseeing the undertaking.

One of Forse's inspirations was the recently completed work that Ben Crenshaw and Bill Coore performed at Pinehurst No. 2. Crenshaw and Coore removed massive expanses of turf and replaced them with sandy waste areas that harken back to the original Donald Ross design. Forse and Metairie refer to their work as "sandscapes." Bob Faren, Pinehurst's director of golf course and grounds maintenance, coined the term for the Coore-Crenshaw features.

Maintaining playability

Metairie's members were influenced in their approval of the makeover by photos Forse showed them of the 17th hole at the National Golf Links of America. A sand mound there

PHOTO BY: DAVID MARCHAND (TOP); COURTESY OF FORSE DESIGN (RIGHT)

has been an integral part of the Charles Blair Macdonald design since its inception.

According to Metairie General Manager Ken Hamrick, the goal in adopting the sand-scapes was to break up open space while maintaining playability.

“We didn’t want to make it more penal,” Hamrick said. “We wanted to keep the playability as is, if not improve it. It’s easier to play out of than 2 1/4-inch bermuda rough.”

Director of Golf David Marchand said the placement of the new features determines how players negotiate a hole.

“The look is going to help shape shots,” he said.

By utilizing the bunker, superintendent Andy Alexander estimates the club is saving \$28,000 more than it would have had it purchased new sand.

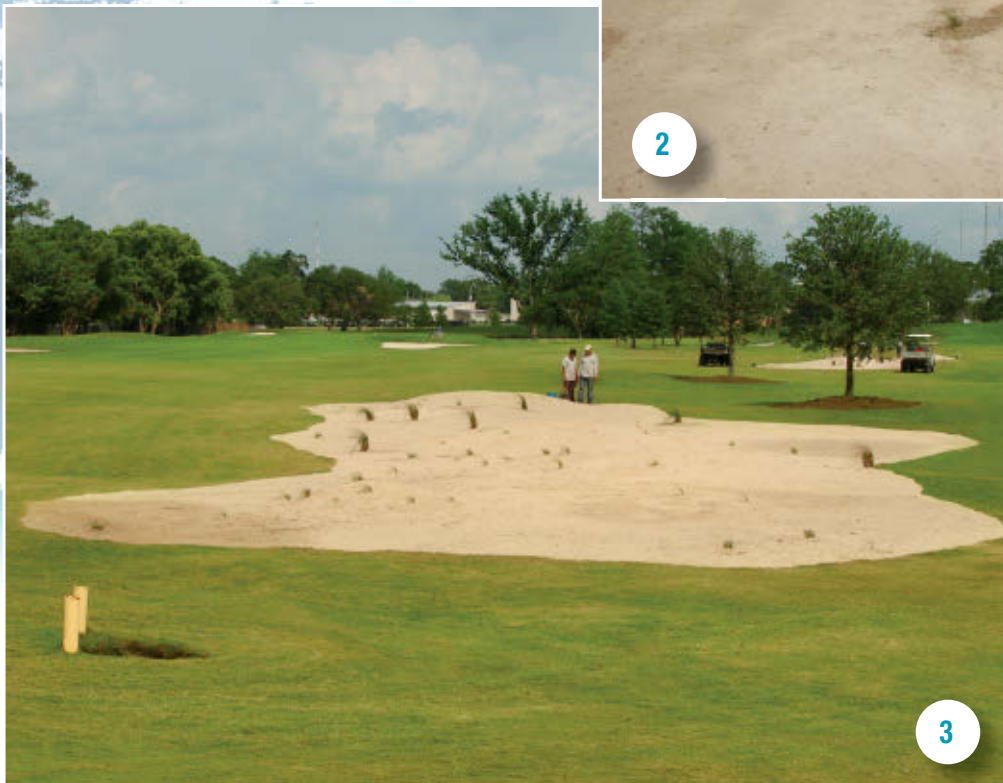
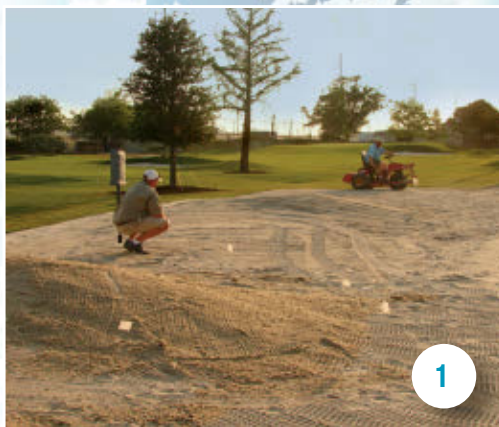
Stages of the renovation

