

**THE SPORTSTURF INTERVIEW:** ERIC FASBENDER, CSFM  
**BATTLE BURNOUT:** ADDRESS 6 MOTIVATORS FOR ENJOYING WORK

SPORTSFIELD AND FACILITIES

MANAGEMENT

May 2015

# SportsTurf

Field of the Year

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SPORTSPARK**  
WAUKEGAN, IL

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**GUIDELINES**

For Employee Documentation

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**MANAGING  
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Noel T. Brusius of Waukegan (IL) Parks, says a testament to his sound maintenance and programming working together is that an average of 2,000 games are played annually at his SportsPark softball fields.



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# INTRODUCING "THE INTERVIEW"

**Eric Schroder**  
**Editorial Director**  
 eschroder@specialtyim.com  
 717-805-4197



In our March issue this year we began a new feature, The *SportsTurf* Interview.

Our first subject (victim?) was Mike Schiller, CSFM, who is mostly retired and says his most important job today is being Grampa. His perspective on both the history of the Sports Turf Managers Association and the sports turf industry makes for interesting reading.

In April we caught up with Dale Getz, CSFM, CSE, another long-time STMA member who currently is the sports turf sales manager for The Toro Company after spending 17 years as athletic facilities manager at Notre Dame.

This month we hear from Eric Fasbender, CSFM, sports turf manager for Louisiana State University (see page XX). We hope you are enjoying these up-close looks at these industry notables.

During our process of finding interviewees, I exchanged emails with Dr. Gil Landry of the University of Georgia, former extension agent and researcher, as well as a former STMA president and Founders Award winner. He gave permission for me to share these comments below on the organization's founders:

"Twenty-five years ago we could see this day coming if we could just hold the program together and stay focused on what was most important to industry. Thankfully, the leaders of STMA have done that and more. Many individuals played important roles during that time, but three really stand out to me.

"Dr. Jim Watson, what a great person, scientist and facilitator. He had all the tools and he used them to improve our industry

and its people. I'm certain he was instrumental in getting Toro to associate with the industry, an association that has lasted many years and benefitted many practitioners.

"Then there was a guy who was just as visible and accomplished in his own right, Mr. Super Bowl Field, George Toma. He is still going today and using his pulpit to set an example of how to handle authority. I believe his message has always been that his role in "the big dance" and any event he was associated with was just as important as anyone else's. George, like Jim, always seemed to avail himself to support STMA and I think that was invaluable. These two men are icons in Sports Turf. They brought a significant level of "legitimacy" and set great examples for the industry.

"There is other contemporary of mine, a "younger guy," Steve Wightman. Steve was very visible in his own right and I will guess no one has spoken at the annual conference of STMA more than Steve. That in itself is an example of how he was so willing to share his experiences with others. It takes a special person to be focused on managing turfgrass in a high-profile situation but be willing to develop educational materials and then do a great job of presenting their material.

To borrow a term from Toma, these people all have/had the "and then some." To me, that is/was a vision and willingness to exceed the "expected" in their job and do more; they sacrificed self for the big picture. This industry has many people with this quality, a willingness to be personable and share because they truly believe sharing is a responsibility to their profession. And that really makes the Sports Turf industry unique." **ST**

## SportsTurf

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**STMA OFFICE**  
 805 New Hampshire Suite E  
 Lawrence, KS 66044  
**Phone:** 800-323-3875 **Fax:** 800-366-0391  
**Email:** STMAinfo@STMA.org  
**www.STMA.org**

**EDITORIAL**  
**Group publisher:** David Voll  
**Editorial Director:** Eric Schroder  
**Technical Editor:** Dr. James Brosnan  
**Art Director:** Brian Snook  
**Production Manager:** Karen Kalinyak

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**Reprints**  
Robin Cooper  
rcooper@specialtyim.com

**Group Publisher**  
David Voll  
dvoll@epgmediallc.com

**Account Representatives:**  
**Chris Pelikan**  
Senior Account Manager - East  
Phone: (954) 964-8676  
cpelikan@epgmediallc.com

