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December 2023

Vol. 39 No. 12

The Official Publication of the Sports Field Management Association

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Parks and Recreation **24** | Infields **30**

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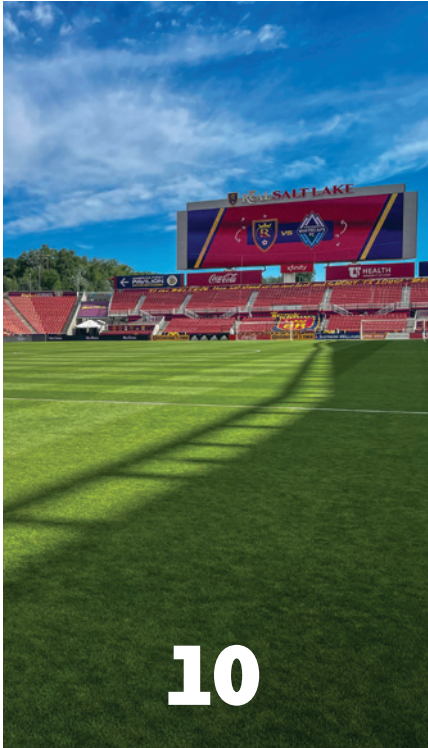


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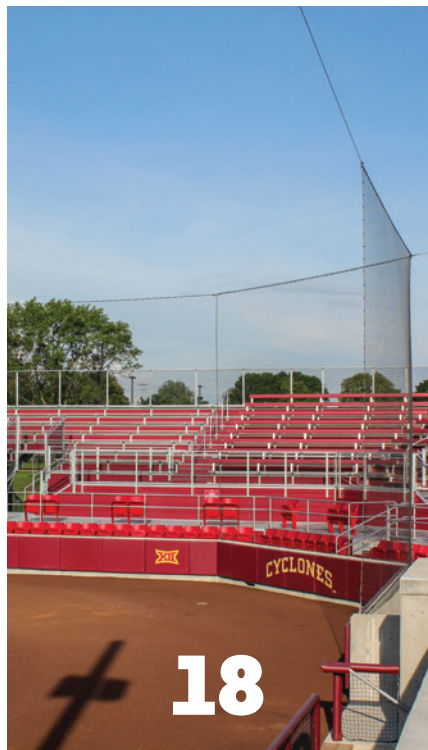
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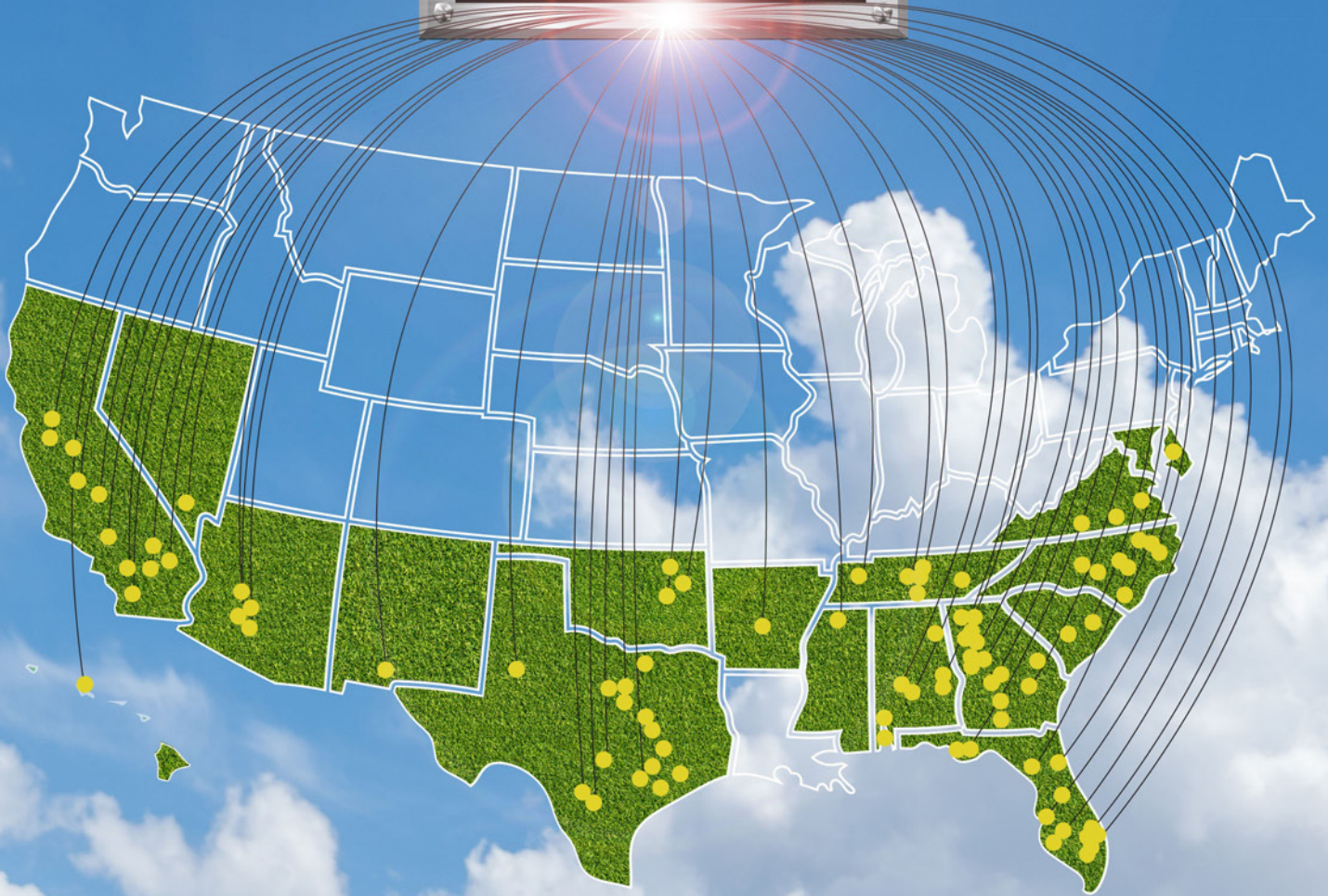
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Editor's Note



John Kmita

Associate Publisher /
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I've had the pleasure this year of attending sporting events at all levels of play — from youth to high school to college to professional. To me, there is nothing like sitting in the stands with friends, eating concessions food I know I will regret, and enjoying live sports.

The older I get, the more I appreciate the people who work to make those events happen. I can't sit through a basketball game without noticing the people at the scorer's table. In the past, I spent plenty of afternoons and evenings volunteering at youth sporting events to keep score book or run the clock/scoreboard. I have helped coach youth sports, I've run concessions, and I've helped organize tournaments. But I'm just an editor, so I can only observe and report on the hard work and effort you put into your fields and facilities as sports field managers.

When I tell people about the magazine and the sports field management industry, people often say they didn't know this was a career. I know you hear the same thing, and you also deal with fans and parents who show up to games and tournaments thinking that everything is just magically in place and a beautiful, safe playing surface just happens to be there.

So, as we wrap up the year and look back on 2023, I am thankful for the people in this industry and the work that you all do to make our sports-obsessed lives so enjoyable.

My year has included trips to see many of you at work — or to see the results of your efforts. This year has allowed me to meet some amazing professionals (both in person and via video conference).

On a personal note, this year has also seen my daughter head to Iowa State University, where she has since taken a job at the Iowa State University Sport Turf Research Field. Hearing her speak with pride about her job and her fields has further strengthened my connection to this industry.

So, as we head toward the New Year, I want to thank you for supporting the magazine and our efforts. Happy holidays, and I look forward to seeing you in Daytona Beach. **SFM**



Iowa State University Sports Turf Research Field

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President's Message



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Sun Roesslein, CSFM

SFMA President

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Happy December, SFMA! We often hear, "I can't believe (insert month) is here already; time flies when you are having fun," and that statement has proven true yet again. 2024 is right around the corner and there is so much to look forward to.

Before we get there, this is a great time to look back at what you've achieved this year. Long sports seasons, weather events, extra events, crew shortages, you name the challenge, and you've conquered it. Congratulations!

Here at the NAAC, all those challenges hit home, but there is a lot to be proud of too. I believe it is very important to keep those moments of success in mind in order to build upon them while preparing for the upcoming year.

On the association level, there has been a lot of work going on behind the scenes that you won't notice just yet. The strategic plan that is the road map for everything we do for the next eight years is based on growth. Our three strategic pillars — growing respect for sports field managers, growing the organization by integrating the next generation of field managers, and diversifying the organization to attract underrepresented groups — all need to have the "back of house" support to make them happen.

Software and systems upgrades, along with adding a learning management system, will build the next foundation to set SFMA up

for that future growth and success. These upgrades and additions are setting the stage for the association to provide better member resources, more educational offerings and other exciting programs.

Stay tuned for some specific program announcements in January at the annual conference and exhibition in Daytona Beach, Florida. By the way, this is our 35th annual conference and exhibition! It is pretty cool to look back at my 20-plus years of membership, realize how far we've come, and prepare to move forward toward what's next for SFMA!

January will be here soon enough, though, and I really hope you are able to take time to truly enjoy the holiday season. Regardless of how you celebrate, I wish you happy and healthy days with family and friends, full of laughter and presence — yes, presence; it's the best gift we can give to our supportive #TurfLife families.

Happy holidays! **SFM**

Sun Roesslein, CSFM

SFMA announces 2023 Field of the Year winners

Eleven SFMA members were awarded Field of the Year honors for 2023. The SFMA Awards Committee — led by Jason DeMink, CSFM, and Jeremy Driscoll, CSFM—reviewed each submission and independently rated applicants on field quality as impacted by staffing, budget, use, monthly maintenance and a visual story that documents each field’s challenges and successes.

Winners received complimentary registration to the annual conference, three nights hotel, signature clothing, a trophy for display and will be highlighted in an upcoming issue of *SportsField Management* magazine.

The 2023 SFMA Field of the Year Award winners are as follows:

■ **Schools and Parks Baseball:** Providence Catholic High School, Tom Dedin Field, New Lenox, Illinois — submitted by Scott Heren.

■ **Schools and Parks Football:** Brentsville Turfgrass Management Program, Donald Lambert Field, Nokesville, Virginia — submitted by Drew Miller.

■ **Schools and Parks Soccer:** Pace Academy, Walsh Field, Mableton, Georgia — submitted by Daniel Prince.

■ **Schools and Parks Softball:** Spartanburg High School, Lady Vikings Softball Field, Spartanburg, South Carolina — submitted by Matthew Arms, CSFM.

■ **Schools and Parks Sporting Grounds:** Brownsburg Community Schools, Brownsburg Championship Cross Country Course, Brownsburg, Indiana — submitted by Matt Dudley.

■ **College and University Baseball:** University of New Orleans, Maestri Field, New Orleans, Louisiana — submitted by Scott Blanchette.

■ **College and University Football:** Duke University, Brooks Field at Wallace Wade Stadium, Durham, North Carolina — submitted by Ian Christie, CSFM.

■ **College and University Soccer:** University of South Carolina Upstate, County University Soccer Stadium, Spartanburg, South Carolina — submitted by Bruce Suddeth, CSFM.

■ **College and University Softball:** University of Illinois, Eichelberger Field, Champaign, Illinois — submitted by Daniel Thomas, CSFM.

■ **Professional Baseball:** West Michigan Whitecaps, LMCU Ballpark, Comstock Park, Michigan — submitted by Mitch Hooten.

■ **Professional Soccer:** Mecklenburg County Parks and Rec, Sportsplex Stadium Field, Matthews, North Carolina — submitted by Jonathan Waszak.



S&P Softball FOY, Spartanburg High School, Lady Vikings Softball Field



University of Illinois, Eichelberger Field, Champaign, Illinois



College and University Football FOY, Duke University, Brooks Field at Wallace Wade Stadium

Register for SFMA Conference now and save

The 35th SFMA Conference and Exhibition is next month, and registration is open! Taking place January 22-25, 2024, in Daytona Beach, Florida, attendees will experience best management practices from academics and industry experts through case studies, hands-on learning, traditional presentations and in-depth classes. Take advantage of the lowest registration rates by registering online before Dec. 15, the link to register is on the home page of the SFMA website (<https://www.sportsfieldmanagement.org/>). SFMA members receive a discounted full conference rate of \$475; the non-member rate is \$625. All registrations received after January 12, 2024, will be \$700. SFMA offers many different registration types (see below).

If you are not a member of the SFMA or if your membership has lapsed, you can sign up via the SFMA website, and the member link to register for the conference will be emailed to you.

Full Conference Registration Rates:

(Includes all education sessions, welcome reception, trade show, awards banquet, and all meals provided during the conference).

	Online Early Bird	Online after 12/15
SFMA NATIONAL MEMBER	\$475	\$550
SFMA NATIONAL MEMBER <i>Reduced rate for second member from same facility (must register all facility members together to receive reduced rate)</i>	\$425	\$500
NON-MEMBER (OR CHAPTER-ONLY MEMBER)	\$625	\$625
STUDENT NON-MEMBER FULL CONFERENCE	\$350	\$350
ONE DAY PACKAGE	\$260	\$260
TRADE SHOW ONLY	\$50	\$50

SFMA membership — renew now

The holidays are here — and so is the end of SFMA's membership year! Every year, SFMA works hard to produce new educational materials, recognize certification and award recipients, and push for the safety of all fields around the globe. Invoices have been sent out, so SFMA urges all members to avoid interrupted membership by renewing before the Dec. 31 year-end deadline. Your SFMA membership is an investment for your future, that's why SFMA prides itself in providing a membership that connects you with a network of peers who are willing to share their best practices, provides opportunities for education to help you do your job better, and quick access to information and resources to help you save time. If you are considering joining SFMA, the recognized leader in championing the sports field industry and its professionals, SFMA is sure to have a membership for you. SFMA has specific membership categories for every professional in the sports field management industry.

