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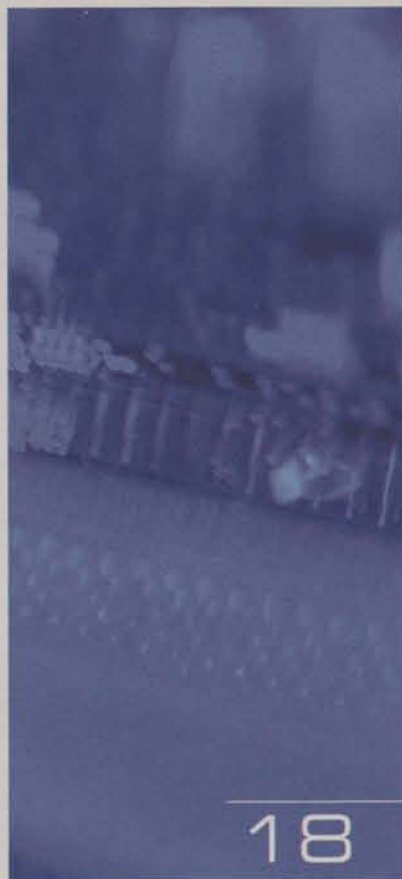
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the front office

Words about Pictures

When we redesigned this magazine, we emphasized using interesting, colorful, and BIG photographs, and lots of them. Some of the images we receive from readers, and the companies that want to reach you, are much easier to process for publication, while others are downright unprintable (see examples).

GOOD



We want to present your pictures "in the best light" possible. To help us make you look good, here's what we need: high resolution, quality images that we can enlarge from the original, if need be. High resolution means an image should be at least 300 dpi (dots per inch) with 133 line screens, and at least 4 inches big, vertically or horizontally. Any smaller-sized image, or one with fewer dpi, becomes blurred when we enlarge it. Keep in mind, the better your picture looks in this magazine, the better you look to everyone.

The same rules apply for images you want to email, but please don't send any file larger than 10 MB—they just don't transfer well. Here are our electronic file requirements: Use 100 MB ZIP disks or CD-ROM (you can email me, too). For software, use QuarkXPress 4.0, Adobe Illustrator 9.0 (saved as EPS), or Adobe Photoshop 5.5 (saved as EPS, TIFF, or JPEG). Please convert higher versions down.

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president's message

What a year!

It's hard to believe that 2001 is nearly over. It's been a year none of us would like to repeat. Yet, despite the September 11 terrorist attack and all that has resulted from it, this has been an extremely progressive—and productive—year for the Sports Turf Managers Association.

STMA founders believed and sports turf managers everywhere agreed that sports fields could be improved through sharing knowledge and exchanging ideas. Our mission statement is, "To be the recognized leader in strengthening the sports turf industry and enhancing members' competence and acknowledgement of their professionalism." As an Association, and an industry, our ultimate goal is providing the best sports surfaces for all levels of play.

To better understand how to achieve all this—and how to better serve our membership—earlier this year STMA conducted the first All-Member Survey. We then integrated this survey feedback into the STMA Strategic Plan. The Board and Committee Chairs analyzed their key initiatives as outlined in the overall Strategic Plan and developed action plans and timelines to carry out those initiatives.

Much has evolved from that process. Some of the initiatives undertaken were structural, organizational, or logistical. Some were a product of the Association's growth and development. Others involved taking an idea or suggestion raised in the survey or strategic planning sessions and developing it into a working program, such as the member referral program introduced last October.

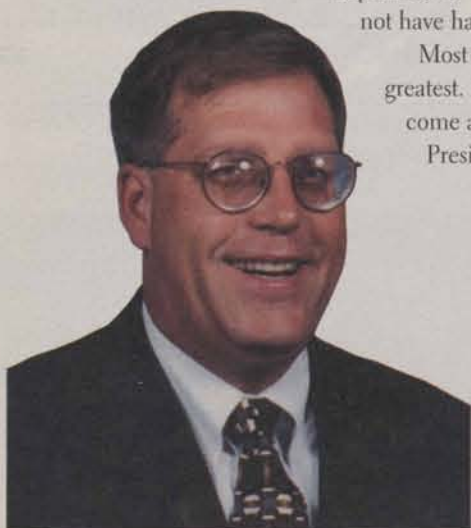
Many of the initiatives are communication and networking related, directly addressing our mission. The best example of this is the newly revamped STMA Website: www.sportsturfmanager.com. It is already a more informative and interactive vehicle than the old version, and the Website Committee is continuing to enhance it and add new features. Please log on and check it out.