**Peggy Tupper**  
Senior Account Manager - Mid-West  
Phone: (763) 383-4429  
ptupper@epgmediallc.com

**Leslie Palmer**  
Senior Account Manager - West  
Phone: (248) 731-7596  
lpalmer@specialtyim.com

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# WE'RE ALL IN THIS TOGETHER

**Allen Johnson, CSFM.**  
johnsona@packers.com



**O**ne of my favorite lines is, "They don't know that they don't know." Think of all the scenarios that play out daily with that phrase in mind. People often make off-the-cuff statements as if they were factual when in reality they may have no idea what they are talking about. It's funny when you overhear someone speaking about a topic that you know well firsthand, to see how an ill-informed person can massacre the story. Anyone have someone in the media make those types of comments about their playing surface?

This also happens in our daily lives when we try to make sense of what's going on in the world. Those who try to keep up on the news and current events no doubt will have formed opinions. Unfortunately, almost none of us can know the entire picture. We can only form our thoughts based on our own life experiences and the information available to us. One can only imagine how eye opening of an experience it must be to become the President of our nation and learn about all that is classified. Maybe it's good to not know everything, which lends itself to another very true phrase: "ignorance is bliss."

What does all of this have to do with the Sports Turf Managers Association? When I first joined the association it seemed there was an unwritten code of conduct that addressed both of these phrases. It was part of our culture that we would not make comments about a peer in our industry or

their fields. We also wouldn't judge their abilities or disparage them in anyway. It not only fit with our theme of being a professional, but it also made logical sense. How could any of us speak intelligently about someone else's work situation or their abilities unless we wore their shoes?

Enter the social media phenomenon over the past few years that seems to invite emotional, ill-informed comments and it is easy to see how an association's professionalism could start to diminish. Fortunately, the vast majority of our membership's interactions are overwhelmingly positive and supportive, but I'm bringing up this topic because I've started to witness a few instances creeping into our association that have been the opposite in nature.

The business of our association and its members is to constantly promote professionalism and the growth and betterment of the sports field manager. It is our responsibility to lift each other up rather than tear each other down. It is with this type of spirit that the association began our roots.

Though we may have disagreements in the family about how to properly maintain various surfaces or which type of surface is better, those disagreements should not take away from the professionalism in which we view and interact with each other. We can't know what we don't know, which should be knowledge enough to keep us from speaking ignorantly. All of our members are professional equals; let's continue to treat each other as such. **ST**

# GUIDELINES FOR EMPLOYEE DOCUMENTATION

■ BY CAROLE DAILY



**H**ave you ever tried to fix something and didn't have the right tool? You can try and improvise, but eventually you end up spending a lot of extra time and money to finish the job because you started unprepared and without the right tool. The same is true if you are involved in any type of legal proceedings with employees. If you don't invest time and effort on proper employee documentation to begin with, you could be spending countless hours and thousands in legal fees after the fact. Proper documentation is

one of the most important tools in an employment relationship.

Proper documentation is quite simply a requirement in today's litigious society. Most Human Resources professionals will tell you that merely "recalling" generalities of discussions or incidents are literally, "Worth the paper they ARE NOT written on." In legal circles, most attorneys would prefer one page of supporting documentation than 10,000 words of testimony. This is because many times lawsuits may not come to trial for several months or even years after an incident has occurred.

By then important details about what has happened may be forgotten or the memories of individuals can be discounted in the absence of supporting documentation. Occurrences in the employee relationship, positive and negative, need to be properly documented to help authenticate the occurrence, ensure integrity of the details of the occurrence, and complete a reliable picture of the employment relationship over time.

