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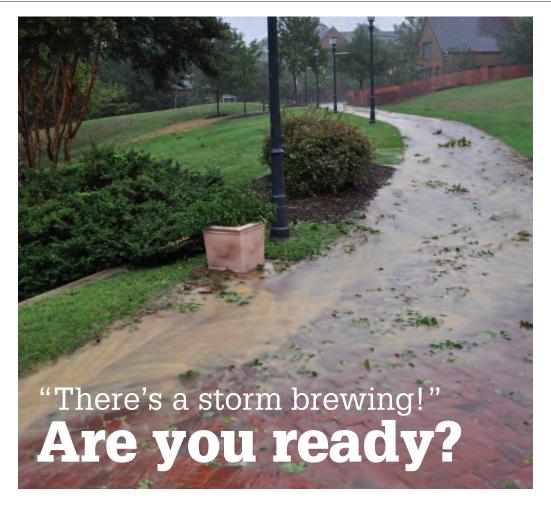
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ark Twain said, "Climate is what we expect, weather is what we get." This statement stills holds true today. Weather affects sports turf mangers livelihood weekly, daily and sometimes hourly. How many times have you thought over and over about the weather? Is global warming alive and well? Could it be true? Who knows? Let the meteorologists and environmentalists argue that point and case. This is what we do know, with the recent tornado events from May and June 2013 in Oklahoma, about 40 people have lost their lives; that's worrisome enough. However, looking back at 2012, I was taken back on how much the weather has impacted our livelihood in such big ways. From California and the Dakotas and east to Indiana and Illinois. at least 123 deaths were associated with excess heat and \$35 billion primarily in crop losses were a result from record drought.

The western wildfires that burned over 9 million acres across the United States resulted in eight deaths and cost over \$908 million in damages. Super Storm Sandy and Hurricane Isaac contributed to 182 deaths and cost more than \$64 billion.

The term Derecho refers to fast moving storms that are long-lived and wide-spread wind storms that can exceed hurricane force winds typical of most hurricanes. Last year when this type of weather system went through the Midwest to

the Mid-Atlantic, it was responsible for more than 20 deaths and millions of dollars in property damage.

Last but not least, there were 939 tornadoes last year which cause 70 deaths and over 1.6 billion dollars in property and crop loss.

These facts are stunning and a little bit scary, but how can we prepare ourselves from such mayhem. Being prepared is only half the battle; predicting the unpredictable is the second half. To start you need to develop a plan, a checklist, for every department of your facility. You also need to conduct round-table discussions with appropriate representation from critical areas such as: the general manager, security, the sports turf manger, the housekeeping manger, public relations, human resources, IT, local fire and police departments etc.

Planning: (Before the Storm-Checklist)

- Resource management: Make sure you have enough staffing and contractors to maintain all shifts with places for them to rest in case long hours are needed.
- Fleet Management: Make sure your vehicle fleet is gassed up with extra gas and properly stored in case of power failure that could put your gas tanks out of service.
- Back up Power: Make sure all generators are filled with fuel and are working properly.
- Flying Debris: Make sure all tables and chairs or any other loose items are put away or tied down.



JOHN Wascaro's Photo Quiz

Answers from page 17

THESE PHOTOS are from the San Diego Padres' Dominican Republic Baseball Park that houses the club's international baseball academy. The irregular dark green areas in leftfield are actually the result of good fertilization; well sort of. What actually happened is that the field was fertilized with a 17-3-17 fertilizer at a low rate. After the operator was finished with his application, he parked the fertilizer spreader on the turf and washed it off. The areas where the fertilizer was more concentrated by the washing operation turned green. These green areas showed what the turf would look like if the correct amount of fertilizer had been applied to it. If you look closely at the photograph, you will also notice green lines running toward the infield. This was the direction of travel during the fertilizer application. These green stripes are actually areas where the spreader was overlapping, also delivering the correct amount of fertilizer. This situation made for a very teachable moment and since there was no damage done, additional amounts of fertilizer were applied at the correct spacing and rate and the entire area greened up.

Photo submitted by Luke Yoder, director, field operations, San Diego

Padres.



If you would like to submit a photograph for John Mascaro's Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of SportsTurf magazine and the Sports Turf Managers Association.