Simultaneously, we have continued to expand and enhance those things the survey feedback indicated we should, including our Conference. The 13th Annual Conference & Exhibition will be held January 16-20, 2002, in Las Vegas. The educational program is terrific and the trade show will be bigger and better than ever. And, as much as I look forward to both, as I've said before, I personally believe the greatest jackpot of the Conference is the networking. So please plan now to join many of your peers and me in Las Vegas.

As 2001 draws to a close, I wish you joy and blessings during the Holiday Season, and a productive and prosperous 2002. I am proud and humbled as this progressive year, and my term as your President, comes to a close. I thank all the board members and committees for their dedication and hard work. I also want to thank Trusty & Associates, especially Steve, Suz, and Stephanie, for without them all the growth and provided services would not have happened.

Most of all, I want to thank each and every member. You're the greatest. I've made so many friends and had a lot of fun. We've come a long way. Thank you for the honor of being your President.

ST



Rich Moffitt,
STMA President

Rich Moffitt

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A dream of a field

Drainage system key to successful field renovation

BY PARKER WOOD

Howard Gamble is varsity baseball coach at Skyline High School in Oakland, CA. He's held the position for eight years, and for most of that time he was a man with a problem field, built on clay soil, that never drained properly. When winter rains arrived, the field turned to mud, and it was anyone's guess as to when it would dry out. Poor field conditions put an end to routine maintenance, and forced most preseason training sessions to be held on the school's outdoor basketball courts. Early season games were often moved or rescheduled for the same reason. To make matters worse, the field had been graded to promote surface drainage, but instead the slopes and contours led to a deep depression and a large drain inlet in center field—an accident waiting to happen.

For years, Gamble dreamed of a better field. Neither the school nor the district had funds for renovation. The same was true for the team's booster group. Gamble even talked to the city's parks and recreation people, but they responded that the field was on school district property, making it ineligible for city assistance. Gamble had all but given up when, suddenly things started to go his way.

An anonymous donor approached the city wanting to contribute money for improvements to several athletic facilities, if the city would match the gift. Through lots of hard work, Art Yamashita, supervisor of park special programs, and Al Garcia, facility project analyst, confronted the problems presented and solved them.

Yamashita had remembered Gamble's request for help. He and Garcia spearheaded the work at Skyline, which took several months to complete. The scope of the project included: killing the existing turf; capping and burying the offending drain inlet; ripping, disking and regrading the field; putting in new irrigation; installing a sub-surface drainage system; erecting a new fence; adding new infield mix; and installing new sod. The City did much of the work using its own personnel and equipment and contracted out the rest.

Early on, Yamashita and Garcia realized that improved drainage would be critical to the project's overall success. As they evaluated their options, Yamashita remembered a seminar he had attended where the concept of Sand Channel drainage was discussed. He was reassured to learn that, among other places, Sand Channel drainage had been used successfully at Stanford Stadium, and as part of the renovation of the football field at Colfax High School, the Sports Turf Manager Association's 1999 High School Football Field of the Year.

Renovation work began in October 2000, and the Skyline field was finished in time for Gamble's team to play three home games before the end of the 2001 season. Coach Gamble noted a number of positive changes he attributes to the renovated field and the new drainage system:

- His outfielders' level of play improved after they quit worrying about slipping and falling.

- The players have a lot more pride in their field, which means they have a lot more pride in themselves.
- Pride in the field spurred the players to be more proactive when it comes to keeping the field in top-notch condition.
- The improvements to the field have motivated greater community involvement, which Gamble is sure will lead to increased support for the team.

Yamashita characterizes the outcome of his and Garcia's efforts as a "win-win-win" situation: The school district got improvements to two of its athletic fields, the city got improvements to one facility and an agreement that they could use the school district sites for city programs, and the kids of Oakland got better and safer facilities for both school and city-sponsored activities.

