


Preparing for the *unexpected*

Simple steps to
creating a plan
that will minimize
downtime in case
of a disaster

By Marisa Palmieri



Despite Eric Bauer's host of experience as a golf course superintendent – including completing grow-ins, serving as a project manager and working on Jack Nicklaus' home practice facilities – he discovered one area where he lacked skills as Hurricane Rita was bearing in on Houston in September 2005.

"I never had a hurricane threat when I was working in North Palm Beach (Fla.)," says the director of grounds at the Club at Carlton Woods in The Woodlands, Texas. "There was always a possibility for a tornado when I worked in Memphis. But you tend to get wiser as you get older, and I didn't think of those things then. Even when I first moved to Houston in 2000, I didn't think of hurricanes."

Though the impact of Hurricane Rita thankfully didn't devastate the Club at Carlton Woods, it did leave Bauer feeling vulnerable.

"Being my first hurricane, you see how little time you have when you're actually in that situation," he says. "It made me realize I wasn't prepared. If it had hit, we were probably 70-percent ready."

Bauer and his crew learned from that experience and developed a plan of attack, including a checklist to begin preparing for future disasters five days before they're expected to hit (see "Disaster preparation checklist" on page 56).

"If you just have to execute a checklist, it makes your job that much less hectic," he says.

Bauer's plan paid off. This year, when Hurricane Ike hit, he and his team were prepared. Despite the 263 trees that were damaged – some of them blown over completely, exposing the root balls – the facility's Fazio course was back in operation within days, and its Nicklaus course was running within two weeks. Many of the area's courses took weeks to reopen.

Thanks to the five-day plan, the facility had tree service within 24 hours, fuel within 72 hours and a generator within 36 hours.

But more than anything else, a quick recovery was possible thanks to Bauer's staff.

"The day after the storm I had four employees show up," he says. "Within 36 hours, we had 85 percent, and we were fully staffed within 72 hours."

Bauer attributes staff preparedness to the plan, which tells employees to contact him within 24 hours during a disaster. After determining no one needs assistance and everyone's families are safe, Bauer shares the game plan for returning to work.

"When they see you're calm and prepared, that's going to make it less stressful for them, and they'll be at work," he says. "Your employees respect the plan. They look at you to be the leader, be prepared and think of these things. They're not paid to worry about these kinds of things; that's what you're there for. If you show them that, they'll respond the way they do every day. If they see you changing your mind and being indecisive, then they're not going to respond well."

WHERE TO START

If a golf course doesn't have some type of general disaster plan, it's behind the times, says Mitchell Fenton, a security consultant and executive security director for Baltusrol Golf Club in Springfield, N.J.

"Katrina was the biggest lesson for the golf industry," Fenton says. "It woke up a lot of managers and superintendents because of what happens when a natural disaster hits."

Unfortunately, many facilities are vigilant shortly after a disaster, but attention to the issue wanes before long, Fenton says. It's common for managers to create disaster recovery plans and let them fall out of date, collecting dust on a shelf.

"Instead of having a giant book that never gets updated, consider more of a flow chart to provide employees so they can look at what they can actively do," Fenton says, adding that all disaster plans should be updated annually.

"It needs to be reviewed regularly and exercised by all staff," says Ken Koch, owner of the disaster recovery consulting firm Business Resource Management in Eagan, Minn., noting this task can be particularly challenging in the golf industry where temporary and seasonal employees are common. "They need to know where copies of the plan are and what their duties are if a disaster occurs."

All disaster plans should start with a threat assessment.

"Ask, what are the risks to the golf course, and

then you can identify ways to mitigate the risks and have a plan in place," Koch says.

When identifying risks, look beyond the obvious. A club in the Midwest may not seem like a candidate for hurricane damage, but every state in the continental U.S. may be affected by hurricanes. Last fall, Hurricane Ike blew down trees and knocked over a TV tower at Valhalla Golf Club in Louisville, Ky., just days before the club hosted the Ryder Cup.

In addition to hurricanes, fires, tornadoes, earthquakes and nonnatural disasters, such as civil disturbances and gas leaks, there are other circumstances to consider. Whether a facility is a public, private or a resort course may affect the plan's details and who's involved creating it.

While the superintendent will have his own agenda for the maintenance department, it's important he considers how that will work within the scope of the entire operation. Most importantly, senior management has to buy into developing the plan.