Benefits of membership:

- A monthly electronic newsletter that communicates association and industry information.
- Access to the Member's Only section of the SFMA website, which has a real-time membership directory and hundreds of technical educational resources that are specific to sports field management.
- Access to Michigan State's Turfgrass Information File, the green industry's greatest resource for up-to-date technical information — a \$100 value.
- Ability to enter your field in the nationally recognized Field of the Year Awards program.
- Opportunity to become a Certified Sports Field Manager (CSFM) to showcase your professionalism and to have your facility certified as Environmentally Responsible.
- Significant savings on registration to SFMA's annual and regional conferences, and discounts to other organization's education.
- Opportunity to participate in volunteer leadership positions.
- Opportunity to join one of SFMA's affiliated chapters for a strong local network. (Each chapter sets its own local dues.)
- *SportsField Management* magazine each month.
- The ability to apply for scholarships (students only).
- Discount on advertising in *SportsField Management* magazine and discounted exhibitor booth at the annual conference (commercial members only).

Make sure to renew your membership before the Dec. 31 year-end deadline to avoid missing out on these great benefits. Renew online by logging into your account and adding your membership to your cart through the Products page. Any questions about membership or how to renew can be directed to SFMA HQ at 800-323-3876 or sfmainfo@sportsfieldmanagement.org. **SFM**



AMERICA FIRST FIELD SALT LAKE CITY, UTAH

The Field of the Year Awards program is made possible by the support of sponsors Carolina Green Corp., Precision Laboratories, John Deere and World Class Athletic Surfaces.



2022 was very eventful for our club and crew. In January, new ownership took over Real Salt Lake, and with that takeover came hope. We hadn't had a lot of hope the last few years with the old owner leaving under bad circumstances and new owners not coming in for two years. It was a tough time not knowing if we would have a job month to month, or if the team was going to leave. That being said, my crew here performed professionally and without complaint. The thing we take pride in the most is getting our work done and not having our general manager, president or the team worry about us. Our job of maintaining a safe, playable, beautiful field has never wavered in these tough times. All staff participate in the maintenance of the field — mowing, fertilizing, divot walks, spot watering, identifying issues and game prep. Players, coaches and staff (not just from Real Salt Lake) tell us that our field is the best in the league, and we get constant shout outs on social media from

fans, players and commentators. The surface is consistent, safe, stable and provides a premium ball roll. We began incorporating Clegg testing, moisture meters and soil sensors into our daily maintenance procedures. This helped recognize what areas of the field need aeration and more/less water without having to aerate or water the entire field. Soil tests also play a big role in how we fertilize by showing us the exact nutrients we need for healthy soil and grass. I take a lot of pride in my work, and I expect a lot from the crew. They deserve this award because of the passion, professionalism and pride they show for this team and for their work. Everyone is working toward the same goal of making the team successful. The crew and I are driven to strive for perfection and explore new ideas and technology to constantly learn and adapt. After 11 seasons in Salt Lake, I can say that this has been one of the best fields we have ever put out.

— Dan Farnes, director of fields and grounds



Level and category of submission: Professional Soccer

Field manager: Dan Farnes

Title: Director of fields and grounds

Education: Bachelor's degree in Parks and Recreation/Horticulture

Experience: I graduated from Utah State University in 2009 with a degree in Parks and Recreation, and a minor in Horticulture. I then took a job for a parks department in southern Utah. I saw an opening for an hourly position for a new professional soccer team in Salt Lake City and jumped at the chance. I started here for Real Salt Lake 11 years ago, worked my way up to assistant field manager after two years, and a year later became director of fields and grounds.

Full-time staff: Dustin Pixton, assistant director of fields and grounds; Clay Runk, landscape manager; and Blake Benhoff, practice field manager.

Original construction: 2008

Turfgrass: Kentucky bluegrass HD Sport 2.0

Rootzone: Sand

Drainage: Herringbone



SportsField Management (SFM): Congratulations once again on the winning field. What are you most proud of with this win?

Dan Farnes: Thanks! It was special to be able to win the award while everyone was in our hometown for the SFMA conference. I'm proud of my staff for the many hours they put in each year to make these fields safe and enjoyable to play on for all the different teams. It's also cool to be able to show off the award to fans, our bosses and owners because they are really proud of us as well.

SFM: You won the 2019 Professional Soccer Field of the Year Award with this field. What are some of the unique challenges you faced this time around with America First Field?

Farnes: Weather is our biggest challenge here in Utah. We have all four seasons — with temperatures ranging from -10° to 110° — that brings snow, rain, wind, drought

and everything in between. That makes it difficult for us to plan maintenance, because the weather changes frequently and sometimes without warning. It forces us to use a couple different weather apps/reports to make the best choices we can. I even have a local weatherman on speed dial to get his real-time opinions and updates.

SFM: What is the best part of your job or what aspects do you enjoy the most?

Farnes: I love being outside and especially mowing the stadium field. The sense of accomplishment I feel seeing the players walk out on our field fills me with pride. There aren't many jobs out there where you can see professional athletes use the product you work on all week and (hopefully) be successful on it by winning games and championships. I love solving problems and being able to plan and execute events that utilize the product we produce all year. The people at the club are great, and I have



Movie night on the pitch

met a lot of lifelong friends here. It's also fun to be able to bring my wife and kids to games and special events to show off what I do day in and day out.

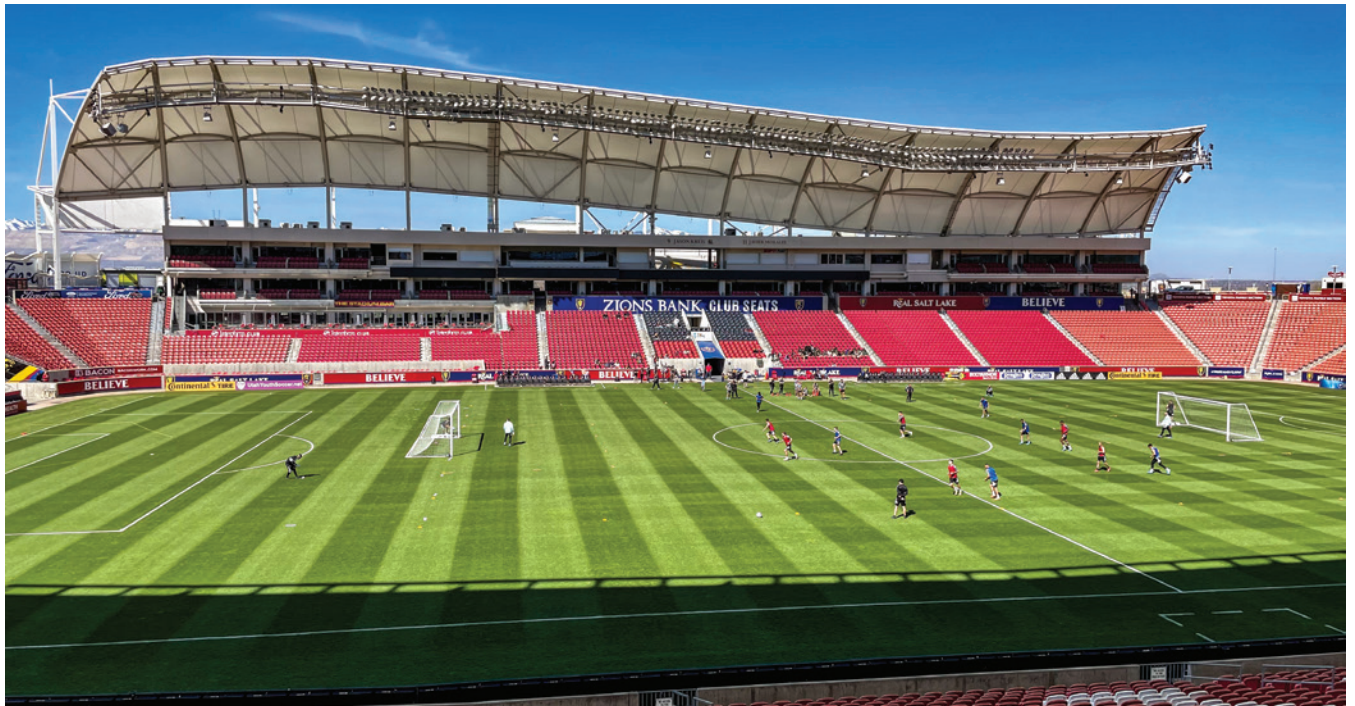
SFM: Please tell us about your crew and your organization or others who contributed to this Field of the Year win.

Farnes: Three full-time crew members worked on the winning field — Dustin Pixton, Blake Benhoff and Clay Runk. Blake and Clay started as part-time employees and worked their way up, while Dustin joined us from the NFL (Dustin recently moved on to manage the fields at BYU). These guys are great to work with and can roll with the punches that are thrown at us all year. The club supports

us by providing us with top equipment and supplies, so we can maintain the field with the best products available. We work with some amazing companies such as Toro, Greensource, STS Turf, Pioneer Athletics, Covermaster, Raft River Sod and Landmark Seed. We wouldn't be able to do what we do without them.

SFM: What would you say is the key to producing award-winning fields, and what advice do you have for other sports field managers?

Farnes: If trying to win Field of the Year, keep good records and photos during the season, and always have it in the back of your mind that it is a goal to win this



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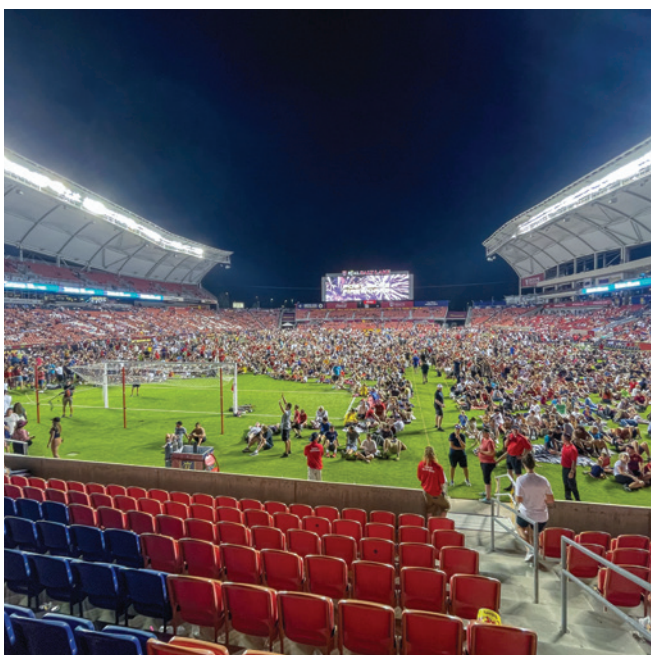
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award. The application process takes longer than you think, so start early. Remember that you have a unique and special position working for a professional sports organization. It's easy to get bogged down and burnt out during a long season, but just try to focus on the positives and use your time-off days. Use other colleagues in your area to help with issues, or get on social media to reach out to others in your same sport. SFMA is a great resource for all of us to branch out and meet others to help. The sun is usually shining and the grass is growing, so get outside and make it happen! **SFM**



Grow tarps down



Crowd on the pitch to watch fireworks after a game

Maintenance schedule

JANUARY

- Field frozen and dormant

FEBRUARY

- Field frozen and dormant

MARCH

- Season starts
- Grow tarps are down
- Slit seed 4 lbs./1,000

APRIL

- Aeration: cross tines
- Veticut

MAY

- Aeration: bayonet tines

JUNE

- Aeration: cross tines
- Broadcast seed: 300 lbs.

JULY

- No aeration or seed, too hot

AUGUST

- No aeration or seed, too hot.

SEPTEMBER

- Aeration: cross tines
- No seed

OCTOBER

- Aeration: bayonet tines
- No Seed

NOVEMBER

- Season over
- Let field go dormant

DECEMBER

- Field frozen and dormant

JOHN MASCARO'S PHOTO QUIZ



CAN YOU IDENTIFY THIS TURFGRASS PROBLEM?

PROBLEM:

Area of brown turf

TURFGRASS AREA:

Municipal park

LOCATION:

Callaway, Florida

TURFGRASS VARIETY:

419 bermudagrass

Answer on page 33

John Mascaro is president of Turf-Tec International

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Upgrading Your Facilities



All photos provided by Beacon Athletics

By Nick Balistrieri

When deciding to upgrade your baseball or softball facilities, there are a lot of things to consider. It's easy to accumulate a substantial wish list quickly, so distinguishing between your needs and wants is crucial to maximize your budget. Let's explore several areas in and around the field where improvements can be made, along with important considerations to keep in mind during this process.

BACKSTOP NETTING SYSTEMS

Backstop netting systems will be an improvement both players and fans will appreciate. Removing those bulky and beat up chain-link backstops will give your field a big-league feel, and fans will appreciate the improved sightlines offered by fewer poles and netting. The scuffing balls get when they are constantly fouled off a metal fence doesn't happen with netting.