## GUIDELINES FOR WRITING DOCUMENTATION

When writing our final drafts of documentation, we need to keep the Guidelines for Employee DOCUMENTATION in mind:

- D- Document facts, not opinions
- O- Observations are documented
- C- Consistent
- U- Use proper grammar
- M- Measurable goals and standards
- E- Eliminate document "invalidators"
- N- Note progressive discipline
- T- Truth/accurate

### Document Facts, Not Opinions.

"Facts, just the facts." Focus on the, "Who, what, where, when, and how's" of the occurrence. Who was involved? What was discussed? Where did it take place? When did it take place (making sure to include the time and date, including year). How did this occur? Also when documenting we need to keep in mind the "audience" that may be reading this information one day; notes you may be making just for yourself or an employee's file may one day be read/used by someone completely outside of your department. This "audience" can include future supervisors (in cases of employee transfer/promotions), HR departments, government agencies (i.e., unemployment claims), or possibly even attorneys or legal



forums (i.e., discrimination cases). Make your documentation as fact-based as possible.

**Observations are documented.** Observations can be so important in conveying what was actually happening/occurring vs. imposing an “educated guess.” Instead of saying, “The employee was drunk at work,” provide the observations that made you suspect this to be true: “The employee was walking/stumbling into things, was using slurred speech, and was witnessed by two other employees (give the names), drinking beer at lunch.” Even though your suspicion is that the employee was drunk or at least drinking, without your personally witnessing this or the employee taking a breathalyzer; you cannot swear this to be true. Let your observations establish the case.

**Consistent.** Consistency is key; by investing a little time each week or every other week to update employment performance notes, supervisors can save huge amounts of time when having to compile information for probationary or annual performance reviews. Sadly, most annual performance evaluations end up being based on performance the weeks directly before the evaluation; but what about the other 10-11 months of the year? Notations/documentation statements regarding performance (positives and negatives), with dated references and specific examples of where the employee has met or exceeded goals or areas of concern will show a more accurate picture of the employee’s entire year of performance.

Another side to the “consistent” factor is to make sure you are not just keeping documentation on the “poor performer” but the entire staff. Documenting the successes of your excellent performers and being able to account for those in their formal evaluations not only shows the employee that you acknowledge and are proud of their accomplishments, but perhaps your documented notes can be used to justify raises or promotions for these employees in the future. In addition, you do not want to appear focused on the performance of just one employee; especially if this employee may fall into a protected group.

**Use proper grammar.** Again with the premise that the “audience” reading the documentation could be from HR, government agency, or even legal personnel, you want the documentation to look professional and well-written. Errors in grammar and spelling are not only embarrassing; they can actually change the meaning of the words and impact of what is being described. Spell check is a beautiful thing, but make sure to re-read for context errors and if possible have another person proof your work.

**Measurable goals and standards.** Vague goals with no measures attached are nearly meaningless since they are open to different interpretations by the employee and the supervisor. For example, if you have an employee who may not make it through their probationary because, “They aren’t meeting the needs of the job,” what does that really mean? Supervisors need to ask themselves if they have clearly defined the goals and standards of the position so that the employee can be successful. It is not enough to just tell an employee, “Do a better job at raking.” Define what

a “better job” is by giving measurable standards and guides, and make sure to put it down in writing complete with the date discussed with the employee. Set a follow-up date to meet with the employee to review if the goals/standards are being met.

**Eliminate documentation “invalidators.”** When writing documentation, make sure to NOT include the following things that can “invalidate” documentation. This includes:

- Personal opinions (just the facts!)
- Rumors or speculation about the employee’s personal life/family.
- Theories about why the employee behaves a certain way; we are supervisors not psychologists. Even if you suspect early weekend partying resulting in “Friday-itis”, focus on the number of absences and any patterns that may exist, not why you think they are happening.
- Any statements that can be construed as “discriminatory” that would include any reference to or information about the employee’s ethnic background, beliefs, medical history, sexual orientation, etc.
- Unsubstantiated accusations.
- “Always” or “never” statements. Making sweeping statements like “John is always late” will quickly be invalidated if it can be proven that John actually did show up on time, even just occasionally.