At Brasstown Valley Golf Club, a resort course in Georgia's Blue Ridge Mountains, the golf course maintenance staff takes part in the resort's disaster plan. The worst-case scenario involves evacuating guests.

Thankfully, golf course superintendent Steve Gonyea hasn't had to do that yet, but he says he's always in touch with the resort manager about how many guests are in house.

No matter the type of facility, it's important maintenance departments consider how their own disaster recovery plans work within the scope of the entire operations' plan. They should focus on the safety of guests, golfers and staff first and on minimizing down time and damage to the course second.

GATHERING INFORMATION

Because, as Bauer's experience shows, employee preparation is central to recovery efforts, no plan is complete without a current list of staff contact information. Don't forget area codes. Also, provide details for what to do in case phone lines are down. Cell phone numbers, e-mail addresses (cable Internet may still be available during a disaster), home addresses for door-to-door notification or establishing a rally point are all other things to consider.

"This is where the little things count," says Paul Sullivan, vice president and general manager with Agility Recovery Solutions, a disaster recovery planning company. He suggests man-

agers print all the pertinent details on a card employees can keep in their wallets so they know exactly what's expected of them.

Creating a list of complete contact information for vendors is essential, too.

"Sometimes disasters are frustrating because the facility is fine, but you might not be able to get any supplies," Sullivan says. "In the golf course world, if you can't maintain your grass, you could end up with a bad reputation in the marketplace."

Having a generator supplier on call was essential to the recovery of the Club at Carlton Woods. The irrigation system ran on a generator for two weeks.

To learn more about what every disaster plan should include and get a downloadable version of Bauer's five-day plan, visit golfcourseindustry.com/disasterprep.



Facilities should ensure they're equipped to run a generator; typically, a transfer switch is required, Sullivan says.

In addition to staff and power concerns, Sullivan provides other questions to consider when developing a recovery plan:

- Space – if the maintenance facility were destroyed, what would serve as the central point for staff?
- Off-site or digital backup of critical files – budget, irrigation schedules, etc.
- Technology/connectivity – how many and what type of computers/servers are needed to continue operations?

Because downed tree limbs and those that are vulnerable to falling can be a safety hazard, it's critical to have a tree service on standby, says Chris Hughes, superintendent at Old Corkscrew Golf Club in Estero, Fla.

"Safety is the foremost concern when you're

The maintenance crew at the Club at Carlton Woods wasn't prepared for Hurricane Rita, which didn't devastate the club but left superintendent Eric Bauer feeling vulnerable.



Disaster preparation checklist

Eric Bauer, director of grounds at the Club at Carlton Woods in The Woodlands, Texas, shares the checklist he developed after being unprepared for his first hurricane in Houston in 2005.

"You can retrofit this plan to any kind of catastrophe," he says. "It doesn't have to be a hurricane. It could be flooding or tornadoes – anything that can impact the operation at a golf facility. The more prepared you are going into it, the better and faster you're going to come out of it."

Five days away

- Contact tree companies to be put on their list for clean-up work following the storm.
- Contact a generator rental company for an industrial-sized generator to run the pump house in case of an extended power outage.
- Purchase a battery-powered or manual pump to remove fuel from tanks to fill up equipment.
- Ensure all chain saws are in working order and have plenty of spare chains, bars, bar and chain oil, and mixed gas on hand.
- Ensure onsite generators are operational.
- Ensure all pumps used to move water are operational.
- Ensure operation of a water cart or modified spray rig with a hose to hand-water if the pump station is down.
- Have extra hoses and quick coupler connections for hand-watering.
- Check inventory of safety supplies including work gloves, rain suits, ear plugs, safety glasses and order more if necessary.
- Purchase flashlights and batteries.
- Purchase two-by-fours and landscape timbers to stand up any trees worth saving and plywood to board up exposed windows on the maintenance building.
- Update list of employee phone numbers to contact them after the storm.
- Inventory all chemicals and ensure MSDS sheets are current.

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trying to reestablish your business,” says Mark Twinski, the general manager at Old Corkscrew.

Maintaining a supply of inputs is necessary, too, in case of any supply chain disruptions. For Bauer, wetting agents were key.

“You’re typically not thinking of the grass right away – it’s more about course cleanup – but you want to be confident your grass is going to make it two or three days while you’re not there,” he says. **GCI**

- Schedule a fuel delivery to fill up gas and diesel tanks, preferably after all of the equipment and fuel containers have been topped off.