Typically, you can get 30 to 40 feet in height for less money in netting than a 30- to 40-foot chain link system. We recommend incorporating some sort of knee wall, so the netting doesn't come straight to the ground. This will help with mitigating damage from maintenance equipment and little critters — increasing the longevity of the net. Those walls can



be made of concrete, block or a modular wall system. Certain systems enable easy net removal for extreme weather conditions such as tornadoes, hurricanes or cold winters. Doing so will add extra life to the net. Switching to netting will be the most noticeable improvement you can make, and it will affect the biggest number of people visiting the field.

BARRIER NETTING

Barrier netting is becoming increasingly popular every day at the MLB and MiLB levels. It also is becoming more popular at multiuse/multifield complexes. When determining your needs for barrier netting, first decide what you are trying to protect. It could be protecting a nearby playground or parking lot, or just the people who are too busy on their phones instead of watching their kids play. Either way, selecting the appropriate height will be very important to ensure that nothing bad happens. Like backstops, barrier nets provide good flexibility to go upwards of 40 feet in height and let you span much farther between poles than chain link fences — helping increase sightlines.



DUGOUTS

Dugouts can be upgraded simply by adding accessories such as a bat/helmet rack or new benches, or by adding padding and netting to the front of your dugout. Any of those items will dress up dugouts and make them more usable for the players. If it is in the budget to do more, there are a few more options from which to choose. Dugouts can be below field grade, or at field grade. Building dugouts below field grade may limit the options or styles of dugouts you can choose. If you don't go that route, there are several dugout packages that will add a professional look. With dugout packages, pay attention to the structural forces that the dugouts are engineered to absorb. Dugouts can become expensive quickly, so having a clear plan and understanding your needs is crucial to staying within budget.

BATTING CAGES

Outdoor batting cages can provide a nice practice/warm-up facility all season long. The setup can be customized by positioning cages side by side or end to end. There are attachments available for additional hitting stations to make the most of the setup. With any batting cage, it is always recommended to hit and throw from a mat on top of the turf, so as not to wear out those two high-traffic areas.



WINDSCREEN

Windscreen can be a relatively inexpensive way to spruce up fencing or dugouts. Add logos or prints to display school spirit or town colors, or choose a plain design for added privacy and to shield against unwelcome wind. There are different types of windscreen materials to provide more privacy, durability to wind, and color/printing options. If measured and installed correctly, a windscreen can give that extra wow factor to really set your complex apart.



CLAY / INFIELD RENOVATIONS

Clay/infield renovations are one of the biggest and best improvements you can make to your playing surface. Adding clay to the mound and plate will dramatically affect the quality of both of those areas. Most outs are recorded on the infield or at the plate, so making sure that those surfaces are up to snuff is important. Any dirt/clay improvement should be based on your maintenance capabilities. If you don't have the staff to maintain clay on a daily or every-other-day basis, we wouldn't recommend you add clay to the plate or the mound. Luckily, there are other options that will get you closer to the desired result of smaller holes. Using rubber hitting mats in place of clay is an affordable and low-maintenance option. It is hard to hit when standing in a batter's box and one foot is higher than the other. Same thing for the mound — it is very unsafe to have a crater in your landing spot. Safety should be the priority for every sports field manager.

Just as important as adding clay to the mound and the dish is choosing the right infield mix. The right infield mix will lighten your daily maintenance load significantly compared to maintaining an unbalanced mix. I have had a lot of success with engineered soils in both the amendment process and a full 3- to 4-inch cap. Determining how much

clay is in your mix is very important. If you do not have the time or labor to put out water multiple times a day, you should not be using a high clay content in your mix. If you do have the capability to water frequently and have a tarp on hand, then you should use a mix with a higher clay content. Conversely, aim for a silt percentage that's about half or equal to the amount of clay, maintaining a silt/clay ratio between 0.5 and 1.

By selecting a properly balanced infield mix, you will notice your mix stays in place and doesn't migrate to different spots on your infield or to your grass. If the mix stays in place and holds its grade, water will run off the infield in the proper direction, which will allow you to get back on the field after rain quicker. It will also help avoid lips on your edges, which can be extremely dangerous when players are trying to field a ground ball and the ball comes up toward their face instead of staying down like it should. Just like when determining to add clay, your maintenance capabilities should determine what you want to do with your infield mix. Adding infield irrigation will dramatically affect your infield's playability. Most irrigation companies will advise on using a high-speed head to avoid excessive puddling.

Like with all improvements, these things come at a cost. Some are more significant than others. If you don't have the money readily available, don't give up. There are multiple avenues to explore to get some help with these items. Consider applying for grants, getting donations from people who have a vested interest in the field or community, and asking associations who use the field to fundraise. Getting buy-in from all parties involved is an important step in getting the upgrades past the finish line.

Any of these improvements will make a difference. Don't be afraid to reach out to companies who do these things for a living and ask questions about anything you don't have experience with. As always, reaching out to your peers who may have had experience with improving their own fields will be beneficial. Ensuring we can provide safe facilities and fields will only help in making sure kids keep on playing youth sports so we all can continue to do what we love. **SFM**

Nick Balistrieri of Beacon Athletics has 13 years of grounds management experience. He has spent time at the MLB, NCAA and parks and rec levels, and has transitioned to the sales side of the industry. He is passionate about working with customers to provide safe playing surfaces and safe facilities for everyone who uses them.



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College and University Turfgrass Programs

State Technical College of Missouri

State Technical College of Missouri's (State Tech) Associate of Applied Science degree program in Commercial Turf and Grounds Management is designed to prepare students to enter careers in the golf course, athletic turf and landscaping industries. The program has a 99% placement rate, and the work of State Tech graduates can be seen on golf courses, athletic fields, landscapes or at garden centers and greenhouses throughout Missouri and beyond.

State Tech is a two-year technical college that offers Associate of Applied Science degrees, and the school has grown approximately 80% during the past eight years (with a current enrollment of more than 2,300).

The Commercial Turf and Grounds Management program used to be capped at 22 first-year students, but enrollment numbers have trended upward in recent years and the program now sets its goal at 50 first-year students.

"We started with 38 first-year students this year," said Ryan Klatt, department chair, Commercial Turf and Grounds Management. "Between our first- and second-year students, we currently have 56 in the program. It is an Associate of Applied Science in Commercial Turf and Grounds Management."

State Tech also offers a 1-year certificate in either Turfgrass Management or Landscape Management, but does not have any certificate students at this time.

"I try to talk students into pursuing their associate degree," said Klatt. "When you look at the job ads out there, most of them require a two- or four-year degree."

State Tech's facilities and grounds include a new facility for the Commercial Turf and Grounds Management Department. Three years ago, the college took ownership of a 9-hole community golf course that had been struggling, and built a new \$3-million facility at the site — complete with greenhouse, driving range and entertainment complex.

"Our classrooms and our shop are out here, and students get to go out on the golf course," said Klatt. "I teach an equipment operations class, and students mow the greens and fairways, rake bunkers, and everything that is required on the golf course."



All photos provided by State Technical College of Missouri

Despite being taught in a golf course setting, State Tech's Commercial Turf and Grounds Management program is much more than just golf course management.

Although many students pursue careers in golf course management, State Tech graduates work in professional landscaping, as well as in sports field management careers at all levels of sports.

"We educate students on a range of equipment — from reel and rotary mowers to skid-steer loaders and mini excavators — and we try to get everyone onto every type of equipment they would encounter out in the industry," said Klatt.

Now in his twenty-third year of teaching, Klatt — who formerly worked in golf course management — teaches the equipment operations, turf, irrigation and shop classes, while his colleague, Nick Rackers, teaches landscape design, plant propagation, herbaceous ID, woody ID, weeds/diseases/insects/pests, etc.

According to Klatt, much of the coursework is hands-on experience, but it depends on the time of the year. For the equipment operations class, safety procedures are covered in class, but then students are outside running equipment for two hours every day. In the shop class, students learn how to weld, sharpen reels and troubleshoot engines. Classes such as plant propagation or woody ID and maintenance feature plenty of hands-on experience as well.



“A student doesn’t need to know what they want to do when they come in,” Klatt added. “Everyone takes all of the classes. The more they know when they get out, the more valuable they are going to be.”

The Commercial Turf and Grounds Management program at State Tech breaks its class schedule into eight-week sections. The academic year begins in August with the first eight-week section running from August until early/mid-October; followed by another eight-week section from mid-October to Christmas break. Following the holiday break, students are on campus for another eight-week set of classes, with the academic year concluding the first week of March. First-year students then have a mandatory internship between their first and second years — from March until August.

“They are on the job, training and making money for six months,” said Klatt. “That gives them a chance to focus on the area they are most interested.”

Second-year students follow the same schedule, which allows them to graduate by March of their second year.

Added Klatt, “We do that so employers have help for a longer amount of time. It allows those on internship to experience multiple seasons, and it allows the graduates to get out there during peak hiring season.”



State Tech students are able to showcase their skills in settings such as the state Professional Agriculture Students (PAS) conference, which offers turfgrass, landscape and floriculture competitions, as well as a career-building component.

“We used to go to nationals with PAS, but the organization focuses more on agriculture,” said Klatt.

Now, State Tech uses the state PAS as a qualifier, and if students qualify for national PAS, State Tech instead takes them to a national event based on their area of interest — such as the SFMA Student Challenge, the GCSAA Turf Bowl, or the NALP Student Career Days.

“We have found that it works better for our students, because they can choose their area of interest, which allows them to go and network with people they might not otherwise meet,” Klatt added.

Although some graduates of the program go on to pursue their bachelor’s degree, most go straight into the industry. Many State Tech turf and grounds students gain exposure to potential employers through the department’s Commercial Turf and Grounds Career Expo, which brings in dozens of companies from several states to meet existing students.

State Tech alumni have gone on to work for (among others) the St. Louis Cardinals, Chicago Cubs, Milwaukee Brewers, Minnesota Vikings, Kansas City Chiefs, Boston Red Sox, Sporting KC, MU Athletics, as well as professional landscape and design companies, botanical gardens, and golf courses such as Oakmont, Valhalla and Bellerive.

The success of its alumni has helped State Tech when it comes to recruiting new students, and making them aware of the Commercial Turf and Grounds Management program. The department displays banners of the various teams, organizations, golf courses and companies at which its graduates are employed. Prospective students are able to see those banners during their tour of the facilities.

“A big thing that helps the college as a whole is just getting people to see what we offer,” said Klatt.

In addition to on-campus tours, State Tech reaches prospective students through career fairs, communication with state high school agriculture teachers, via word of mouth from alumni, and through television commercials during major sporting events.

For more information about the State Tech Commercial Turf and Grounds Management program, visit <https://statetechmo.edu/program/commercial-turf-grounds/> **SFM**

Setting Your Parks and Recreation Facilities Up for Success



Photo courtesy of GeoSurfaces Inc.

By Mary Helen Sprecher

During the pandemic, when gyms and fitness facilities closed, Americans discovered the opportunities for fitness and recreation that awaited them in their local parks. These ranged from playing disc golf with the family to running or cycling on local trails to playing tennis or pickleball on courts to challenging themselves on fitness courses — and all of it was free.

Of course, the upshot was that many of those facilities received a lot more wear than they might have otherwise, necessitating more — and earlier — maintenance. Now park and recreation managers continue their essential work of running programs, but are also balancing the need to have facilities repaired, upgraded or rebuilt.

Those who are juggling all those jobs might be reaching out to contractors who are putting in bids to do work on sports facilities.

This should be a “how to” about finding a contractor, but here’s a quick “how not to.” Do not go to the internet and do a blind search to find someone to work on your parks and recreation facilities. Unfortunately, such searches can result in someone with little or no skill in the project that needs to be done.

Paul Arcella from CSR Construction Heavy & Athletic in Deerfield Beach, Florida, said that when looking for a partner, be sure to ask plenty of questions.

“I think it’s important for any owner or municipality to know the background and experience of the builder,” said Arcella. “What are their credentials? Are they licensed? Do they have any certifications? Interview



Photo courtesy of Byrom-Davey Inc.

their customers and ask things like how they handled the projects; whether there were any changes or unforeseen conditions that caused a change in the final cost; and, if so, how was that handled?"

Sometimes, in the rush to have a project completed by the time the season for a certain sport opens, mistakes are made by not taking the time to select the right company for the job. As a result, it is possible to choose someone without the necessary experience in that sport.

According to Arcella, it is important to come to the table prepared with information, including:

- When fields, courts or other facilities need to be in use.
- Whether there is a preference in terms of the type of surface to be used.
- The sports each field/facility will host.
- What level of use the fields/facilities will receive (i.e., summertime Little League or larger and longer-term tournament use).
- What, if any, additional facilities or amenities are needed, such as spectator seating, restrooms, lighting, fencing, etc.

Builders recommend a team approach to designing and building (or rebuilding) athletic facilities. In addition to the builder, that team might include a designer of sports facilities, as well as subcontractors with expertise in areas such as electrical, lighting, etc. Also on board should be representatives of any applicable user group(s).

Contractors have long preferred creating lasting relationships with clients — not one-and-done jobs — and, as a result, have been working to forge partnerships with municipalities.

According to John Schedler of Baraka Sport in Fort Worth, Texas, the first and most essential ingredient in creating that beneficial relationship is free.

"From concept to completion, communication is key to all projects," he said.

When a project has a group of advisers, including community users, it is essential that all voices are listened to; however, only one person should be communicating with the contractor to avoid confusion or unapproved expenses.