As for Coach Gamble, for the first time he can remember, he isn't worried about what his field will be like next February. He's confident he'll be able to use his field, right from the first day of practice. Where once he was a coach with dreams of a field; now he's a coach with the field of his dreams.

ST

Parker Wood is director of marketing for Sand Channel Greens, Inc. He can be reached at 800-379-8873.



Weathering the storm

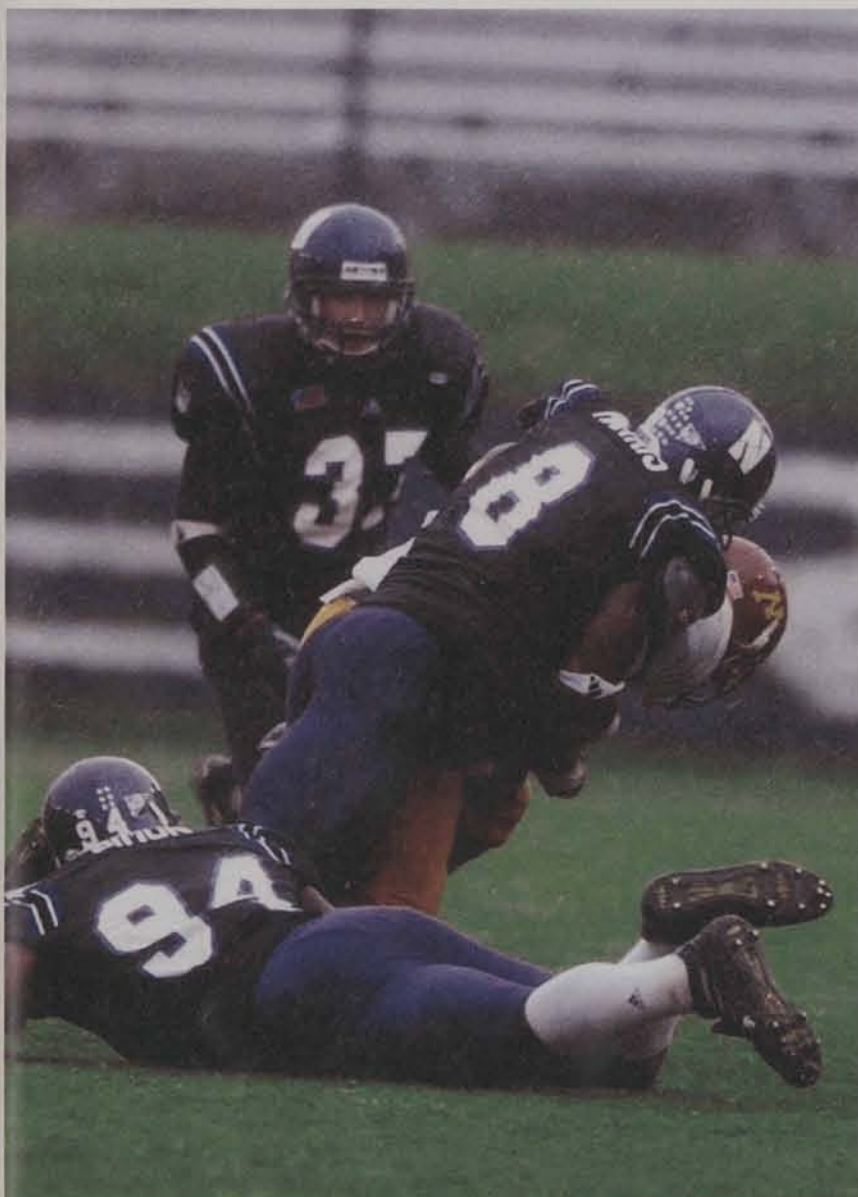
BY NATHAN ODGAARD

Though the rain continued to fall—heavier as the game progressed—Eric Adkins remained relatively calm.