**Note progressive discipline.** Unfortunately, terminations are sometimes the conclusion of an employment relationship. The goal of any supervisor and/or HR area is that a termination should not come as a “surprise” to an employee. Noting progressive discipline refers to the documentation associated with progressive steps to encourage change in an employee’s problem behavior. Typically the stages of progressive discipline include (but are not limited to), a verbal warning, written warning, final written warning and/or suspension, and then termination. By applying progressive discipline and “noting progressions” in documentation; the supervisor/employer is better able to defend a potential unemployment or discrimination claim by showing they took multiple steps to change the employee’s behavior.

**Truth/Accurate.** Again, back to the concept that our documentation may be read one day by legal representatives who are trained to find “holes” or discount evidence based on inaccuracies, remember that the simplest error can call into question the validity of an entire report. Do not embellish or exaggerate details; simply stick with true, fact-based details and review documentation carefully to eliminate errors and ensure accuracy.

Invest the time and effort in proper employee documentation in any employment relationship you have. It can be one of the most important tools for a supervisor to do the job correctly; don’t start an employment relationship without it! **ST**

*Carole Daily has bachelor's degree in Human Resource Management from Harding University and more than 15 years experience in the HR industry. Carole consults through Daily HR Solutions, and is the wife of Darian Daily, Head Sports Field Manager for the Cincinnati Bengals. They live in Independence, KY.*





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◀ **Top Image:** Fourteen acre synthetic complex viewed southward from soccer fields. **Bottom Left:** Pop Warner football field facing east. **Bottom Right:** Soccer fields with synthetic softball field in the distance.



# MANAGING PARKS IN AN URBAN ENVIRONMENT

■ BY FRANK RAVASCHIERE

**T**he City of Long Branch is located on the Jersey shore, just south of Sandy Hook and north of the more well-known Asbury Park. As is the case with any oceanfront

resort area, summer sees a seasonal swell in the population and a strain on services.

When I began working for the Public Works Department in 1998, there

was virtually no parks maintenance program in place. Fortunately, a city councilman who happened to run the sports field maintenance facilities for Monmouth University was instrumental in establishing a bonafide Parks Department. With a \$70,000 budget, we were able to purchase Toro Z Masters, an Infield Pro, and a Workman. Previously we had used old Cub Cutters for cutting and dragging ballfields. There were no fertilization or treatment programs of any kind in place. Seeding was only something you did for bare spots in the turf. Our four-man crew began attending seminars and training sessions and I studied and tested for my pesticide license. In 2005 I was made Parks Supervisor.

Aside from the seven major parks that are maintained we are responsible for municipal buildings and grounds which include city hall, two libraries, and various riverfront areas and rights-of-way. More often than not we find ourselves scrambling to meet the high demands of recreational schedules of the various local organizations and day camps organized by the summer visitors. If we are lucky enough to acquire extra help seasonally such as college or high school students, they are usually used primarily on the beachfront only occasionally being of help in the parks. This attention given to the upkeep of the beaches also makes it difficult to manage any projects for the parks system at this time of the year. Even something as fundamental as aerating a soccer field can be difficult when all available equipment is designated to beach rakes.

In 2008 the city broke ground on a 20-acre sports complex in a riverfront area known as Manahassett Creek. The sheer size of the complex drastically increased our work load. The initial cost for first phase of construction was \$3.9



million. This would include 14 acres of synthetic fields, one of the largest on the East Coast. In addition to the synthetic components of three soccer fields, a Pop Warner football field and a softball field, there are two natural Little League fields as well as basketball and tennis courts. In 2011, a second phase was completed with a children's play area, putting greens, and a recreation and concession building complete with team rooms and a full kitchen.