"Establish a point of contact with the owner and with the designer/contractor and have regular meetings to discuss progress and issues," said Schedler.

To keep community members in the loop, the point of contact should schedule regular meetings to give progress updates and to provide notifications on any significant changes to, or questions about, the project.

When it comes to new construction, parks and other municipalities are seeing an uptick in demand for specific types of facilities. Pickleball, of course, is growing exponentially, but so are other sports, including disc golf and half-court basketball. Dog parks are also proliferating in parks nationwide — often with different sections for small and large canines, and with amenities such as water fountains and agility courses.

"We're seeing a major uptick in South Florida in small-sided soccer facilities," said Arcella. "We actually replaced a skate park, an outdoor inline hockey rink and an unused baseball field, and converted all of them to small-sided soccer. With Lionel Messi now playing for Inter Miami, and the 2026 World Cup being played here, we think that trend will continue." **SFM**

Mary Helen Sprecher wrote this article on behalf of the American Sports Builders Association (ASBA). ASBA offers a wealth of resources to assist parks and recreation personnel, including publications such as "Sports Fields: A Construction and Maintenance Manual," "Pickleball Courts: Construction & Maintenance Manual," "Running Tracks: A Construction and Maintenance Manual," "Tennis Courts: Construction & Maintenance Manual," and "Courts & Recreational Surfaces: Construction and Maintenance Manual." To learn more, visit sportsbuilders.org, and from the blue toolbar at the top of the page, mouse over to "Resources." A drop-down menu will include an option for publications.

Electrification

Putting a charge into power equipment



By Glenn Hansen

When the Ram division of Stellantis (the parent company of Dodge trucks) ran a 60-second Super Bowl commercial, it got a lot of attention for its provocative “premature electrification” theme. With clever writing that mocked an often-spoofed medical condition, Ram tried to address the issue so many fear about batteries — will they last. Ram’s actual goal was to get truck buyers to wait several months for its electric trucks instead of buying a Ford Lightning F-150.

However, although battery life is a serious consideration in the electric equipment purchase process, it’s one of many, and it might not even be the most important one.

IT’S REAL, NOW

I researched this topic to learn the current state of electrification in the outdoor power equipment industry. What are manufacturers doing? Why are they doing it? What do dealers think? I spoke with a few dozen people and ran a short survey. In the process, I uncovered a story — two actually, one short and one long.

The short story: The internal combustion engines we’ve enjoyed for 150 years are going away because consumers want better options and manufacturers are creating those options.

The long story: It includes noise reduction and ease of use and motor efficiency and sustainability and regulations and uncertainty — a lot of uncertainty.

ACCEPTED

California gets the blame — or the credit, depending on your politics — for kickstarting the electrification push in power equipment. But it started well before the West Coast giant imposed its ban on the sale of new gas-powered mowers and equipment. Electrification started when NASA contracted tool maker Black & Decker to create a battery-powered drill astronauts could use in space. That was 1961. Today's performance of battery-powered tools has proven to the most skeptical construction crews and DIYers that lithium-ion (li-ion) can do the job.

Lawnmowers and drills are different animals, but the sales numbers for battery-powered equipment are trending up. Industry research group Traqline reported that sales of non-gas-powered outdoor equipment have grown significantly year-over-year for the past decade. “For both unit sales and dollar shares, gas-powered outdoor power equipment (OPE) has been losing share slowly but steadily since 2013, leading to significant year-over-year losses. Currently, electric and battery-powered outdoor power equipment make up 64 percent of the total OPE market in terms of unit sales,” the company reports.

Tool and equipment manufacturers recognize this reality. And so does retail giant Home Depot, which announced it is aiming, by the end of 2028, for 85 percent of outdoor power equipment sales to be generated by items that run on rechargeable battery technology instead of gas. Big orange is focused on walk-behind mowers and handheld outdoor equipment such as leaf blowers and trimmers. Ron Jarvis, Home Depot's chief sustainability officer, said in a statement, “By working with our suppliers to bring innovative and sustainable products to every aisle of our store, we can help our customers create more sustainable homes and workplaces.”

Regulations, whether by state governments or localities, will continue to impact the power equipment industry. But the larger evolutionary force is coming from manufacturers because buyers are asking. Home Depot, not known to be a politically liberal corporation, recognizes consumer interests and it acts to meet those. Much of Home Depot's sales volume feeds the residential market with handheld outdoor power equipment.

While mass-market retailers in many areas (Home Depot, Lowe's and others) do compete with traditional OPE dealers, the independent operation and the manufacturer product mix is different. I spoke with several OPE dealers and manufacturers to learn how and why electrification is changing the business.

**THE POWER OF EXPECTATIONS**

We surveyed a few dozen OPE dealers to begin my research into the electrification of OPE. Nearly 70 percent of the dealers surveyed indicated their sales of electric products are increasing. And nearly 25 percent say that both residential and commercial users are buying battery-powered products.

“We see more and more landscapers looking at battery-powered tools, and many trucks have inverters so they can charge batteries on the job,” said Bob Rodgers of Rodgers & Sons in Cherry Creek, N.Y. Still, he adds, “Nobody is asking about electric equipment bigger than handheld. People here still like their gas.”

While consumers are making the shift to li-ion power tools and equipment, commercial buyers are slower to adapt. Whether it's because they “like their gas” or for another reason, there is a question of expectations.

“On the landscaper side, they are looking for something that will last for the full day,” said Christin Wam, senior director of marketing for Briggs & Stratton's Turf & Consumer Products group. “But while many of them consider a ‘full day’ to be eight hours, they're not cutting for eight hours — but that's their expectation.”

Briggs & Stratton (B&S) itself is an interesting study of the electrification evolution. In its 100-plus year history, B&S has produced more than 200 million gas engines. And the Milwaukee manufacturer calls itself “the world's largest small engine producer.” Today, the company is evolving to become a “provider of power.” The company's Vanguard commercial power division markets li-ion battery packs and V-Twin gas engines. It also boasts about being “a leading designer, manufacturer and marketer of lithium-ion battery products.”



According to Wam, the company ran a marketing campaign years ago to fight in favor of gasoline, and the comments it received from consumers were not good. “Many people told us we needed to evolve,” she said. Had it not done so, it might have become the modern-day Kodak, a company famous for eschewing the digital camera biz.

At the opposite end of the evolutionary spectrum, Kress promotes “The death of gas” on its website. “Welcome to the post-gas era,” announces Kress with a headline over its battery-charging system. Kress has been marketing battery-powered tools — and only battery-powered tools — to the North American market for one year, though its roots are deeper in Europe. With a focus on equipment powered by fast-charging batteries for commercial users, Kress is trying to reach landscapers and OPE professionals to address their expectations of electric tools.

PERFORMANCE IS MONEY

“The first thing landscapers ask us for is a substitute for gas equipment,” said John Sloan, director of sales for Positec’s Kress brand. “Most companies have tried battery tools, and they want to know about battery runtime. We could engineer a battery to run for two hours, but it would be too heavy.”

One OPE dealer I surveyed added this comment to his response: “I will be impressed when an F16 jet could perform with battery on par or better than today’s jet.” While innovators are developing and testing battery-powered jets, I doubt they will impress this anti-battery dealer anytime soon.

When comparing batteries to gasoline (or jet fuel), I need to cover the topics of energy density and motor efficiency, even if briefly. I’ll start by paraphrasing an ancient question: “If an oxcart is carrying a load of grain to market, how far can it go before the oxen eat up all the cargo (i.e., their fuel)?” All vehicles that carry their own fuel face this problem. The grain as fuel has low energy density, and the oxen as a motor has low efficiency, but it’s all they had.

Fast forward and look at gasoline; it has a significantly higher energy density than a lithium-ion battery. Some of that difference is offset by the high efficiency of electric motors in converting stored energy into motion. Internal combustion engines are inefficient; they’re unable to use all of gasoline’s inherent power. That inefficiency — plus the heat, noise, maintenance and exhaust — is why we’re talking about batteries today.

To be clear, none of the manufacturers with whom I spoke said the performance equivalency (battery to gas) is equal.

“The biggest limiting factor right now is energy density,” said John Powers, director of product management for Echo, “Power equipment is a hard challenge to solve.”

According to Powers, with a car, you can install more batteries because weight is less of an issue. With most handheld equipment you can fit enough energy in a tool and it’s easy to have access charging when needed. But larger tools, such as backpack blowers and mowers, present a bigger challenge.

What the manufacturers do offer is a revision to the power question. “We try to turn that runtime question into a productivity question,” said Sloan. “What do you need to get done?”

Productivity, not pure performance, is a key development factor. “The challenge is to give pro users the same productivity,” said Powers. “The work they do is established. They look at the equipment on their truck, and they want battery versions of those tools, because those tools get the jobs done.”

The productivity comparison reveals other differences between gas- and battery-powered equipment. When discussing the Bobcat T7x electric compact track loader, Joel Honeyman, VP of global innovation for Doosan Bobcat, said, “Remember that there is no idle. Much of a loader’s use is at idle. So, battery power works well for productive work time.”

Plus, with far less noise and zero emissions, battery-powered tools allow landscapers and others to work near schools, hospitals, residences and other places where noise and emissions are unwelcome.

LESS NOISE, MORE EASE, IMPROVED IMAGE

“In the past, say until about two years ago, most of our electric tools were bought by customers who wanted to reduce the noise,” said Dave Little, whose Little’s Equipment operation includes five retail stores in southeast Pennsylvania. “We’ve sold even more this year, people switching over from gas to electric, for overall ease and less mess. We had a slower start with Stihl, but now the customers are buying in, and our salespeople have bought in.”

“Ease of use is a lot of it,” said Greg Paul of Paul’s Lawn & Garden in Massillon, Ohio. “No pull starting — that’s big for some older customers. Quiet is a benefit for some people. No worrying about old gas.”

“Noise is a big one,” said Powers. “I hear about this in Florida for sure, and other places, especially hot areas where workers like to start early in the morning and noise can be a problem. With gas-powered trimmers and blowers, right next to a building, noise is an issue.”

The battery industry does have issues to work on, including battery recycling.

“Our OEMs need to help us figure out how to recycle batteries,” said Paul. “I have shelves full of old batteries. It’s not a huge percentage, but it’s a problem over time. This is the biggest question I have right now.”

The Outdoor Power Equipment Institute (OPEI), which represents equipment manufacturers and suppliers, has a Battery and Electric Products Committee that is working, in part, on issues such as battery recycling. Manufacturers are also working on the recycling issue, as well as current and potential regulatory challenges facing product development.

That doesn’t stop the myriad forces driving the shift to electrification. Home Depot is not the only corporation aware of the growing consumer demand for “sustainability.”

“Our commercial customers get more frequent requests from their customers for sustainable work teams and products,” said Jack Easterly, global segment manager for Husqvarna. “We are a 330-year-old company focused on innovation. That includes helping to lead this new future of sustainable landscaping.”

A BALANCE

With customers measuring everything from productivity to noise levels to cost and more, manufacturers face as tough a challenge as ever — to build equipment that performs and sells and meets modern environmental criteria.

“From extensive market research, the primary demand from the market for both professional and consumer users is battery technology that meets or exceeds the performance of gas, the runtime to get the job done, and durability to last as long or longer than gas comparable units,” said Paul Beblowski, product manager, professional battery, Stihl.

Added Easterly, “Battery is an evolution, not a revolution. And internal combustion engines still have a place.” **SFM**

Glenn Hansen is editor of OPE Business magazine, sister publication to SportsField Management magazine. This article originally appeared in OPE Business.

The History and Best Practices for Infield Topdressings



Photos and graphic provided by DuraEdge Products, Inc.

By Luke Yoder and Paul Zwaska

Back in the 1960s, groundskeepers began incorporating different products into their infield skins to try to improve playability. These products were initially produced for the golf and automotive industries, and consisted of diatomaceous earth, porous ceramics and even crushed corn cobs. They were referred to as amendments or conditioners because the products were typically blended into the infield profile.

By the 1980s, calcined clays became the primary product to apply to infields, either by tilling in as an amendment or applying across the surface as a topdressing. Utilizing the calcined clay on the surface improved the sliding surface, provided a buffer between the infield mix and the athlete's feet, and improved moisture management.

In 1990, vitrified clay topdressing was introduced to the sports field management industry as an infield amendment. The clay product was baked much hotter than calcined clay, which ultimately changed its water absorption capabilities. What you had was a harder particle that absorbed much less water than calcined clays. These vitrified clays only lasted for 10 to 15 years and were eventually replaced by expanded shale, which acted very similarly to the vitrified products, except they were even more durable. The changing landscape of these

products during that period left many groundskeepers confused as to what to do with their fields. It took some time for end users to understand the benefit, as there was little to no research during that 30-year span to guide the field managers in the application of these various products on their infields.

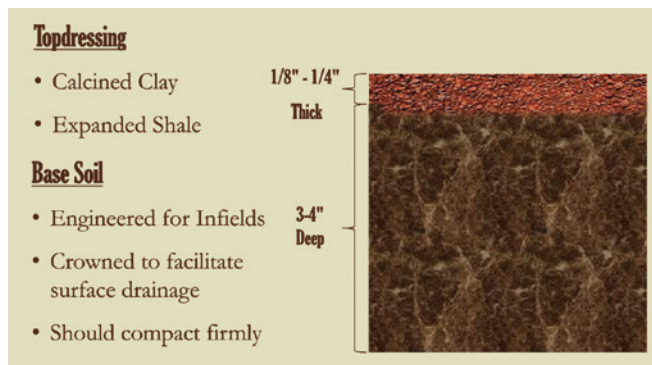
By the 1990s, the term "infield topdressing" became more prevalent terminology in the sports field manager's vocabulary. The practice of using these products strictly on the surface — not tilling into the infield soil profile — started to change the way infield skins were managed.