Adkins, an agronomist at Northwestern University in Evanston, IL, watched with uneasiness, but confidence, October 13 as Ryan Field took a pounding from both Mother Nature and the Northwestern and University of Minnesota football teams. Storm cells produced steady, at times heavy, rain that drenched the field 1 hour before and nearly the entire 3 1/2-hour game. In that period, the field collected 2 inches of rain.

Ken Kraft, senior assistant athletic director, said the rain briefly stopped on a couple occasions, but otherwise, “It was just a mess. The rain got heavier and heavier throughout the game. At times it was coming down in sheets.”

Panic-stricken? Not Adkins. Renovations to Ryan Field in April 1999 (the 2000 Collegiate Field of the Year by the Sports Turf Managers Association, see ST Aug), which included the application of Profile™ porous ceramic soil amendment, angular sand and peat, were designed to enhance drainage and stabilize the field. Still, Adkins was concerned. Since the renovations, Ryan Field, which Adkins has looked after for 4



Northwestern's Napoleon Harris makes a tackle vs. Minnesota during a driving rainstorm that Ryan Field survived beautifully.

years, hadn't seen a rainfall amount close to that which fell on October 13.

It was Ryan Field's greatest test of durability—and as it turned out, it easily passed.

It can be a ground crew's worst nightmare: persistent rainfall during a game. Trampling by 300-plus lb. football players for a 3-hour period alone takes its toll on any football field. Add drenched sod, and the consequences can mean thousands of dollars in time and product to repair divots or replace sod. But at Ryan Field following Northwestern's 23-17 win, there were no such consequences.

The sand-based natural turf field sustained only scuffmarks, Adkins said.

Divots and tears, common scars left behind after games played in inclement weather, were non-existent. Therefore, the field maintenance crew's post-game duties were, for the most part, no more demanding than had the game been played in dry conditions.

“It's a relief knowing you don't have to spend thousands of dollars to renovate again,” Adkins said. “The money we spent (on the April 1999 renovation) paid off for this game. Adding Profile and then doing drill-and-fill this spring has paid dividends. We endured 2 inches of rain, and nothing happened. It was like a normal game.”

Said Kraft: “The field held up extremely well. A lot of rain had fallen. We didn't have the big chunks that are standard in these conditions.”

Ryan Field's durability surprised even Randy Walker, the Wildcats' head coach: “It was incredible. When I looked at the field the next day, I didn't see any significant damage. I don't think I've ever played a game in those conditions and had the field hold up so well.”

Ryan Field's ability to withstand the elements on October 13 was in stark contrast to the beating it took in a 1998 Northwestern-Michigan game. The field suffered heavy turf damage, Adkins said, requiring major and costly stripping and replacement of battered and shredded sod.

The following spring, renovation began to improve turf drainage and soil stability.

Based on recommendations from a Profile agronomist, the existing root zone was amended with a combination of the product, a porous ceramic, and a more angular sand than was in place. The old sod was stripped off and removed, and 15 truckloads of angular sand and 88 tons of soil amendment were spread over the field surface and tilled in to a depth of 6 in. In incorporating the new material with the original soil, the field's top 6 in. of soil profile consisted of 80 percent sand, 15 percent Profile, and five percent Dakota Reed Sedge Peat.

Last spring, the Ryan Field crew performed a drill-and-fill aerification that placed 1-in. diameter and 12-in. deep columns of the soil amendment spaced 5 in. apart into the sand to enhance drainage. The drainage rate was 6-7 in. per hour during the Northwestern-Minnesota game. Adkins said the product also increases the nutrient- and water-holding capacities of the rootzone, which help stabilize the roots.

“Basically, after the (Oct. 13) game we spent a half hour pushing the scuff marks together, and the next day we rolled the field and it was ready to go for next week's game, a 2:30 p.m. contest against Penn State in front of a national television audience,” Adkins said. “I don't think anybody could tell that it had rained the previous week.”

Following the Penn State game, the crew aerated and broadcast 1 1/2 tons of Profile onto the field.

“We did so based on the downpour that we had,” Adkins said. “I wanted to get a little bit more air into the field and smoothness on the field.”

“We got a couple of comments from players and coaches (following the October 13 game),” Adkins said. “But mainly they were quiet, which was good. The field wasn't involved in the outcome of the game. I saw a couple slips, but for the most part the footing held up fine throughout the whole game.”