- Emergency Response: Have a safety program in place during and after the storm for trafficking pedestrian sidewalks and roadways blocked from debris and falling trees.
- Trafficking: Develop outbound evacuation routes and emergency vehicles routes inbound and outbound. Have areas for airlifts, if necessary and/or feasible.
- Crisis Communications: Have a form of communication like cell phones or UHF or VHF two-way radios etc.
- Conduct a Business Impact Analysis (BIA): Areas to consider are payroll, equipment rentals, food, water, etc.
- Information Technology: One of the most important people to have at your round table discussion is IT. Having a plan in place in case of power loss and know what areas are critical for fully operational systems in case servers go down are crucial to your storm readiness plan.
- Incident Management Training: Like anything, practice makes perfect, but it is hard to plan for the unknown, so use all types of scenarios with your plan and grade them on effectiveness and failures to make your team better prepared. Use exercise results to evaluate the overall effectiveness of your plan.







DURING THE STORM HTTP://WWW.READY.GOV/BUSINESS

Your headquarters for a storm event or also known as an Incident Command System (ICS) is used by public agencies all the time. This system is also effective in these instances and is starting to be used widely in the private sector. At the very least it may not be a bad idea to be familiarizing yourself and your team with its protocols. Not all weather events require activating the ICS; just those that meet the guidelines established by your administration. ICS Checklist:

- Point of Contact (POC) or person in charge of operation.
- Assess the situation and let POC know if first responders are
- In case of emergency, the appointed internal emergency team is in charge of areas until first responders show up.
- Notify or verify internal teams, departments, public agencies, regulators, contractors and suppliers have been notified and are on
 - Appoint others to incident command positions as needed.
- Brief staff on current organization protocol and on events as
- Terminate the response and demobilize resources when the situation has been stabilized and safe for reentry.
- Identify and assess hazardous situations and high risk areas until all areas have been cleared internally and/or externally.

AFTER THE STORM (ASSESSMENT-CHECKLIST)

After the storm passes, assess your damages and log all your property and equipment damages with your facility. Also, log all the man hours it takes to clean up the debris and water damage from the storm. If your governor declares a state of emergency and it is signed by the President, then you may be considered for some relief from FEMA; however, you need to have your ducks in row.

- Manage all financial aspects of the incident.
- Provide financial and cost analysis information, as requested.
- Create accounts for claims and costs; coordinate with logis-
- Track worker time and costs for materials and supplies.
- Document claims for damage, liability and injuries.
- Notify risk management/insurance to initiate claims report-
 - Provide incurred and forecasted costs at planning meetings.
- Provide oversight of financial expenditures, new leases, contracts and assistance agreements to comply with corporate governance.

Public Relations checklist: Only state facts that are cleared through upper management and ISC. Develop brief information for use in media briefings. Monitor and forward useful information to the media.

FINANCIAL AID STEPS (CHECKLIST)

Your sports complex could be reimbursed by FEMA for labor, equipment rental, property damage etc. Here are the ten protocol steps by FEMA for you to follow to help increase the chances of eligibility for financial aid reimbursement.

(http://www.fema.gov/pdf/government/grant/pa/fema323_app_ha ndbk.pdf)

- 1. The governor of your state requests federal assistance.
- 2. Federal and state governments collect information on the extent of damages and put together a damage assessment report.
- 3. The President signs off for state of emergency or disaster relief funding.
- 4. Your local state will brief all applicants and work closely with you once approved.
- 5. FEMA and your local state representative will meet with meet with you and your administration for a kick off meeting.
- 6. The FEMA staff will work with you on projects and estimating cost.
- 7. Your local and state appointees and FEMA will evaluate all damage assessment cost.
- 8. FEMA will transfer funding to the state and you will work with state official to obtain funding.
- 9. After you obtain funding on any project, FEMA and your state will work with you until work is complete.
- 10. The final step is closing out your project along with FEMA and your local state official.

Precautions for Weather Patterns: The National Weather Service has learned over the past few years the predictability of certain types of weather patterns that could help you to forecast. This forecasting could help you to prepare for what items you may need or to add more contingences in your budget for events such as an extreme drought year or vice versa an extreme rainy year and snowy winter. I have looked up a lot of facts from the National Weather Service http://www.weather.gov/ and put together a list that might be a useful tool when forecasting your budget for your next fiscal year.