Today, calcined clay and expanded shale products now dominate the infield topdressing industry. Calcined clay, with a massive amount of pore space in the particle, can absorb its own weight in water. Expanded shale has very little absorption capacity, allowing more water into the infield skin and holding it there while it acts like a mulch on the infield skin surface. Shale's heavier bulk density also slows its migration on the infield surface. The different attributes of calcined clay and expanded shale are subtle to some, but can provide solid maintenance options depending on climate and labor capacity.

In the past, the terms topdressing, conditioner and amendment were used interchangeably by manufacturers and field managers to describe multiple products. The practice of tilling into the profile of the infield skin to amend or condition was preached as gospel throughout the industry. Tilling in calcined clay was the solution to every possible problem on an infield — too hard, too soft, too dry, too wet, just till in calcined and all is good. There are obvious shortcomings with a one-size-fits-all solution to multiple problems. Tilling in calcined clay to improve a poor rootzone was a good idea and still is today.

It will increase pore space, relieve compaction, increase CEC, improve vertical drainage and encourage stronger rooting for a healthier, happier turf plant. A good infield profile requires a totally different structure than a rootzone. A certain amount of compaction is essential, and, because of that, vertical drainage is virtually nonexistent. Horizontal or surface drainage is what saves games. Using calcined clay as a conditioner will compromise the structure, reduce the moisture-holding

capacity, and decrease the stability of the infield profile. Calcined clay, expanded shale, or a combination of both should only be applied to the top surface of your infield profile at an 1/8-inch depth (no more than 1/4 inch) to improve the sliding surface and moisture management.



Using calcined clay and/or expanded shale as a topdressing has become recognized as a best management practice in recent decades. However, there are still stalwarts out there who cling to the old tilling method. Changing the process throughout an entire industry will not happen overnight. The use of the term “conditioner,” and the continuing message to use calcined clay and expanded shale as an “amendment” to improve your infield profile is still common. Recommendations of as much as 1,800 lbs./1,000 ft² are still common. The question is how can calcined clay be marketed as a conditioner for both infield skin profiles and rootzones when the objective for the performance of each are opposite?

If your goal is to improve your infield soil, the best approach is based upon science. Collect and submit a soil sample to a professional laboratory for a particle size analysis. This is the blood test for infield skin material. The results will show the proportion of sand, silt and clay in the infield skin. At this point, adding the right soil as an amendment can alter the makeup of the soil and correct any deficiencies in its texture. This approach permanently modifies the soil and can be measured. Tilling calcined clay or expanded shale cannot correct the soil texture in ways that are beneficial to the performance of an infield skin.

One common issue with calcined clay is the breakdown of the particles due to the abrasive actions of dragging, rolling, normal play and other maintenance tasks. Expanded shale resists breakdown due to the natural hardness of the raw material, which is further enhanced through the heating process of it during production of the product. When calcined clay does break down, it tends to turn to a powder that acts much like a silt layer on the

surface of the infield. As this “silty” layer accumulates on the surface, it can create very dusty conditions when dry and slimy conditions when wet. At this point, the only fix is to remove the top 1/2 inch to 1 inch of contaminated material and replace it with new infield mix.

Research the calcined clay products available on the market to find the most durable. The quality of calcined clay increases as you increase the temperature at which it is baked. Those that are baked just enough to calcine it are subject to more rapid breakdown on the field surface than those that are baked to the upper end of the calcining process. Those calcined clays will be more durable and break down at a slower rate — and therefore last much longer on the infield surface. You will find there are sizable differences between the brands on the market.

Sports field managers should look at topdressings as tools in a toolbox. Today’s various offerings of infield topdressing materials have distinct different modes of action, and sports field managers need to understand the benefits of each of these materials. They can then decide which material(s) they want to use — either alone or combined with each other to craft the performance they want for the surface of their infield. **SFM**

Luke Yoder and Paul Zwaska are members of the DuraEdge Products Business Development Team, which features more than 125 years of combined professional groundskeeping experience. Yoder is former head groundskeeper for the Pittsburgh Pirates and San Diego Padres, and Zwaska formerly served as head groundskeeper with the Baltimore Orioles.



Topdressers

EARTH & TURF 415-SP TOPDRESSER

Topdressing athletic fields is key to managing soil health for green, consistent grass. Rough games tear up turfgrass and require soil repair to keep the surface consistent. When fields are topdressed properly, it helps athletes to avoid foot and ankle injuries, rainfall will absorb quicker to avoid puddles, and grass will come in with fuller consistency. Earth & Turf's 415-SP topdresser provides a quick, ride-on option for maintenance crews to touch up fields without bringing out large equipment, yet it is fast enough to keep up with large machines for full renovation. The Quadrasteer system means operators can quickly maneuver at the end of the field instead of taking wide, sweeping turns, backing up, etc. Compact design makes the machine quick for small areas and ideal when on sidewalks, beside tracks, on trailers and into storage.



GKB TOPDROP

The GKB TopDrop, a pull behind material spreader available from STEC, can spread material as thick as needed by simply adjusting the rear gate and brush speed. It can cover anywhere from 54 to 78 inches wide, depending on the model. TopDrops have capacities from 1.3 cubic yards to 4.3 cubic yards. The GKB TopDrop is a tow-behind, hydraulically driven, material delivering workhorse that puts the material exactly where you want it.



JOHN DEERE TD100 TOPDRESSER

Designed for the John Deere ProGator heavy-duty utility vehicles, the TD100 topdresser offers enhanced capabilities for applications on athletic fields and other areas where topdressing is needed. The TD100 boasts a capacity of 12 cubic feet level-full or 19 cubic feet heaped, a rated capacity of 1,500 lbs., and is made of steel to reduce corrosion and supported by steel members to increase strength. The hopper is engineered to resist corrosion. It is reinforced by robust steel members for strength and stability. The TD100's fixed-speed, nylon/polyester cord, endless conveyor belt transports material under the metering gate, guided by a rotating brush for even distribution. With a full-width metering gate opening, easily adjustable from zero to three inches, the operator has precise control over the desired application depth. The two-lever system makes adjusting the gate height and securing it in position easier for the operator.



REDEXIM RINK DS 1600

The Rink DS 1600 is a new topdresser in the Redexim line. The capacity of the Rink DS 1600 is 2.4 cubic yards heaped (see Rink DS 3100 for 4-cubic-yard capacity). The added capacity allows the operator to be more productive. Four balloon tires allow for a very light footprint. The Rink DS 1600 is equipped with dual spinners with a spread pattern variable up to 40 feet. The operation of the belt speed and spinner speed can be changed from the seat of the tractor by way of a new electric control system. The release gate automatically closes when the belt is stopped to prevent any unnecessary spillage. The spinner discs have been designed to handle wet or dry material. The fins on the discs can also be modified to a specific spread. This unit comes with pivoting axles to follow surface undulations. **SFM**



JOHN MASCARO'S PHOTO QUIZ



ANSWER

From page 17

I was looking at a friend's fully rebuilt municipal park that they were just charged with maintaining, and we came upon this area. During the construction phases of the park renovation, there were issues with the new irrigation system. Some of the irrigation pipe was installed too shallow, and many of the valve boxes and irrigation heads were installed either too shallow or too high. In this instance, the sprinkler head was not installed to the proper depth. When the field was first mowed by the municipalities crew, they used a rotary mower. While mowing, one of the blades hit this irrigation head, slicing off the top, which allowed the spring to fly up into the mower deck. The spring wrapped around the mower blade, turning it into a metal string trimmer that scalped the turf. The issue was quickly discovered when the mower operator was making his turn. He stopped the mower, removed the spring and continued mowing. The inset photo shows the additional sprinkler parts that the mower ejected.

Thanks to Tim Legare, CSFM, CPRP, CPSI, director of leisure services for the City of Callaway, Florida for letting me take this photo.

John Mascaro is president of Turf-Tec International

If you would like to submit a photograph for John Mascaro's Photo Quiz, please send a high-resolution digital photo to John Mascaro via email at john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of *SportsField Management* magazine and the Sports Field Management Association.

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April 1986



In this retrospective, we examine historic issues of *SportsTurf* magazine, predecessor to *SportsField Management* magazine. In this edition of "Accessing the Archives," we look back at the April 1986 issue of *SportsTurf*.

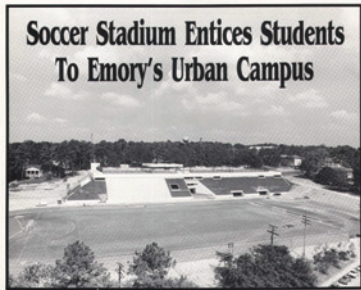
The cover of the April 1986 issue featured a goalkeeper attempting a save on a soccer pitch. The cover image was tied to an article about Emory University and the construction of the George Woodruff Physical Education Center and soccer stadium. The article detailed how the university, located near Atlanta, had used \$20 million worth of donations to upgrade its facilities.

According to the article, "As colleges and universities compete for students, athletic facilities are being recognized as an increasingly important part of the campus physical plant. Colleges are responding with impressive new physical education centers. Such investments can spill over into athletic fields."

The project resulted in an all-season field and state-of-the-art track for Emory, which allowed it to host an invitational NCAA soccer tournament and many regional soccer championships.

The article goes on to detail the construction and composition of the field and facility, including drainage, soil, irrigation, turfgrass (Tifway 419) and more. Also highlighted are Emory's maintenance practices, as well as additional renovation plans for other campus soccer fields, softball fields, touch football fields and a rugby/lacrosse field.

The April 1986 issue also featured an article titled "Sports Turf Drainage: A Battle of Two Forces," by John W. Moreland, president of Cambridge Soil Services of America. "When sports turf managers experience problems with insects, diseases, drought or winterkill, they may not realize these are often visible manifestations of poor drainage. The full impact of poor drainage on turf is not well documented, but few would argue that poor drainage is the number one problem of sports turf."



Soccer Stadium Entices Students To Emory's Urban Campus

The George Woodruff Physical Education Center and soccer stadium was designed as a complete unit with the stands on one end of the building and the arena on the other.

Since the inception of the 1970s, it has become the preferred spot of all Emory University students. Each semester over 20,000 students flock to the stadium for athletic events.

Emory's 150-year-old university is located in an older residential neighborhood in Atlanta, GA, one of the oldest and most beautiful cities in the South.

College are expanding with impressive new physical education centers. Such investments can spill over into athletic fields.

The Emory physical education center was built in 1977. J. T. Lurie was manager of the stadium and an officer of the university. In 1977, J. T. Lurie was manager of the stadium and an officer of the university. In 1977, J. T. Lurie was manager of the stadium and an officer of the university.

to lobby for improving the 18 acres of fields on campus as part of the overall improvement program. Paine was responsible for the new 1,000 athletic activities on the 18-acre site. The site was developed in 1977. The stadium and track were built in 1977. The stadium and track were built in 1977.

Emory University's Emory couldn't have been better. A track was built in 1977. The stadium and track were built in 1977. The stadium and track were built in 1977.

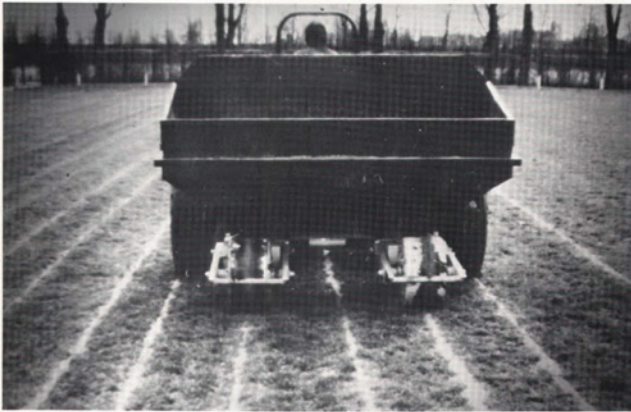
Emory University's Emory couldn't have been better. A track was built in 1977. The stadium and track were built in 1977. The stadium and track were built in 1977.

Emory University's Emory couldn't have been better. A track was built in 1977. The stadium and track were built in 1977. The stadium and track were built in 1977.



The soccer game was the last held by Emory the year after the new stadium was completed.

Sports Turf Drainage: A Battle of Two Forces



Sand is injected into a British soccer field by a machine designed just for sand-slitting sports fields.

By John W. Moreland

When sports turf managers experience problems with insects, diseases, drought or winterkill, they may not realize these are often visible manifestations of poor drainage. The full impact of poor drainage on turf is not well documented, but few would argue that poor drainage is the number one problem of sports turf.

Drainage is a lot more complex than "water runs downhill." In soil, water moves according to two forces which often oppose each other. Gravity is the first force, the one that makes water go downhill. The force gravity exerts on water is dependent on the depth of sample. From this relatively simple concept of gravity we jump to the other, more complicated force called capillary attraction.

If gravity was not opposed by another force, soil would not retain water for plant

use. The main factor in capillary attraction is the size of the pore spaces in the soil. Smaller pore spaces have stronger capillary attraction than large ones.

An easy way to illustrate the two forces is with a wash cloth. Water will move in a wash cloth in very much the same way that it does in soil.