Three days away

- Remove any course accessories not essential for daily play that have the potential to be flying objects.
- Purchase any fungicides, wetting agents, fertilizers or other chemicals that you may need following the storm that may become temporarily unavailable.
- Top off all vehicles and fuel containers and refill main tanks.
- Save all pertinent files to a disc including a back-up copy of the irrigation database.

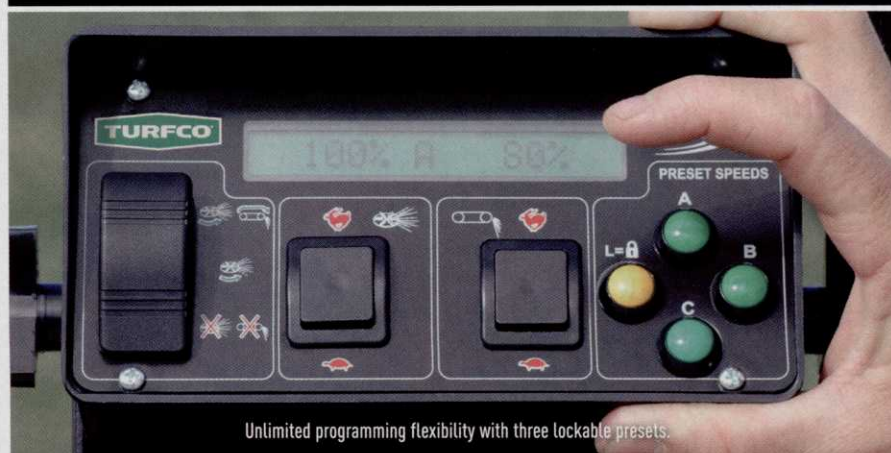
Two days away

- Spray greens with a preventative fungicide application if necessary.
- Remove remaining course accessories that have the potential to be flying objects. This includes, but isn’t limited to, tee markers, tee signs, flagsticks, rakes, ropes and stakes, water coolers, trash receptacles and bag stands on the driving range tee.
- Remove any satellites and/or lower any antennas from the roof of the maintenance building.
- Clean out all drains on the course.
- Board up exposed windows on the maintenance building.
- Store all possible equipment inside. Park all of the rest of the equipment against the building in a protected area away from potential flying debris.

One day away

- Depressurize the irrigation system and shut off power to all satellites and the pump station.
- Open weirs to drop level of lakes if possible.
- Turn off power to all computers. **GCI**

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DIVIDE AND CONQUER

BY JIM CONNOLLY

Implementing section maintenance can increase operational efficiency, improve playing conditions and reduce costs

The current economic downturn is pressuring golf course superintendents to scrutinize all maintenance operations to improve efficiency. Because labor represents the largest part of a maintenance budget, it's often targeted for reductions.

"Staff reductions range from 10 to 30 percent, with even more cuts possible later this year," says Larry Gilhuly, director of the Northwest region for the USGA Green Section. "Superintendents may need to look at a complete change in management philosophy, and that's not easily done."

Gilhuly has visited hundreds of golf courses throughout the Pacific Northwest and Hawaii, providing advice and guidance through the USGA Green Section's Turf Advisory Service. Hawaii seems especially hard hit by the reduction in play at resort courses that depend on tourists from the mainland and Japan. Facilities on the islands are using an alternative type of maintenance called section maintenance successfully, Gilhuly reports. He believes section maintenance is an excellent option to improve efficiency, create better playing conditions and, in some cases, reduce maintenance costs. Converting from a conventional maintenance operation to section maintenance is a practice Gilhuly has been promoting for years since he first wrote about it in the USGA Green Section Record in 1991.

Maintenance methods among superintendents vary widely, and it's almost impossible to say there's a universal system everyone should use. Superintendents who use all or part of the section maintenance concept are often surprised more superintendents don't implement the practice.

The core idea of section maintenance focuses on individual responsibility, accountability, efficiency and a more astute attention to detail. A significant difference between conventional maintenance and section maintenance is how tasks are assigned and carried out. Conventional main-

tenance assigns a task to an individual that must be completed throughout an entire golf course. Section maintenance assigns an employee multiple tasks to be completed in a limited area or section. Many superintendents use varying combinations of both methods, but there are fewer that use section maintenance as their primary form of maintenance.