La- Niña is unusually drier conditions in the southwest of the United States that starts in late summer and actually continues through the winter. The Central Plains will have drier than normal conditions in the fall and in the Southeast, theirs will be start in the winter with warmer temperature than normal. On the opposite end of this spectrum the Pacific Northwest will encounter wetter conditions and cooler temperatures then normal and also with a well establish La-Niña you will have fewer costal storms in the northeast, but more Alberta Clippers with more milder and warmer temperature then normal. I would caution; however, La Niña typically brings more hurricanes to the Atlantic coast and less to the Pacific coast.

EL-Niño typically brings drought conditions through the northwest to the northeast of the United States. The winters are very mild and above normal temperatures; however, extreme flooding could hit the Gulf States in the winter months.

Pineapple Express typically causes wide-spread flooding, strong winds to the Pacific coast and heavy snow accumulations to northwest.

Siberian Express typically brings polar air from the Siberian

and across Western Canada in a southward trend to the central, northeastern and sometimes the southeastern part of the United States. This weather front will bring extreme cold weather temperatures that could linger for days and even weeks.

Mother Nature will always be unpredictable and will always have the last word. All of us who have been in the business long enough already knows this; however, planning for severe weather events to saves lives, property and equipment should be on everyone's radar. Having a plan in place and the resources ready in case of a catastrophic weather event happens at your sports field complex can heighten your readiness and professionalism for your employer and even more importantly to your community. I hope you will never have to go through any severe weather event. I know our jobs can be difficult enough without Mother Nature barring down her wrath on us. No matter if you have a simple plan or a complex plan, it still boils down to one thing, it's a plan and planning is always good. Sometimes a community event as simple as a ball game could bring back a sense of normalcy and help in the healing process to your community. I think at times we can do more for our community then we may even realize.

Kevin Mercer, CSFM, works at Vassar College, Poughkeepsie, NY.





- Level of Submission: Schools/ Parks
- Category of Submission: Baseball
- Head Sports Turf Manager: Josh Weigel
- Title: Director of Grounds
- Education: Bachelor's degree in Turf Management
- Experience: Bachelors degree in Turf from University of Tennessee (2007). Intern, Indianapolis Indians in 2006. Assistant Director of Grounds at Wesleyan School in 2009, now Director of Grounds at Wesleyan School (2009-present).
- Full-time staff: David Thro-wer, Zach Lindner, Jose Flores
- Other crew to recognize: Grant Frerking
- Original construction: 2004
- Turfgrass variety: Bermuda Tifsport from June-September; overseeded with Pennington's Sunrise Primo perennial ryegrass
- Overseed: We overseeded Pennington Sunrise Primo at 16 lbs per 1,000 square feet on October 7. We touched it up with another application in early march but not as aggressive (8 lbs per 1,000).
- Drainage: Lines along the skirts in foul territory. Everything is sloped to the warning track where we have drainage lines. This field does not drain well.

By the third day of practice it was almost like we needed to add water to the skin it was so hard. After each day of aerifying, we would roll the skin with a double drum roller to try and smooth out any rough areas we had left.

DON GAEBELEIN FIELD, Wesleyan School, Norcross, GA

CHALLENGES

Because 70% of the game is played on the dirt in baseball, this was a serious problem. I know we all love the green grass and the dynamic patterns but the skin is the most important part. We bring in clay every year and then follow it up by having our skin laser graded. I decided to skip last season due to budget reasons. So this past November we brought in two tandem truck loads of "wet" clay. It was then spread out, tilled into the existing clay, and laser graded. Since it was late November/early December, we did not have much sun and had plenty of rain. Because there are no activities on the field this time of year and the ryegrass wasn't growing often, I would send someone down to mow the field maybe once a week and that was all we would do to the field. By mid-January we started getting dugouts cleaned, repairing the warning track, and continued mowing/fertilizing the field. I noticed the skin was very soft but figured it was due to all the rain we had gotten the last few months.

One week before the first practice the skin was still soft and we had been dry for almost a full week. I took a shovel and dug into a soft pocket and hit a puddle of water. I started walking the entire skin, digging, and hitting water. Due to the weather, the condition of the clay when we put it out, and sealing it back up, there was water trapped 1 foot under the surface. The

biggest problem was that the first practice was in 3 days. I decided to hand till the worst areas and let them sit for 3 days. After 3 days, the top layer was crusted but the stuff underneath was still wet.