In 2012, Super Storm Sandy hit. Although I was told that the synthetic field was undamaged, the debris and river reeds woven into the surrounding fence said otherwise. The synthetic turf at Manahassett Creek Park, designed for downward drainage, was devastated when the storm surge came upward, lifting the carpet off the sub-surface. Initially it was believed that the carpet could be pulled up and the sub-surface rolled and leveled. Testing revealed that the carpet was too contaminated to be re-used. Repairs were completed this past spring at a cost of nearly \$700,000.

Long Branch recently underwent a phase of redevelopment. Once vibrant oceanfront and downtown business areas had become rundown and blighted; these have been replaced with luxury apartments and thriving restaurants and shops. However, when the financial crisis hit the country, much of the revitalization of the city's downtown plans were stalled. Despite the stall, the completed redeveloped areas have been a huge success and a major revenue generator for the city. Ground is just now being broken and many run-down buildings still sit only blocks away from a resort and convention hotel and bustling beaches.

## FRUSTRATING LOW-BID PROCESS



Throughout the years a constant frustration for me in the planning, design, and construction of parks has been the low-bid process adopted by most municipalities. I'm sure many of you have experienced when the architect pays more attention to detail and aesthetics than ease


of maintenance. I have had a baseball field constructed with a street drain installed in the base line between third and home plate, with a walking path around the field where the warning track should be. When one engineer found himself with a surplus of trees, he planted them beneath larger preexisting trees!

The more subtle design flaws in an urban environment occur when fence lines and the placement of buildings and facilities obscure a clear view of less-than-desirable activities during daytime and after hours. On one particular occasion only days before a Veteran's Day ceremony we found a Vietnam War

# 2014 STMA Field of the Year

Congratulations to Jason Smith and crew at Florida Field



Two things I love about Celebration are the dark green color and the rate of recovery. We need a grass that can take a lot of abuse and recover quickly. We have high expectations and Celebration is our grass of choice.

*- Jason Smith, University of Florida  
Turf Coordinator*

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**Contractor's solution** to surplus trees: planted under existing wooded area.

memorial had been vandalized and tagged with gang signs. It took us several attempts with different cleaners and solvents and finally a belt sander to remove the graffiti. I have had many repairs done on holes made in sections of fence where nooks and crannies in the design of the fencing provide a convenient way to sneak in without using a main entrance.

In the same park vandals found it was not at all difficult to use the outside stalls on the comfort station to climb onto the roof and tear the shingle off, throwing them onto the basketball courts. Sadly, during the summer months the majority of the police patrols are focused on the beachfront and the parks take a backseat in any attention that would discourage public drinking and drug use. It's not unusual to come in on Monday morning and find litter baskets full of beer cans and bottles and empty blunt wrappers on the basketball courts.



**Grffiti** at Jerry Morgan Memorial Park located near area of redevelopment

I've made several attempts in the past few years to remedy some of these problems. Many of the older existing parks were signed off by city officials before we had a viable parks department to supply input as to design and maintenance nightmares. I now try to meet with architects and particularly contractors to give opinions and hopefully solutions to some of the everyday issues that arise. Whenever possible, I try to do walk-throughs with city officials and point out different shortfalls. I have reached out to the police department and have gotten some assistance from Urban Enterprise Unit and community service programs to address cleanups in problem areas. The Recreation Department has begun employing summer help to team up with Public Works to address the excessive litter generated by summer camps and local organizations. I have even had some success with local Eagle Scout programs looking for projects. I recently reached out to fellow New Jersey sports turf managers and am currently in the process of dealing with poorly designed ballfields at the Manahasset sports complex. They were extremely supportive, even visiting the site and evaluating existing problems with construction and drawing up a comprehensive plan for renovations. I am lucky that my crew, although small, has held on to their enthusiasm and dedication. Hopefully with the help of the community we will be able to keep the quality of our facilities up to the standards everyone deserves. **ST**

*Frank Ravaschiere is parks supervisor for the City of Long Branch, NJ and a member of the Sports Field Managers Association of New Jersey.*