According to Alexander, the project was completed in phases, beginning with the selection of the five sites. Then, turf and soil were removed at a depth of three to four inches in those locations. Most of the sod was used in

other areas of the course. As sand was removed from greenside bunkers, it was deposited on the rough then shaped by Chad Lambert of Sur-Line Turf Inc.

When Lambert finished all of the sand-

Continued on page 28



1 Architect Ron Forse came up with the idea to introduce sand features on the course.

2 Sand was removed from greenside bunkers and deposited on the rough.

3 When the sandscapes were finished, their shaping was perfected and locations for native grasses were selected.

Back in Form



Coore and Crenshaw's work on Pinehurst No. 2, pictured, served as an inspiration for Metairie CC.

“We didn’t want to make it more penal. We wanted to keep the playability as is, if not improve it.”

— METAIRIE GENERAL MANAGER **KEN HAMRICK**, ON ONE OF THE GOALS IN ADOPTING THE SANDSCAPES

Continued from page 27

scapes, Forse’s design associate Jim Nagle returned to tweak the shaping and to select locations for the native grasses that were planted by Metairie’s grounds crew staff and horticulturalist Don Hammon.

Sand not used for that project was tilled into the sand cap, which was installed on the course during the Forse renovation eight years ago.

Forse’s work includes a landscaping plan that calls for the addition of trees. They will be located in areas that won’t impact play. Hammon also has added ornamental grasses, roses, hollies, azaleas and other plants well away from the areas of play. Together with Forse and Nagle, he selected the grasses used in the sandscapes.

Long history

Forse and Nagle first worked at Metairie in the early 2000s, completing a major reconstruction of the layout in 2003. The project’s intent was to regain the original Raynor layout as much as possible. Over the years, nearly all of Raynor’s design was lost to a series of ill-advised alterations.

As a guideline for the work, Forse used a 1941 aerial photograph of the layout taken before most of the modifications took place.

According to Nagle, when he and Forse first visited Metairie about 10 years ago, it was

vastly over-treed, typical of plantings done in the 1950s and 1960s. “As soon as you’d get off the fairway you were into areas with no grass, roots and leaf debris,” Nagle said.

In August 2005, two years after the course was completed, Hurricane Katrina came ashore, causing so much damage that Metairie shut down the golf course until December.

In the years immediately following Katrina, Metairie not only had to regrass the 70 acres destroyed by floodwaters, in 2007 it also began a \$19 million clubhouse renovation, completed in March 2010.

Some members were put off by the continuous onslaught of renovations and dropped out. Membership, once 1,240, dropped by about 400. The exodus slowed when the club launched a two-month membership drive in November 2009, generating 114 new members. And in the following two months, membership continued to grow. It now stands just shy of 1,000.

The average age of Metairie’s members has dropped from 59 to 51. Hamrick estimates about 35 percent of them play golf regularly.

Soon, all of them will be enjoying a golf course that is one step closer to reclaiming the original intent of Seth Raynor. ■

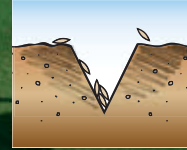
Freelance writer Anthony Pioppi lives in Connecticut.



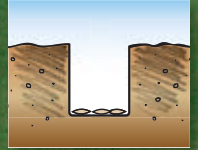
TriWAVE™

60-Inch Overseeder

Traditional overseeders create a v-shaped slit, causing inconsistent seed-to-soil contact.



The TriWave creates clean, square slits, resulting in faster, thicker turf establishment.



NEW WALKING TRIWAVE™

BETTER GERMINATION WITH LESS SEED.