First, thoroughly soak a wash cloth and hold it parallel to the floor. It remains wet and drips very little. The capillary attraction of the wash cloth is greater than the force of gravity on such a shallow sample. Now rotate the wash cloth 90 degrees so it's perpendicular to the floor. Water flows freely down the wash cloth. The top edge of the cloth is no longer as wet as the bottom.

Although the wash cloth has the same capillary attraction in both positions, the force of gravity has increased more than tenfold due to the increased depth of the sample.

Gravity then exceeds the force of capillary attraction in the large pores of the cloth. The cloth remains wet because the force of gravity is not sufficient to pull the water out of the smaller pores.

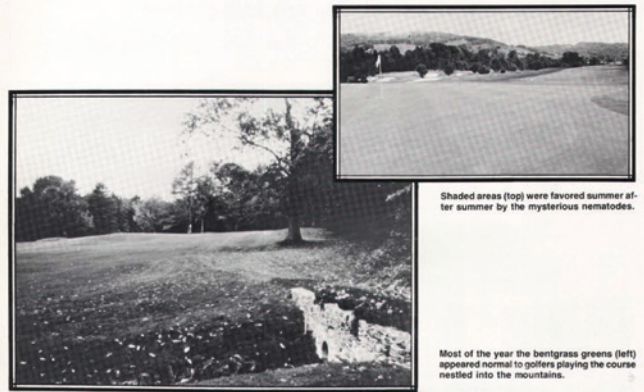
These two forces working within the soil sample really determine how much water is removed from the turf. In most cases the permeability of the soil is the limiting factor, not the size of the drain pipe.

In fact, if the soil were absolutely uniform in permeability, water moving downward in the soil profile would not enter the pipe at all, it would be carried around the pipe by the capillary attraction of the soil.

Sports turf drainage is not the same as agricultural drainage. In agriculture, the cultivated surface soil is more permeable than the subsoil. French drains are very effective in these situations. A French drain is

continued on page 20

New Hampshire Superintendent Solves Summerkill Mystery



Shaded areas (top) were favored summer after summer by the mysterious nematodes.

Most of the year the bentgrass greens (left) appeared normal to golfers playing the course nestled into the mountains.

Bentgrass can fool the best superintendents. You can never drop your guard to this cool-season midgird.

Roland White, superintendent at Bald Peak Colony Club in Melvin Village, NH, noticed that every summer patches of his bentgrass greens, collars and fairways mysteriously yellowed, turned brown and then died. It happened in the same areas every year no matter what he did to prevent it.

"Between the second week of July and the third week of August, the bent was gone," White said. "Once you got through this period, you'd see some recovery. In fact, the problem was entirely masked in the spring."

Hidden behind a forest of giant white pines, Bald Peak Colony Club rests on the northern shores of Lake Winnepesaukee, a lake seen in the movie, "On Golden Pond." The White Mountains form the horizon for the club.

24 sportsTURF

It's the part of New Hampshire where Bostonians and New Yorkers flee to ski, fish and climb mountains in addition to playing golf. The mountains and the wilderness lure them by the busload in both winter and summer. Nearby, White National Forest is teeming with deer, moose, fox, raccoon, squirrel, rabbit, mink and black bear. There's also an abundance of grouse, woodcock, pheasant and duck in the area. Many varieties of game fish inhabit the cool, fresh water lakes carved out of the mountains by the last glacier.

In Melvin Village, the average summer temperature is 70 degrees, an ideal climate for growing lush green bentgrass for golf. It's a part of the country with no history of severe problems with insects or disease. The summer kill was baffling. All soil tests came out normal. For years the troubled areas received several types of fungicides

and insecticides with no change in the condition of the turf.

"It looked like Poa going out. A wilt condition of some sort. The worst areas were the greens and tees that were under trees. The greenhouse effect produced by the trees reduces the air movement and causes the humidity to rise. I could draw a chalk line around these areas before they went out, yet nothing I did saved them."

Night after night White studied the soil and the floundering bentgrass under his microscope searching for a clue. He compared what he saw through the lens with photographs of disease and insect damage in turf magazines and books.

What he found didn't make sense—nematodes. Everything he read said nematodes didn't damage turf in the Northeast. Yet, there they were, clustered around the root system of the grass.

The article goes on to detail two opposing forces that impact drainage: gravity and capillary attraction. "The main factor in capillary attraction is the size of the pore spaces in the soil," Moreland stated. "Smaller pore spaces have stronger capillary attraction than large ones."

This issue also included a golf course management article about a mysterious case of summerkill on the bentgrass greens, collars and fairways at Bald Peak Colony Club in Melvin Village, New Hampshire.

"When patches of bentgrass died mysteriously every summer even though test results showed nothing wrong, superintendent Roland White did his own investigation. The culprit revealed was the nematodes, a pest not usually a problem in the Northeast."

As is the case with other early issues of *SportsTurf*, the April 1986 issue included a lot of golf course management content, with one article about the golf course boom and another about golf course design and maintenance.

"Today's high-performance golf clubs and balls enable the better golfers, for whom the hazards were designed, to avoid them and score too well. These

hazards are also causing poorer golfers to score higher than they should," said John Watson, president of the American Society of Golf Course Architects. "Therefore, golf course architects are developing master plans to phase in new tees and greens, reposition bunkers, and add water retention ponds for both aesthetic and preservation purposes."

The editorial opinion page in this issue urged readers to take a chance on progress. "One of the main reasons why the sports turf market has not kept up with available technology is a general disagreement among experts over field construction and maintenance methods," wrote Associate Publisher Bruce Shank. "To wait until research has settled all disagreements could destroy much of the healthy momentum now in the market." **SFM**

All content for this section is pulled from the SportsTurf/SportsField Management archives, an ongoing cooperative project of EPG Brand Acceleration, SFMA and the Michigan State University Libraries (<https://sturf.lib.msu.edu/index.html>).

2023 Most-read Articles

With 2023 coming to a close, we look back at the top stories of 2023. Below you will find the most-read stories on *sportsfieldmanagementonline.com* this year. We have broken it down into categories to highlight the most popular feature stories, news items and product news of 2023. Among the feature stories, our series on college and university turfgrass programs was extremely popular — with three articles in the top 10; as were the Q&A series with Pamela Sherratt and Dr. Grady Miller, which landed four total articles in the top 10.

The full recap of this year’s top stories is as follows:

FEATURES

1. INTRODUCING THE SFMA 2023 BOARD OF DIRECTORS

The Sports Field Management Association (SFMA) 2023 Board of Directors officially took office at the association’s annual meeting, during the SFMA Conference in Salt Lake City, Utah, including SFMA President Sun Roesslein, CSFM; Past President James Bergdoll, CSFM, CPRP; President-elect Nick McKenna, CSFM; Secretary/Treasurer Adam Thoms, Ph.D.; and Vice President – Commercial Paula Sliefert.



2. COLLEGE AND UNIVERSITY TURFGRASS PROGRAMS: TEXAS A&M

In 2023, *SportsField Management* magazine started its College and University Turfgrass Programs series. This installment kicked off the series and featured the Department of Soil and Crop Sciences at Texas A&M University.

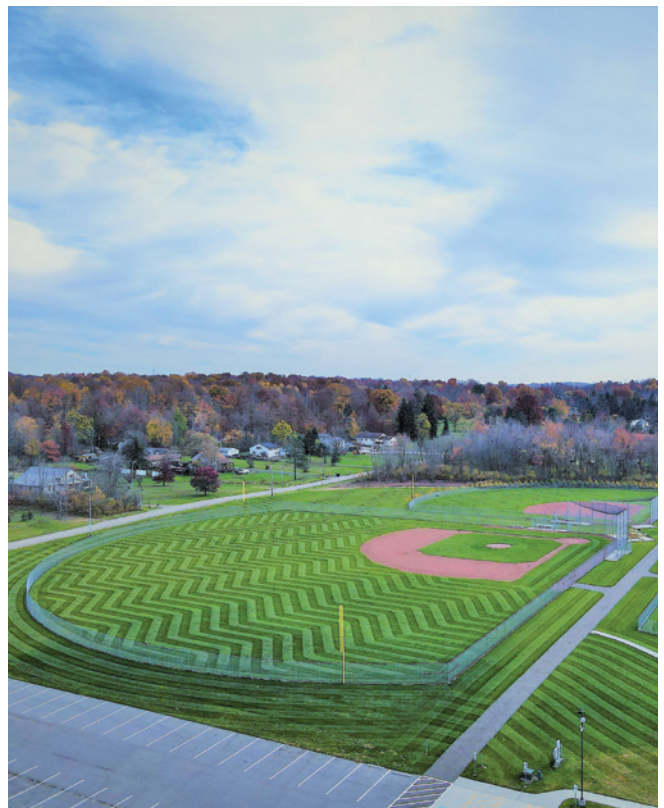
3. INFIELD CARE

“When you see athletes kicking around in the batting box and knocking the dirt off their cleats, that’s your infield mix they’re messing with.”

Mary Helen Sprecher from the American Sports Builders Association (ASBA) goes in depth on how to take care of infields in both natural and synthetic applications.

4. SFMA MOWING PATTERNS CONTEST WINNING DESIGN

The Sports Field Management Association (SFMA) named Nick Miller, field and grounds coordinator for the City of Aurora Parks and Recreation Department (Aurora, Ohio), as the winner of the 2022 SFMA Mowing Patterns Contest. The winning field is located at Hartman Park.



5. PAMELA SHERRATT ON PERENNIAL RYEGRASS

Pamela Sherratt, sports turf extension specialist at Ohio State University, is asked her thoughts on using perennial ryegrass on sports fields.

6. COLLEGE AND UNIVERSITY TURFGRASS PROGRAMS: DELVAL

In this edition of the College and University Turfgrass Programs series, Delaware Valley University (DeVal) is featured. DeVal is the only small, private university that offers a 4-year degree in Turf Management.

7. Q&A WITH DR. GRADY MILLER: SUPER BOWL LVII TURFGRASS

One of the hot-button topics in sports field management in 2023 was the playing surface at Super Bowl LVII in Arizona. Dr. Grady Miller, professor and extension turf specialist at North Carolina State University, responded to questions he received during the second half of the big game.

8. COLLEGE AND UNIVERSITY TURFGRASS PROGRAMS: IOWA STATE UNIVERSITY

The Iowa State University Department of Horticulture Turfgrass Management option has an excellent national reputation and students are sought after by employers throughout the country. Iowa State University Turfgrass Management students learn all the skills necessary to maintain turf that could earn them a position as a sports field manager, golf course superintendent, lawn care specialist or municipal grounds professional.



9. PAMELA SHERRATT ON BLUEGRASS/ RYEGRASS SWARDS

Sherratt answers if a bluegrass/ryegrass hybrid field can shift back to a majority Kentucky bluegrass surface through overseeding.

10. Q&A WITH DR. GRADY MILLER: MINIMUM TEMPERATURES FOR BERMUDAGRASS GROWTH

Dr. Miller is asked about bermudagrass growth in the spring.

DAILY NEWS

1. SPORTSFIELD MANAGEMENT RISING STAR AWARDS

SportsField Management magazine introduced its inaugural class of Rising Star Award winners. The Rising Star Awards highlight industry members who are under the age of 40 or have been in the industry for less than 10 years.

2. INDUSTRY WEIGHS IN ON SUPER BOWL FIELD CONDITIONS

The Super Bowl playing surface was center stage, and the turfgrass variety at State Farm Stadium was thrust into the national spotlight as players for both teams struggled with footing.

3. WEIGHING THE DIFFERENCES BETWEEN NATURAL AND SYNTHETIC TURF

As a debate arises in the NFL and other professional sports over the benefits of choosing natural or synthetic turf for athletic fields, Cale Bigelow, professor of horticulture and landscape architecture in Purdue University's College of Agriculture, suggests that both turf types have positives and negatives to consider.

4. LLSWS TO FEATURE ALL-FEMALE GROUNDS CREW

SFMA members volunteered to be part of the all-female crew at the Little League Softball World Series at Stallings Stadium at Elm Street Park in Greenville, North Carolina. 2023 was the second straight year that an all-female crew took care of the field at the LLSWS.



5. MARK YOUR CALENDAR FOR THE 35TH ANNUAL SFMA CONFERENCE AND EXHIBITION

The 35th Annual SFMA Conference and Exhibition will be held January 22-25, 2024, in Daytona Beach, Florida, allowing members to share information with other

successful members of the sports field management industry. In addition to educational seminars, hands-on workshops and the latest technology on display, conference attendees have the opportunity to tour professional, college and municipal facilities that offer a range of insights to take back home.

6. SFMA INNOVATIVE AWARD WINNERS

The Sports Field Management Association (SFMA) Innovative Awards program recognizes SFMA commercial company members who have developed a product, service, equipment or technology that “substantially enhances the efficiency and effectiveness of the sports field manager and/or makes the playing surfaces safer and/or more playable for athletes.”