# John Mascaro's Photo Quiz

John Mascaro is President of Turf-Tec International

*Can you identify this sports turf problem?*

**Problem:** Torn-up turf

**Turfgrass area:** Stadium field

**Location:** Miami, Florida

**Grass Variety:** 419 Bermudagrass

**Answer to John Mascaro's Photo Quiz on Page 17**



Background illustration courtesy of istockphoto.com



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# BATTLE BURNOUT:

## address 6 motivators for enjoying work

■ BY ERICK LAUBER, PHD

Daniel wasn't happy at work. It wasn't that he hated his job or anything like that. His co-workers were fine and he didn't mind the type of work he did. In fact, he thought he did it pretty well. Of course, he wanted more money, but who didn't? No, something else was bothering him. At some basic level he simply didn't enjoy coming to work. Whatever excitement or sense of accomplishment he used to get had been replaced by a lack of motivation.

Daniel's issue was a common one. Employees around the world sometimes lose sight of what makes their work worthwhile. They get run-down, burned out and de-motivated. At times like these it can be difficult for anyone to enjoy work and find the old levels of motivation and energy.

To help Daniel and the millions like him, it is necessary to look at the underlying causes. Why do any of us enjoy work? And can we re-ignite those causes in our own work environment? The answer is yes; there are at least six different reasons why we enjoy work, ignoring money, of course.

### INNER ACCOMPLISHMENT

The remarkable time and energy some people put in to their work can only be understood as an "inner drive"; they simply want to achieve that goal. Seeking a personal sense of accomplishment is natural and can be harnessed every day by millions of workers and employers. It can be described as "taking pride in one's work" or a sense that "this is what I was meant to do." Whether the objectives are short-term or long-term, *making progress toward a goal* makes all of us feel good.

### THE GREATER GOOD

Many of us are also motivated by a sense of community. The feeling that we are part of something larger and that life isn't just about our own individual needs and wants. This particular joy and peace is experienced by millions as they volunteer for church or service club tasks, but it can also be encouraged in the workplace. For example, it is claimed many Asian/Eastern companies reinforce this message. Clearly many Americans are also motivated by community considerations. Perhaps Daniel could be encouraged to reframe his circumstances and see how he is contributing to the greater good.

### PERSONAL RELATIONSHIPS

Many get enjoyment from the individual relationships they experience at work. It helps them look forward to each day. The laughter, the camaraderie, the forgiveness and even the occasional stress are all something they enjoy and know they wouldn't want to live without. But not everyone is the same, and certainly we're not all our best self every single day. Enlightened managers respect this basic human need to connect with others and allow it, if not encourage it, in their workplace. Has Daniel's manager given him the opportunity to connect with others? Has he diagnosed that this is something important to him?

### SENSE OF TEAM

Similarly, some people enjoy a special sense of completeness and wholeness by experiencing "team." In the workplace, many employers work hard to encourage this shared identity by conducting internal PR and messaging campaigns. For quieter teammates, a sense of camaraderie might provide an extremely important opportunity to connect and feel like they belong. Does Daniel feel he's part of a team? How much team spirit has his boss created?

### PHYSICAL EXERTION

For some, a special sense of joy comes from physical exertion, and the absence of it makes any job less appealing. It just doesn't feel like work if they aren't breaking a sweat or doing battle with the weather. This is partly a product of socialization and might be tied up with what "work" means to them. Modern day psychology re-affirms the benefits from physical labor. We all know how endorphins can give us a slight high. And everyone knows about the stress-management benefits from working out. Is getting physical a way for Daniel to battle his "lack of motivation?"

### MENTAL CHALLENGES

Finally, a great many of us enjoy the special mental feeling that comes from exercising our creativity or satisfying our curiosity. The small euphoria that comes from developing something new or conquering a complex problem can be for a big part of enjoying work for some. Does Daniel's boss know whether he's incredibly bored or frustrated by his tasks? Is it time for a promotion, or perhaps a little job engineering to offer a chance at being creative?