The ideal solution would be to till the entire infield and let it sit a day, till it again, and let it sit, and then put a final grade on it. The problem was we didn't have that kind of time. I came up with an idea where we used our Toro aerifier and used 3/4 inch needle tines and aerified the skin. We let the holes sit open all day letting them air out. An hour before practice, we drug the skin and the holes were filled in with Turface. The first day, the field was still soft but playable and level. The second day, firmer, and level. By the third day of practice it was almost like we needed to add water to the skin it was so hard. After each day of aerifying, we would roll the skin with a double drum roller to try and smooth out any rough areas we had left. Once the weekend hit, we tilled the skin and regraded it making the skin almost perfect!

SportsTurf: What channels of communication do you use to reach coaches, administrators and users of your facility? Any tips on communicating well?

Weigel: Communication is probably one of the most important elements of this or any job. I use various forms of communication including e-mail, text, phone, and





▲ Left: ONE OF MY FAVORITE PATTERNS (we call it the plaid pattern). Right: Saturday afternoon game. This was taken from the left field berm.

F.O.Y. | Don Gaebelein Field

face to face. If it is something quick, I either text or e-mail. If it is a scheduling situation, I prefer e-mail so that I have a paper trail. Face to face is best when it is something that needs to be explained more in depth. I try to communicate daily with the coaches/athletic director on our field conditions and also in regard to any changes to their schedules. I have learned that the more often you communicate, the more

trust and respect you gain from them. For example, if we have had a lot of rain, they respect my decision to call or postpone a game rather than questioning it because I have been upfront and proactive with them in the past.

ST: What are your specific job responsibilities? What do find most enjoyable? What task is your least favorite and why?

Weigel: I am the Director of Grounds which means that every growing thing outdoors is my staff's responsibility. We now have just over 20 acres of athletic fields to maintain as we just added 5 more this past summer. We also have 65 acres of ornamental grass and landscape that we maintain, totaling 85 acres of ground. Included in these 85 acres is a playground as well as a walking/running trail on which our cross country team competes in the fall. All the set-up for games, meets, and matches falls under our watch. Football, softball, cross country, baseball, soccer, lacrosse, tennis, and track make up our athletic schedule. As of this coming spring when we will add a middle school lacrosse program; every varsity sport we have will be replicated in middle school. We also maintain areas for band practice during the fall by doing things such as lining the baseball field for their practices during the week. Our graduation ceremony in May is held outdoors, and preparing for it is also our responsibility.

Seeing the student athletes compete on the fields is the most enjoyable part of my job. The end result of all our hard work and dedication is put to use at the end of the day when a team takes the field. My crew and I enjoy seeing the visiting teams use our facilities, especially when they compliment the way the fields look and play. Even our student athletes compliment us on a daily basis, which is always nice to hear.

My least favorite task is the office work and budgeting. It is a necessary part of my job, but I much prefer the actual hands on work on the grounds.

ST: How did you get started in turf management? Weigel: While growing up, I mowed several yards around town, and always enjoyed it. At the time, I didn't realize you could actually go to college and study turf. I started my freshman year at Indiana University where I studied Sports Marketing/Management. The following year, I transferred to the University of Tennessee where my girlfriend (now wife) was enrolled, with intentions of continuing the same major. There I met Dr. John Sorochan, associate turf professor, who persuaded me to go into the turf field instead. The following year, I interned with the Indianapolis Indians and realized this was something I had a real passion for. After spending 3 years and a summer with Dr. Sorochan at UT, together with a baseball season under Jamie Mehringer, the then-head groundskeeper for the Indy Indians, I knew my future was in sports turf.



ONE OF MY FAVORITES. This was preparing for our summer tournament that takes place at the end of May and goes into June (travel team baseball). This is the only travel team tournament we host at the school.

ST: How do you balance your work and personal time?