7. NFLPA ADDRESSES PLAYER INJURIES ON SYNTHETIC TURF

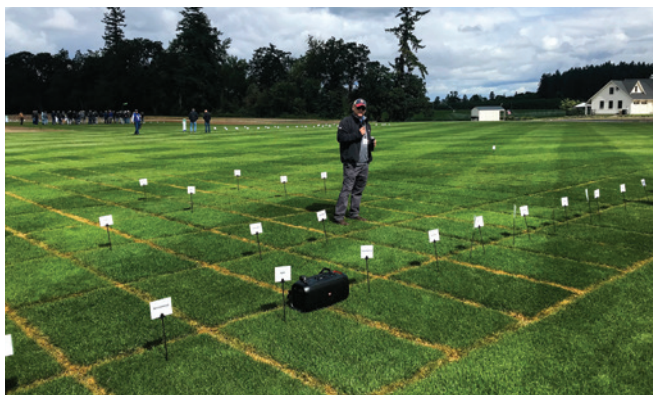
With 14 out of the current 30 NFL stadiums using synthetic turf, players have been outspoken about their preference for natural grass over synthetic playing surfaces. The National Football League Players Association (NFLPA), the labor union that represents NFL players, recently released data showing that injury rates on synthetic surfaces were higher than on natural surfaces.

8. NOTED TURFGRASS SCIENTIST RETIRES FROM PENN STATE

Andrew McNitt, Ph.D., professor of soil science, director of the Center for Sports Surface Research and technical adviser to the National Football League (NFL), retired from Penn State after a 40-year career in the College of Agricultural Sciences.

9. FIELD DAYS SHOWCASE THE SEED INDUSTRY

Mountain View Seeds and Landmark Seed Company hosted field days in Oregon, June 20 and 21. The events provided attendees with a better understanding of the companies’ varieties and products, as well as the seed industry.



10. MSU LIBRARIES’ TURFGRASS INFORMATION CENTER TGIF DATABASE NOW OPEN ACCESS

The Michigan State University Libraries’ Turfgrass Information Center is making the Turfgrass Information File (TGIF) database publicly available. This database, which is a cooperative project of the United States Golf Association and the Turfgrass Information Center, can be openly accessed at <https://tic.msu.edu/tgif>.

PRODUCT NEWS

1. POWER TURF RENOVATION PTO-60 SPORTS FIELD RENOVATION MACHINE

The Power Turf Renovation PTO-60 sports field renovation machine aerates, dethatches, verticuts, levels playing surfaces and removes the problematic infield lips. With one tractor and an operator, an entire football field can be done in two to three hours. With the 5/8-inch blade spacing and a 60-inch-wide swath, the process can be adjusted down to a depth of 2 inches.



2. EXMARK INTRODUCES VERTEX X-SERIES AND VERTEX E-SERIES

Exmark unveiled its complete 2024 line of Vertex stand-on commercial mowers. Larger Vertex X-Series and compact Vertex E-Series machines have been added to the line. The new models join Exmark’s existing Vertex S-Series and electric Vertex V-Series models for the new year.

3. TORO INTRODUCES THE GROUNDSMASTER E3200

Toro announced that its out-front rotary mower, the Groundsmaster 3200 two-wheel drive unit, will be available as a battery-powered option in 2023. Building on a 50-year history from the introduction of the Groundsmaster 72 back in 1973, the battery-powered Groundsmaster e3200 features the same rugged chassis, commercial-grade mowing deck and intuitive operator controls as the current diesel-powered platform.

4. TURF TANK REVEALS TURF TANK TWO LINE MARKING ROBOT

Following the international success of the Turf Tank One, the updated Turf Tank Two has been meticulously crafted, utilizing robust research and development, constructive feedback from users and a focus on elevating the user experience to new heights.



5. FIREFLY AUTOMATIX LAUNCHES AUTONOMOUS EV MOWER

FireFly Automatrix, Inc. introduced its M100-AV mower at the Turfgrass Producers International convention at DeBuck's New Lawn Sod Farm, Belleville, Michigan. This commercial reel mower cuts a 100-inch width, adding to FireFly's line of autonomous mowers. The M100-AV is FireFly's first all-electric vehicle (EV), promising energy savings and environmental benefits.

6. RAIN BIRD'S 11000 SERIES ROTORS

Rain Bird introduced a new rotor series designed to make irrigating sports fields, stadiums and large commercial turf applications more efficient and cost effective. The 11000 Series provides excellent water distribution uniformity over a full 105-foot radius, making it possible to irrigate an area that's 25 percent larger with 40 percent fewer heads than a traditional rotor solution.

7. NEW INFILL AND CLEAT DEPTH TESTER FROM TURF-TEC

From Turf-Tec International, the new Mascaro Infill and Cleat Depth Tester is designed as a testing instrument that will measure infill depth on synthetic turf, as well as cleat depth penetration on synthetic turf and natural grass or any other surface where cleats are being worn by athletes.



8. SPORTAFENCE PORTABLE FENCING SYSTEM

Setting up your fields is easy with SportaFence. With SportaFence, a baseball or softball field can be ready for play in about one hour. This high-quality portable fencing system enhances both player and spectator safety.

9. MILWAUKEE TOOL EXPANDS PACKOUT MODULAR STORAGE SYSTEM

Milwaukee Tool announced the addition of eight new shop-focused solutions to the Packout Modular Storage System with the Packout Wall Plates.

10. STEC INTRODUCES ROOG OVERSEEDER

STEC announced a new disc overseeder from Rotadairon called the Roog. The overseeder utilizes precision opening discs to create a narrow slit and place seeds. Independent mounts, with close 2-inch disc spacing, allow for exact contour following. A working width of 59 inches easily cuts into the hardest ground conditions. **SFM**

The following sports field management industry photos are pulled from a variety of social media feeds.

If you would like your photo to be featured in future editions, tag us @sportsfield_mag.

Scan the QR code for links to all of our feeds.



@SmurfsonTurf

Nearing the finishing stages of our artificial turf install at Ralston baseball and softball. It's been a great learning experience to see this project from construction through install.



@turfgrasstiger



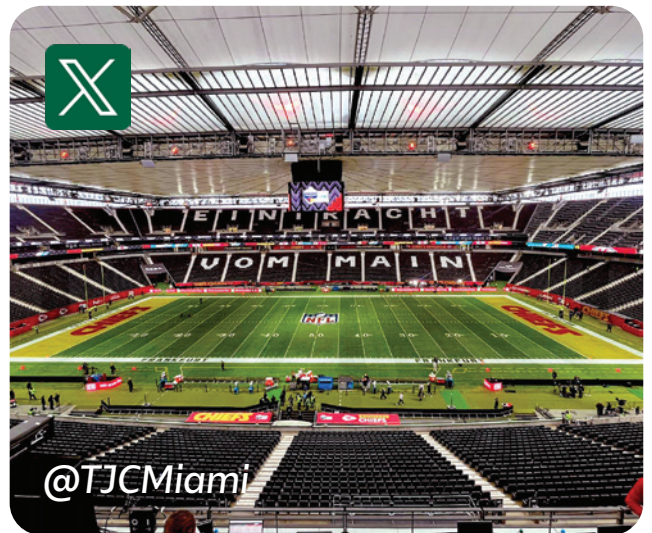
@sPORTs_grass



@lowaturfgy

Paint day one complete with @Cubs and Wildcats Field Crews! #Hawkeyes #FieldExperts







@eric_harshman_cgm

Grateful for the opportunity to share two great venues with grounds associates & managers from @ssc.serv this afternoon. Huge thanks to my friends Tod & Aaron for their time and generosity!



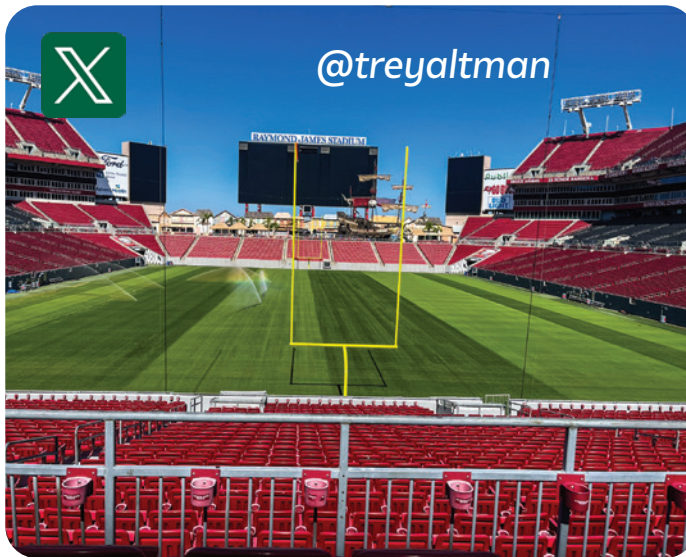
@hartmanboy7




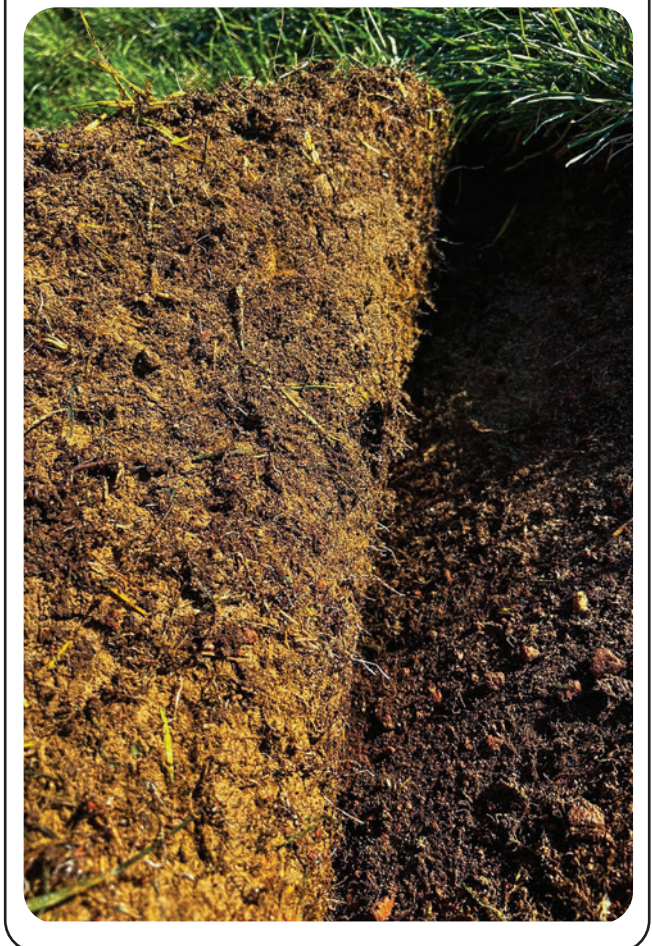
@womeninturfteam

The Inaugural @GCSAA Women's Leadership Academy is underway and we couldn't be more excited to "pull up a chair" #SeeltBelt #GCSAAWLA





 [@WillColeRSTurf](#)
7 days from laying new 365ss KBG sod and we are getting great roots. Last day of cold temps for a while.



Greenworks Commercial OptimusZ

Greenworks Commercial introduced the 72-inch, 36-kWh OptimusZ battery-powered commercial ride-on zero-turn riding mower. The OptimusZ is driven by a 36-kWh battery, equivalent to 99-hp., and LFP technology, delivering runtimes of up to eight hours on a single charge, mowing up to 32 acres with ease.



The constant 19k-fpm blade tip speed and the electric deck lift system, combined with the commercial-grade rear discharging deck, ensure precision with every pass. Users can stay in control with real-time 4G/GPS connectivity and take advantage of the glove-safe touchscreen with pre-downloaded languages and adjustable motor control. The OptimusZ also boasts cutting speeds of up to 14 mph.

Toro unveils new equipment at Equip Expo 2023

Toro unveiled its latest outdoor power equipment at Equip Expo 2023 in Louisville, Kentucky.

“This year we are really pushing the limits of convenience and power,” said Ross Hawley, general manager at Toro. “That starts with our battery-powered equipment, whether we’re talking about our removable batteries found on our walk-behind mowers and commercial handheld equipment, or on-platform battery systems featuring HyperCell found in GrandStand and Z Master Revolution mowers.”

GRANDSTAND HDM (HEAVY-DUTY MINI)

The new GrandStand HDM stand-on mower comes in 32- and 36-inch deck options that can navigate tight spaces and fit through gated areas. The compact deck design also saves trailer space, while enabling operators to complete jobs faster.

The GrandStand HDM comes with the Turbo Force deck and a flip-up utility hood provides easy access for maintenance. The single-belt drive system and sealed caster forks/wheels further minimize parts and servicing requirements. With its durable pump and wheel motor transmissions, the mower’s lifetime is extended, and its handling response is improved.

Z MASTER 4000 HDX WITH MYRIDE

The latest edition in Toro’s Z Master 4000 series offers the widest, heavy-duty deck yet, power from a 35-hp. Kawasaki FX1000 and the added comfort of Toro’s patented MyRIDE suspension system.

The Turbo Force deck made of 7-gauge steel ensures one-pass cutting and enhances the after-cut appearance through dual-capture anti-scalp rollers, a rubber discharge chute and a rugged I-beam front end. Rolling on 26-inch Voodoo Trac tires gives the operator a higher vantage point. The HDX can handle triple bagger and dump-from-seat bagger attachments.

The patented MyRIDE suspension system adjusts on the fly with shocks featuring up to 3.6 inches of travel. As an added bonus, holders for a drink or phone keep them always within arm’s reach, and onboard USB ports keep the phone charged while mowing.

TURFMASTER REVOLUTION

Every component of the new TurfMaster Revolution is made for heavy use in rough conditions. The TurfMaster Revolution has a 30-inch deck to help tackle more ground in fewer passes. Its 3-in-1 design allows operators to quickly switch between mulching, bagging or side discharge.