The innovative Turfco TriWave™ 60-Inch Overseeder delivers better germination and quicker establishment with less turf disruption.

- UNC study showed 30% greater germination rates versus traditional methods
- Patented floating heads follow the ground contour for consistent seed depth
- Patented WaveBlade™ technology creates optimum slit width for improved seed-to-soil contact without turf disruption
- Patented seed delivery system puts seeds directly into the slit, reducing seed waste and increasing germination
- Close 1½" spacing increases germination with fewer passes
- Now available as a walk-behind, the TriWave delivers even greater maneuverability and versatility

"The TriWave is the first overseeder that does exactly what we want it to do."

..... Dale Caldwell
Superintendent
Minneapolis Golf Club
Minneapolis, MN

To see the TriWave in action visit www.turfco.com, or call 800-679-8201 to schedule a FREE DEMO.



WWW.TURFCO.COM

Clark Talks Turf

■ TIMELY TURF ADVICE



→ Healthy, Fast Creeping Bentgrass Greens in the Transition Zone

John Sorochan, Ph.D., is an associate professor of turfgrass science at the University of Tennessee-Knoxville and devotes part of his research effort to developing strategies to maintain healthy creeping bentgrass putting greens without sacrificing putting green speed.

Q Where do you start when you need to get a creeping bentgrass green through a Transition Zone summer and maintain acceptable putting green speeds at the same time?

Don't try to achieve the desired putting green speed manipulating only mowing height and mowing frequency. When mowing height is lowered there is less leaf area and the photosynthetic capacity of the turfgrass is reduced. Creeping bentgrass greens already struggle to survive the summer due to the long duration of intense heat without superintendents reducing photosynthetic capacity by lowering the mowing height.

Q What practices do you recommend to achieve the desired putting speed throughout the summer in Tennessee?

Mow every other day at a height of 0.125 to 0.140 inches during the most stressful periods. On the non-mow days, roll. Rolling smooths the putting surface and maintains the desired putting speed while giving the turfgrass plant additional leaf area so it can produce much needed energy. Plus, by not mowing, the plant won't have to

expend energy to repair the wounding caused by mowing.

Topdress lightly every week or every other week if resources allow throughout the growing season to maintain a firm, smooth and true putting surface. A dusting of sand once a week helps dilute thatch and keeps the surface firm and true. Golfers notice if the putting surface is true, especially on long putts, and a true putting surface helps increase putting speed.

“A dusting of sand once a week helps dilute thatch and keeps the surface firm and true.”

Q When do you recommend starting a program of mowing and rolling on alternate days?

Start alternate days of mowing and rolling when the daily high air temperatures are consistently above 85 degrees F. I would even consider mowing and rolling on alternate days year-round. Research shows that will result in the best putting surfaces over the long haul. However, it is important to use a plant growth regulator if you are alternating mowing and rolling when the creeping bentgrass is actively growing to avoid too much vertical leaf growth.

Q Are there any concerns with rolling greens three or four times a week?

No. Putting greens, whether sand based or native soil, handle rolling without a problem. Today's rollers are light and only smooth the putting surface. They aren't heavy enough to compact the soil.

Problems with rolling occur on the collar and on areas where space to stop and start the roller is restricted. Rollers can operate at high speeds and turfgrass wear can occur where the roller stops, starts and changes direction for the next pass across the green. Make all stops and starts off the collar if possible. Educate the roller operator to ease into stops and starts. Plastic lattice can be placed over the turf to protect it in areas where space is limited for the roller to stop and start.

Q Is there anything else you would like to add?

Fertilize with a reasonable amount of nitrogen. The best performing creeping bentgrass greens that I see in my travels around the Transition Zone are those that receive 4.0 to 5.0 lbs. of nitrogen per 1,000 sq. ft. for the nine- or 10-month growing season.

These greens are fertilized with 0.1 to 0.2 lbs. nitrogen per 1,000 sq. ft. every week or two during the summer months to encourage a modest amount of growth, which allows the grass to cope with wear and recover from other stresses. These courses also have a preventive disease management program in place.

Clark Throssell, Ph.D., loves to talk turf. He can be reached at clarkthrossell@bresnan.net.