Weigel: A lot of people think that because we work at a school, our hours are short and we only work when classes are in session. As most readers know, this is not true. We deal with living things and much of what we do is dependent on weather conditions beyond our control. Just when you think

everything IS under control, a new plant disease springs up or a main water line breaks and floods a field. When I first started as the director, I spent a lot of time at work and felt like I needed to do everything. I would work on weekends and sometimes bring my wife in with me just so we could spend some time together, even if it was just driving around campus and checking the fields. A year ago, we had our first child, and I have since tried to slow down and spend more time at home. A real plus is that our son is in daycare here at Wesleyan so I can drop in and see him whenever I want. Another positive is having a great staff I can rely on. David Thrower, Jose Flores, and Zack Lindner make it a lot easier to get away and trust that the job is taken care of. I try not to work much on the weekends anymore but that doesn't always work out as planned. Another challenge is visiting our families in Indiana. We usually like to go for a week around Christmas and a week in the summer. Obviously, the winter is a good time to get away, but the summer trip can sometimes be hard to coordinate with my work schedule.

ST: What changes are you planning to make or have you made to your maintenance plan for 2013, if any?

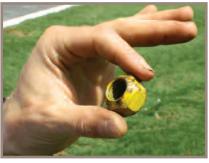
Weigel: I tend to believe in "if it isn't broke, don't fix it." After tinkering with our plan for 4 years, the last two have been very successful. Adding deep tine aerification to our football and baseball fields has been the most beneficial process that we have implemented. Steve Mitchell from Mitchell Reel Works comes in over the summer to pull plugs on our fields. These plugs can be as deep as 10 inches in length. This has helped tremendously with our drainage and transition. We have not had to sod any of the fields since we initiated the deep tine process. The only change I could foresee is deep tining the baseball field twice next summer instead of just once.

ST: Are you yet involved in sustainable management practices? If so, what are you doing?

Weigel: Currently I am researching soil moisture monitors that will be hooked up to our irrigation software to help us conserve water on our fields. As yet we have not selected a particular product.

ST: How do you see your job changing in the future? Weigel: Each day at Wesleyan can present a new challenge. The addition of 5 acres of soccer fields and a middle school lacrosse program is just one example of the constant change in my position. More grounds mean more maintenance, painting, and other responsibilities. Wesleyan always strives for perfection and is constantly adding or improving something on campus to attain that goal. My job is to do whatever I can to insure that the grounds live up to the high standard that our staff and students deserve and have come to expect.







▲ **Left:** After each race, John Pitts will survey the field damage from atop the grandstands. **Middle:** Before mowing, Pitts and his crew must pick up one hundred or more of the lug nuts that are cast off by pit crews during tire changes. **Right:** John Pitts uses a Jacobsen LF570 fivegang reel mower to maintain the field at Charlotte Motor Speedway.

RIGHT ON TRACK:

John Pitts draws from a unique background to manage grounds at Charlotte Motor Speedway

Editor's note: This article was written by Adam Slick, the public relations and communications manager for Jacobsen.

OTORSPORTS is one of the last places you would expect to find a turf manager. But even a sport that lives and breathes on asphalt has a critical need for professional turfgrass.

One nearly every major track around the country, a beautiful section of maintained turfgrass serves as the canvas for sponsor logos and separates pit road from the track—providing a picturesque background for fans in the stands and watching at home.

At Charlotte Motor Speedway (CMS), one of NASCAR's most storied tracks, John Pitts heads up the turf management team. For Pitts, the hardest part of maintaining the "ball field," as it's called, is getting track time.

"It's imperative that I coordinate with our track service guys to ensure the track will be free, and only then can we perform the maintenance we

> need to," said Pitts. "Anything that will make the speedway money takes priority over what we do, which means sometimes our only option is early morning or late at night."

Although the ball field is just 3.7 acres, timing and logistics makes every mowing session a production.

"With weather and the schedule playing a factor in our ability to mow, there is often two dump trucks worth of clippings to be cleaned up before the track can be used," said Pitts. "When you add in collecting the grass and other details, it takes us about three to four hours to get everything done."



▲ JOHN PITTS (RIGHT), Director of Grounds for Charlotte Motor Speedway and his Foreman Armando Sosa (left) stand on the speedway's "ball field" after a mowing session.

Tools&Equipment





▲ Left: A grounds crew member repairs tire ruts left by school buses - yes, school buses. Charlotte Motor Speedway will race buses as part of its regular event schedule. Right: To help smooth out tire ruts and other irregularities, Pitts' crew uses a Cushman Turf-Truckster with a roller attachment.