Three 60V Flex-Force batteries keep this walk-behind mower working for up to 80 minutes of continuous runtime, and it can cut up to an acre per charge. Those same batteries can be used in any of Toro’s Flex-Force handheld tools, snow removal or walk-behind mowers. Each Flex-Force battery is designed to run cooler, enabling all-day use without overheating. Recharging the largest capacity batteries takes just 40 minutes.

HORIZON360

Each of Toro’s new crop of mowers is Horizon360-capable. New features to Toro’s Horizon360 business management system platform include streamlined equipment maintenance tasks, ensuring smoother and more structured equipment management. Mobile invoicing and scheduling capabilities bring greater convenience to field operations, while the platform’s expansion to support Canadian French extends its reach to a broader audience. Adding Horizon360 to a company’s arsenal can improve accuracy and precision when budgeting.

Hustler debuts X-Ride zero-turn mower

Hustler Turf launched its latest zero-turn mower, the X-Ride, at Equip Exposition in Louisville.

The new X-Ride is equipped with “Custom Ride Technology,” an isolated operator suspension platform designed to deliver a comfortable ride for the operator even while on rough terrain. The platform absorbs up to four inches of travel and has five levels of adjustability for the operator to find their comfort preference. For added comfort, the X-Ride is designed with a bolstered, high-back seat with padded armrests. With a 60-inch VX4 deck, the X-Ride delivers a quick, clean and professional cut, perfect for large areas of turf. The X-Ride also features a 12-gallon fuel tank, flip-up seat pan, removable floor pan and toolless removable pulley covers.

The X-Ride will be available beginning in 2024 exclusively through Hustler dealers.



Ferris iCD+ cutting system

Ferris Mowers has taken its iCD cutting system and upgraded it for better efficiency and cut quality. The new iCD+ cutting system, launched at Equip Exposition, will be available on Ferris units this fall. The new system will be available on the Ferris ISX 800, ISX2200, ISX3300 and ISX6200 zero-turns, as well as the Ferris Z2 and Z3X stand-on units.

The system includes a new baffle design and increased blade overlap, which creates more vacuum, pulling the grass up for an improved cut. In addition, a wider exit chute reduces the grass buildup that causes



mowers to bog down. The iCD+ system comes in both 72- and 60-inch deck sizes with plans to expand to smaller deck sizes next year.

The new offering also adds to the durability of the mower with a reinforced rounded trim edge that resists cracks and deflects impact. The iCD+ system also introduces an anti-scalp wheel that is attached with a bracket, instead of being welded on, making it easy to replace if damaged.

Stihl showcases new mowers at Equip Expo

Stihl debuted its new line of battery-powered zero-turn mowers at Equip Expo. The Stihl RZA 748, RZA 752 and RZA 760 battery zero-turn mowers boast all-day runtimes and commercial-grade features with quiet and exhaust emissions-free operation.

Stihl also introduced gasoline-powered walk-behind mowers to the U.S. market with four models — RM 655 V, RM 655 VS, RM 655 YS, and RM 756 YC. These models boast many features, including:

- An easily adjusted mono-comfort handlebar that offers direct access to the grass catcher and easily folds for convenient transport and storage.
- A spring-assisted, single-point height adjustment offers seven cutting height options.
- A Kohler engine with a cast-iron cylinder liner provides powerful performance with durable engineering.
- The easy-to-clean polymer grass bag and the clamshell design makes emptying easier.

The RM 655 VS, RM 655 YS and RM 756 YC also feature a blade brake clutch that allows operators to keep the engine running for intermittent stops such as emptying the grass catcher.

“This is a pivotal moment in our company’s history,” said Chris Keffer, president and CEO of Stihl Inc. “We are making massive investments in battery technology, while also continuing to fully support the sustainable and environmentally friendly advancement of our gasoline-powered products to meet the demands of our customers who want the ability to pick their power source based on the application.” **SFM**



Grand Plaque recipients announced at 2023 NRPA conference

The American Academy for Park and Recreation Administration (AAPRA), in partnership with the National Recreation and Park Association (NRPA), announced the 2023 Grand Plaque recipients in the National Gold Medal Awards for Excellence in Park and Recreation Management. Musco Lighting, LLC serves as the award sponsor.

Founded in 1965, the Gold Medal Awards program honors communities in the United States that demonstrate excellence in parks and recreation through long-range planning, resource management, volunteerism, environmental stewardship, program development, professional development and agency communications. Nominations are separated into six classes, with five classes based on population and one class for armed forces.

The following agencies received the Grand Plaque award October 11, in Dallas, Texas, at the 2023 NRPA Annual Conference:

- Class I (population 400,001 & over): Virginia Beach Parks and Recreation, Virginia Beach, Virginia
- Class II (population 150-001 – 400,000): City of Plano Parks and Recreation Department, Plano, Texas
- Class III (population 75,001 – 150,000): Champaign Park District, Champaign, Illinois
- Class IV (population 30,001 – 75,000): Hoffman Estates Park District, Hoffman Estates, Illinois
- Class V (population under 30,000): Cullman Parks, Recreation, and Sports Tourism, Cullman, Alabama
- Armed Forces Recreation: Naval Air Facility Atsugi, Kanagawa, Japan
- State Parks: Texas State Parks, Austin, Texas

Agencies are judged on their ability to address the needs of those they serve through the collective energies of community members, staff members and elected officials. Each of these recipients received the Finalist Plaque in their category. For the Grand Plaque round of judging, each Finalist submitted a five-minute video that supports their application and the judges reviewed progress on the agency's strategic plan.

Bill Dunn retires from DLF

DLF announced that seed industry veteran Bill Dunn will retire at the end of 2023.

Dunn has been instrumental in the evolution of the company in North America, starting with Seed Research of Oregon 23 years ago in the aftermath of the ABT bankruptcy. As a sales leader, he led his groups through several acquisitions while continuing to build presence in both domestic and international markets.

"I am proud that Seed Research of Oregon remains a valued brand within the DLF portfolio and is supported by the most knowledgeable group in the industry," said Dunn.

Dunn originally planned to retire in 2022, but eventually agreed to stay an extra year and help lead DLF's bentgrass production in the Willamette Valley.

"Building relationships is essentially a sales function, whether it's with customers or growers. You need to figure out the best way to communicate with people, and be responsive, honest and respectful," said Dunn.

Dunn has been a leader throughout his career, not just within DLF but the seed industry. He is a past president of the Atlantic Seed Association (2001), Oregon Seed Trade Association (2011) and Oregon Seed Council (2013). He began his career with eight years in sales at Rockland Chemical covering New York and New Jersey, before becoming sales manager for Lofts Seed. Five years later, Dunn joined ZAJAC Performance Seed, where he worked five years as national accounts manager before returning to Lofts Seed, which had been purchased by ABT, the company that sent him to Oregon.

Knowing DLF is in good hands made the decision to retire much easier. Dunn pointed to improved turnaround times for customers and a renewed focus on the entire supply chain as positive signs for the future.

"The recent investments by DLF have been strategic, and the new leaders' approach shows everyone is valued. I feel confident about the company going forward," said Dunn.

DLF thanked Dunn for his many years of service and wished him a happy retirement.



Bill Dunn

Chip Halderman joins Turf & Soil Diagnostics

Turf & Soil Diagnostics added Chip Halderman to its staff as a consultant. Halderman will be responsible for performing soil testing, analyzing data and preparing test reports, and providing customer service and consultation.

Before joining Turf & Soil Diagnostics, Halderman served as superintendent at The Orchards Golf Course in Lawrence, Kansas from 2019-2023. Specifically, he managed golf course operations and staff, including keeping top quality course conditions, and planning and scheduling maintenance activities according to assessment and agronomic needs. Prior to working at The Orchards, Halderman held various laboratory positions with responsibilities including sample testing and personnel management. He has degrees in Sports Turf Management and Biological Sciences, and is a Class A Superintendent.



Chip Halderman

DuraEdge adds Mike Williams

DuraEdge Products announced the addition of Mike Williams, who took over sales in Florida and the surrounding areas.

Growing up in Athens, Ohio, Williams began working on ballfields at the age of seven. In high school he helped prepare the baseball field for games at Athens High School.

Williams stayed in Athens to study at Ohio University and walked onto the baseball team as a catcher.

Following graduation, he became a graduate assistant for baseball with the hope of becoming a college baseball coach. Due to coaching limitations in the NCAA, Williams decided to take up groundskeeping.



Mike Williams

“It hurt initially, but when I thought about it, I knew it was something I enjoyed and was good at,” Williams said. “Fast forward five years and I was the first head groundskeeper for the Tampa Bay Rays.”

Williams had his first professional job in 1993 and made it to the big leagues in 1998.

NFL announces crowd-sourced challenge to improve safety, consistency of playing surfaces

The NFL announced the HealthTECH Challenge I, a crowd-sourced challenge to accelerate innovations that can help make playing surfaces more consistent and safer for players.

Held in partnership with Football Research, Inc. (FRI) and Duke Biomedical Engineering (Duke BME), the Challenge invites submissions that address several possible elements of natural and synthetic playing surface safety. These include:

- New or improved field maintenance techniques.
- Equipment that reduces variability across the surface and/or over time.
- Methodologies to prolong the viability of natural grass surfaces in NFL stadiums.
- Topical treatments for synthetic surfaces that improve traction for players.
- Equipment to protect playing surfaces during non-sporting events.
- Field usage monitoring technologies.

HealthTECH Challenge I will provide up to \$100,000 to entrants with ideas that further improve the safety and consistency of playing surfaces. The individuals or groups who submit projects that are selected for funding will have the opportunity to work with an expert support team to further develop their concept and plan for creating a finished product.

In addition to companies that currently specialize in playing surfaces, the challenge is open to submissions from companies and new ventures from outside the surface industry, including representatives of academic institutions, design houses and other entities that specialize in engineering, advanced manufacturing and material science.

The submission window is open Nov. 16, 2023, to Feb. 20, 2024, and applications can be submitted at <https://www.grantinterface.com/Home/Logon?urlkey=duke>.

“Our goal for this challenge is to generate fresh and creative ideas to complement our ongoing efforts to create the best possible playing surfaces for NFL players that is consistent and safe,” said Jennifer Langton, senior vice president of health and safety innovation at the NFL. “Crowd-sourced challenges like this one are a unique opportunity to tap into a wide range of expertise and make the game safer for players on the field.” **SFM**

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JOHN DEERE

Infield Grading

Q: How often should our infield skin be laser graded?

A: The short answer is every year if you can afford it or every two to three years if you're on a tighter budget. The more informed answer is that it depends on the level of use, because the more a field is used, the more it needs to be maintained. As my friend Ryan DeMay always says, "field usage and field maintenance are directly proportional." High-usage and high-profile infields would benefit from being laser graded each year, moderately used infields every two years, and lower-use infields every three.

Above all, grading needs to be done when it's needed, and it should be agreed by all parties involved that it is a standard part of the maintenance program. That is sometimes a difficult message to convey, because people typically rate the quality of a field on the turfgrass area, but the skin is where most of the game takes place.

Laser grading is highly recommended because it uses machine-controlled components to establish tighter tolerances for slope or finish grade. Rough grading or hand grading cannot achieve the same results. Laser grading is the process of leveling the skinned surface to a desired gradient/slope by cutting, filling and smoothing the soil. Laser grading establishes surface elevations through the process of moving soil within a given area using a machine equipped with an automated blade.

A properly graded infield provides a smooth surface for athletes and prevents athlete injury from falling, tripping or bad ball bounces/hops. From an agronomic standpoint, a properly graded infield will shed surface water and not puddle or become waterlogged. Nobody wants to cancel games because of standing water. Even if a high-quality, engineered infield soil mix has been installed, the infield will fail if it is not properly graded and can shed surface water.

The effects from laser grading are not permanent. During the playing season, the skin will be subject to wear and tear. To manage wear throughout the playing season, infields are groomed/dragged to maintain surface smoothness and playability. Conditioners such as calcined or vitrified clays are also added throughout the playing season. Infield mix may be added to low spots. Pitching mounds are repaired after each game.

Bases are sometimes removed before grooming, and high-traffic areas will get worn away. All of this contributes to physical changes to the skin over time. This is why grading is something that should be part of the annual or biennial budget.

The standard slope of a skin infield is 0.5 percent. This will ensure that there is water movement off the playing surface. A slope greater than 0.5 percent could result in loss of infield soil material and conditioners. The pitcher's mound is the highest point of the field (approximately 15 inches above home plate and the baselines), and the remainder of the field slopes away in all directions. The infield should be higher than the rest of the field. Since the skinned area will drain poorly due to the engineered material, there must be a positive surface drainage grade. All slopes should have a continuous even grade. The key is to have it sloped toward the foul lines instead of the outfield. If it slopes toward the outfield, it will drain slowly and could create a buildup of a lip on the crown area. On softball fields, the infield should be the highest point on the field. The outfield should then slope away from the infield at a 1- to 1.5-percent slope.

Not all laser grading equipment is created equal. Most laser sources will lose accuracy, so the quality of the equipment and the operator is important. Read SFMA's "Laser Grading Sports Fields" to familiarize yourself with the process. When seeking a quote from a local contractor to laser grade the field, make sure that all important tasks are included: (1) Edging — keep skin:turfgrass interfaces clean, crisp and with no lip buildup, (2) field size and dimensions should be maintained or corrected, (3) make sure soil amendments added during the season have not adversely affected the grade, and (4) pitcher's mound, home plate and bases are all positioned correctly. **SFM**



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