BORN OUT OF FRUSTRATION

Located just outside the city limits of Asheville, N.C., the Biltmore Forest Country Club is rated one of the top courses in the state. One thing that makes Biltmore Forest unique is the money it doesn't spend maintaining the course. Even though the club has the means to spend more, Bill Samuels, CGCS, holds the purse strings. He believes section maintenance is the most effective, cost-efficient method to maintain a golf course to achieve the high-quality results worthy of a high-end private club.

Samuels doesn't remember how, or exactly why, he started using section maintenance. But he does know it was born out of frustration with the lack of accountability in maintenance and evolved throughout time.

"I started experimenting with different ways to improve maintenance efficiency in 1993 and found my staff morale improved and maintenance costs could be decreased by about 30 percent using section maintenance," he says. "I'm surprised more superintendents aren't using this method."

While experimenting with ways to improve efficiency, Samuels found it took too many people to complete a job.

"I would send three people out to do a job only to find it wasn't done properly," he says. "I couldn't tell who was performing at a low level."

Biltmore Forest's staff consists of 12 full-time and two part-time workers. The full-time staff is divided into five categories:

- Section team – seven people

- Mechanic – one person
- Assistant superintendent – one person
- Rough and fairway mowing – two people
- All-purpose rover – one person.

Each section team member is given three holes (includes practice areas) and a personal equipment inventory that consists of:

- A work vehicle for hauling and transportation;
- A Jacobsen 22-inch walk-behind greens-mower;
- A Jacobsen 22-inch walk-behind tee, collar and approach mower;
- An Allen hover mower with a Honda four-stroke engine;
- A Stihl leaf blower;
- A Shindaiwa power string trimmer;
- A Honda push rotary mower for trimming around greens and tees; and
- Various hand tools for raking bunkers and other light maintenance.

Rough and fairway mowing is a daily operation using a Toro 4500, 5400 and 5510. On days when one of the section team members is off or sick, the rover and other team members pick up the slack. The staff meets early every morning to review the day's work schedule and prepare for the occasional special event. Table 1 at the right shows the tasks and assignments for a typical week. The staff members are familiar with the routine that needs to be completed before the golfers arrive and have become proficient at staying out of their way. It takes time, experience and training, but Samuels says the members are pleased with the form of maintenance and interruptions haven't been an issue.

BETTER DETAIL WORK

Another superintendent that espouses the benefits of section maintenance is Steve Kealy, CGCS, at the private, 18-hole Glendale Country Club in Bellevue, Wash. Kealy has been using his tailored maintenance program for about 10 years. For him, the advantages of section maintenance include pride in ownership, attention to detail, healthy competition and improved employee accountability.

"I found details – such as cleaning bathrooms, edging ball washer stands, trimming and cleaning out the bottom of garbage cans – were missed regularly, and conditions weren't meeting my expectations," he says.

Kealy uses a slightly different work schedule

with his full-time staff of 14 and seasonal staff of 10, but the philosophy is similar to Biltmore Forest's (see Table 2 on page 64). Kealy gives each of the five section members a comparable area in terms of time and workload. Workers balance an equal numbers of greens, bunkers, trimming areas and tasks.

RESULTS AND COST SAVINGS

Developing a section maintenance program requires acquiring tools and equipment. Each crew member needs a stable of equipment, and it may take several years to build the inventory. But once built, the benefits of section maintenance can be seen in many areas of the golf course operation.

At Biltmore Forest, the average age of the

Jacobsen greensmowers is 20 years and is a testament to the individual care each crew member gives to the machines. Biltmore and Glendale have low staff turnover and a high level of experience among crew members. Glendale has a combined 63 years of experience among its five crew members.

Maintenance budgets can be reduced using section maintenance, too.

"I would be spending at least 30 percent more if I used the old method I used to use," says Samuels, who describes his operation as lean and mean with the benefits of an immaculately maintained golf course worthy of praise.

Kealy, rather, focuses more on the results he can achieve rather than a cost savings between the two forms of maintenance.

TABLE 1

Biltmore Forest Country Club golf course section maintenance schedule

At Biltmore Forest, Bill Samuels, CGCS, defines section one as holes 14, 16 and 17. Section two is defined as hole 13, the practice green, nursery green, driving range tees and mowing the front circle on Mondays. Section three includes holes three and 10 and the chipping green. Section four is defined as holes one, nine and 12. Section five includes holes four, five and six. Section six is defined as holes seven, eight and 11, as well as mowing along Stuyvesant Road below the tennis courts and mowing by the pool on Mondays. Section seven is defined as holes two, 15 and 18.