One of the more tedious tasks is picking up the hundreds of lug nuts that tire changers throw into the grass during pit stops.

"Lug nuts and reel mowers don't mix very well, so we have to try and get as many out as we can, but due to large amount the reel mower always finds a few," said Pitts.

Although lug nuts can cause equipment damage, race vehicles that veer into the grass cause the most problems for Pitts.

"Believe it or not, we race full-sized school buses and it's no surprise they leave the biggest ruts of any vehicle out here," said Pitts. "U.S. Legends Cars cars leave the least amount of damage because of how light they are and how their front bumpers are designed. Thankfully, NASCAR drivers stopped doing victory burnouts on the field after Kasey Kane destroyed his car on a manhole cover."

After each race, Pitts assesses the damage atop the grandstands overlooking the field. "From up there, I can quickly get a good idea of how much repair work we have to do that night so the turf still looks good for the next day's race."

Pitts and his crew use a Jacobsen LF570 five-gang reel mower and a Cushman Turf-Truckster with a blower attachment in tandem to get everything done.

"We couldn't do the job we do without the Jacobsen machines," said Pitts. "We went to a lower height-of-cut this year and the LF570 has given us great results. After the recent Coca-Cola 500 event, I was told by several fans that the ball field looks the best it has in 15 years."

Pitts also depends on Armando Sosa, his foreman and nine-year veteran at CMS.

"Armando is my right-hand man," said Pitts. "He works incredibly hard and knows every inch of this massive property. It's really nice to have someone with his work ethic and experience on staff."

In addition to moving, Pitts will use a roller to smooth out ruts when the soil is moist. He's in the process of overseeding his 419 bermudagrass with Princess 77 in the hopes it will eventually take over.

"I like the Princess 77 because it likes the shorter growth height and very uniform, we've had great success with the blending of the Princess 77 and 419 for a uniform and vibrant look."

Although Pitts manages just under four acres inside CMS, an additional 2,400 acres outside the speedway also falls under his responsibility.

"A lot of the exterior grass is on the campgrounds, where wet conditions and vehicles produce large pockets of mud," said Pitts. "In the past, we've just dumped gravel or straw on problem areas, but gravel isn't mowerfriendly and the straw clogs up our drains. We just recently started to use Turface, a quick-dry material that is made of very fine clay and absorbs water and evaporates quickly."

Pitts draws from a very unique background that includes a horticulture degree from Auburn and time working as an officer in the Army National Guard in Alabama during the Deepwater Horizon oil spill.

"The horticulture education gives me the landscape design and plant knowledge I need and the military experience helps me create systems and processes to get things done," said Pitts.

Charlotte Motor Speedway is famous for its long-distance races, which fits perfectly with Pitts' philosophy on turf management.

"Before I got here, I think due to time and focus, there was a Band-Aid approach to turf issues. Where it makes sense, I want to look at long-term improvements instead of short-term fixes," said Pitts. "We make the immediate repairs we need to make but also develop a plan to improve conditions each year."

HOW TURF BLANKETS WORK

HE FUNCTION OF A TURF BLANKET is to allow for the increase in soil temperature due to the increase in the sun's radiation. The blanket minimizes temperature losses caused by lower nighttime temperatures and maximizes the positive temperature gains provided by the annual or yearly cycle; and minimizing the temperature losses caused by the diurnal or daily cycle. The soil temperature increases and maintains relative warmth. This principle allows for earlier warming of the soil and therefore earlier turf growth response. You can gain 2-3 weeks of early turf development by using turf blankets in this manner.

When covering the turf you increase the risk of snow mold similar to the increased risk involved with prolonged snow cover. Turf maintained at a higher level of fertility, e.g., receiving late season fertilization, is more susceptible to snow mold. A preventive fungicide application may be warranted. Previous problems with snow mold should be considered when making this decision. If you have never had snow mold, a preventive fungicide application may not be justified. Blankets should be removed periodically to inspect for snow mold.

Blankets are best put down in November or December in cool climates—too early and the soil will overheat—and should be removed 2-3 weeks before traffic returns to the field. After removing the blankets, mow the turf several times to harden it before the field is used.