As did Adkins' confidence. As the game proved, the sound drainage and stability features of Ryan Field have made the maintenance crew's job easier and illustrate its worthiness as the 2000 Field of the Year.

ST

Nathan Odgaard is a writer for Swanson Russell Associates.

Quality above depends on quality below

BY MARLIN BREEMS

Out of sight, out of mind! Sub-surface drainage is seldom seen and seldom thought about. Items such as turf, fertilizer, bleachers, P.A. systems, scoreboards, irrigation, and field markings are more visible and get more attention. However, when a downpour 2 hours before an event turns your field into a mud bowl, the issue of drainage comes to mind. The quality of the field above depends greatly upon the quality of the drainage system below.

Whether designing a drainage system for a new field or for an existing field, certain principles must be considered. The first thing to consider is the system's total capacity. In other words, "How quickly do you want your field to return to a playable condition?" If your field is already saturated with water, and you receive a 3-in. rainfall, then 84,150 gal. of water need to be removed. The field's owner needs to decide about what a reasonable drainage time would be. Is the field located in Florida or Arizona? Is it for amateur or professional use? What kind of flexibility will there be for rescheduling? If the park and recreation department regularly hosts soccer tournaments for out-of-town teams then the designers may wish to drain that field in an hour, not days. A 12-in. smooth wall pipe could accomplish that, assuming of course that the lagoon, stream, or storm sewer is able to accept that speed. It is more likely that 4 6-in. smooth-walled pipes do the job. A 6-in. rain would double the requirements.

This all assumes, of course, that the field is equipped with a system that is able to collect the water and send it on its way expeditiously. It also assumes that the water is able to readily get into the collection system. A herringbone pattern is typically used when the field has a crown in the center running the length of the field. The herringbone allows water running from the higher elevation to cross over a drainage line rather than running parallel to the drainage lines toward the edge of the field. If the field is flat, or has less than a .005 gradient (.5 percent slope) from the center, then a parallel or grid drainage pattern may be appropriate. This drainage pattern should be extended 15 ft. beyond the sidelines to include the area where players and coaches stand.

The drainage lines should be located between 10 and 20 ft. apart depending on how quickly you wish to see your field recover (see Fig. 1). These relatively close spacings are needed for different reasons on different fields. Fields with healthy, porous soil will drain quickly, filling the collection system. If the collectors are spaced too far apart they will be called upon to carry excessive amounts of water and backup will result. Fields with dense, clay-like soil will not drain nearly so quickly. Water will tend to pool on the surface and seep into the collection system on the collection lines. This will be most feasible if sand backfill from around the pipe extends up to near the surface.

Collection systems located near the surface respond more quickly than those deeply buried do. Attention should be paid to burying the system to a depth that will avoid soil aeration techniques. The system that is submerged 6 in. with sand located above and around the collectors is fast and efficient. Products with a tall but enclosed core such as the Multi-Flow Drainage System provide a substantial surface area with which to intercept and collect the water and flow rates that get rid of it efficiently.

A multi-layered filter system (Fig. 2) protects the collectors from failure due to blinding and guarantees a long life. A fabric filter prevents the core from filling with fine sand and silt. A 3.5-4-oz. needle punched geo-synthetic fabric will do the best job. An inch or two of very coarse sand surrounding a fabric will prevent the fabric from blocking. As the water passes through the sand particles of clay and silt are arrested before they reach the fabric filter.

This is much more critical in some soils than in others but it is always an effective insurance against a blinding. In some circles filter wrapped drainage medium has received some bad press. For example the USGA discourages its use. However filter wrapped drainage medium encased in sand is a safe investment. Tom Biddart, a turf-

grass management technology instructor at Fairview College, teaches that encasement in course sand is the only way to satisfactorily protect a geotextile filter and thereby protect the drainage system.

Sports turf drainage is a science in need of far more attention than it gets. A well-designed sub-surface drainage system will yield rewarding dividends in attractive, hardy, healthy, and cost-effective turf. **ST**

Marlin Breems is director of marketing for Varicore Technologies. He can be reached at 800-978-8007.



Figure 1



Figure 2