Task	Mon.	Tues.	Wed.	Thurs.	Fri.	Wknds.
Mow greens		X	X	X	X	X
Cut clean up		X		X		SAT
Mow tees	X			X		
Mow collars	X			X		
Mow green / tee surrounds	X				X	
Trim bunker faces			X			
Empty trash cans	X	X	X	X	X	X
Hand rake greenside bunkers	X	X	X	X	X	X
Check fairway bunkers	X		X		X	SUN
Hand rake fairway bunkers		X		X		SAT
Check number and condition of bunker rakes	X	X	X	X	X	X
Sand tee divots as needed – green sand	X	X	X	X	X	
Sand fairway divots as needed – white sand	X	X	X	X	X	
Check placement / condition of tee markers	X	X	X	X	X	X
Trim yardage markers-sprinkler heads – valve boxes as needed	X	X	X	X	X	
Edge cart paths and sweep as needed	X	X	X	X	X	
Change ball washer water	#1	#2	#3	#4 and #5	#6 and #7	
Check tee towels – change if dirty	X	X	X	X	X	X

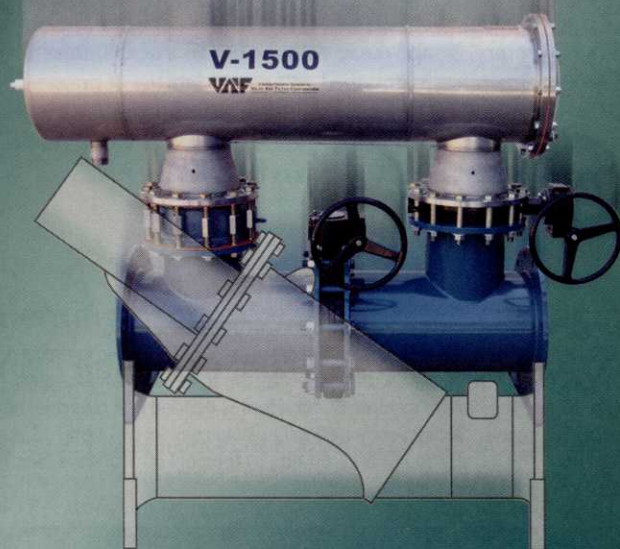


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TRUST IN OTHERS' PERFORMANCE

The increasing demands on a superintendent to maintain excellent conditions while reducing maintenance costs is a stiff challenge. Maintenance operations require constant evaluation of staff performance and accountability. Delegating responsibility and demanding accountability is just one of the advantages of section maintenance. The flaw of many superintendents and the primary reason for job burnout is adopting the axiom, "If you want something done right, do it yourself."

Developing a performance level you can trust, resulting in high morale and accountability, is one way to reduce a superintendent's stress level and achieve employee satisfaction. Section maintenance deserves a closer look for maintenance programs and may be an excellent way to achieve goals set for the year. **GCI**

Jim Connolly, a former USGA agronomist, is president of JCC, a Spokane, Wash.-based consulting firm.

TABLE 2

Glendale Country Club golf course section maintenance schedule

At Glendale, Steve Kealy, CGCS, defines section one as holes one, five, 15 and 17. Section two is defined as holes two, 12, 13 and 14. Section three includes the putting green on hole 6 and holes 10 and 18. Section four is defined as holes four, seven, eight and 16. Section five includes holes three, nine, 11 and the practice area.

Task	Mon.	Tues.	Wed.	Thurs.	Fri.	Wknds.
Mow greens	X	X	X	X	X	
Change holes	X	X	X	X	X	
Flymow around bunkers				X		
Trim bunker faces				X		
Empty trash cans	X	X	X	X	X	
Hand-rake greenside bunkers	X	X	X	X	X	
Hand-rake fairway bunkers	X	X	X	X	X	
Weed around trees	As needed all week days					
Paint hazards					X	
Sand tee divots	X	X	X	X	X	
Sand fairway divots	X	X	X	X	X	
Set up tee markers	X	X	X	X	X	
Trim tee and fairway yardage markers					X	
Edge cart paths	X	X	X	X	X	
Check tee towels - change if dirty	X	X	X	X	X	X