### "WHY" IS THE ANSWER TO "HOW"

So, what can be done more generally to help employees enjoy their work? Or what can Daniel or any employee do themselves? The answer is simple: treat the cause, not the symptoms. Instead of worrying about symptoms like aggressive behavior or poor attitude, employees and employers can create a more enjoyable work environment by directly addressing one or more of these common denominators. Why not casually interview Daniel about whether he feels connected to his fellow co-workers? Does he have any friends at work? Why not ask "Is this job challenging enough?" or "Would you like the opportunity to be more creative?" Stepping back and reflecting on each of these six motivators can guide any manager or employee toward a more enjoyable work place. There is hope for Daniel in the application of modern day psychology to the workplace.

*Erick Lauber, PhD, is an applied psychologist and faculty at Indiana University of Pennsylvania. He speaks and consults on leadership, personal growth and development, and taking charge of our own life stories. He has won 19 educational TV/film awards and has been published in numerous psychology journals and book chapters. [www.ErickLauber.com](http://www.ErickLauber.com)*



# John Mascaro's Photo Quiz

Answers from page 15

John Mascaro is President of Turf-Tec International

The torn-up turf in this photo is the result of an equestrian event called the 2014 American Invitational that was held last year at Sun Life Stadium in Miami. First the stadium hosted the Monster Jam motorsport event that includes covering the field a layer of plastic plywood and plastic sheeting, then installing thousands of cubic yards of dirt on the turf surface and leaving it covered for a couple weeks, which nicely kills the turf. After the event they removed the sod and the field was scheduled for a total rebuilding which included moving and installing new drainage lines and a newly designed irrigation system. Also new a new sand rootzone was installed and then thick cut 419 bermudagrass sod that was grown on plastic was laid.

The following week after the renovation, they hosted a "Movie Night" on the field for season ticket holders followed by a carnival for ticket members the next weekend where actual 18 wheeler carnival rides were driven onto the field on plywood paths so they could be set up. The Equestrian event started setting up about 10 days after the carnival, which included

*Continued on page 49*

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










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# BETWEEN A ROCK AND A HARD PLACE

■ BY **DARIAN DAILY**

**L**ike most of you, I love what I do for a living. I love the excitement of game day when all of the hard work, effort, stress, and preparation come together to be successful. I love the sports turf industry, working with playing surfaces, and learning everything I can about how to make them more successful. I feel supported by our industry groups where ideas are shared and people are always just a phone call away to help guide or just lend an ear.

I tell people all the time that if I could just do what I was trained to do and focus on that I'd have the best job in the world. But as any sports turf managers know, it's not that simple. Even though my degree, my experience, and my knowledge is in athletic turfs, probably only 40% of my time is actually spent in doing the part of the job I love. The majority of my time is spent stuck in the middle of this place known as "manager."

When I think of managing in today's industry, it's honestly like being stuck "between a rock and a hard place." The *rock* is the staff we manage. Our staffs are the heart and soul of our departments and in order for me to be successful in my job, I need to get them motivated, moving, and "rolling" in the right direction to get the job done. The *hard place* is upper management; the ones who determine if I am being successful as I try to meet their expectations, goals, budgets and timelines, while simultaneously trying to keep them educated/ understanding the basic properties of agronomics and why my staff and I do what we do. Between these two groups you find me, sometimes feeling like both sides are closing in tighter and tighter.

This middle ground is not exclusive to sports turf managers; it spans all

industries and shares a lot of the same stressors and frustrations. I read an article that highlighted a 2009 study performed by Randstad, an international staffing company, which stated more than half of employees say they had no desire to move into management roles.


They cited one organization where more than one-third of its engineers promoted to management jobs went back to their old roles in less than 6 months.

The study found "stress" was given as the number one reason for managers' not enjoying their jobs or for simply leaving



► **Darian Daily**, left, discussing a point with an attendee at the STMA Regional Conference in Cincinnati in 2012.





management positions altogether. They didn't like the idea of having to discipline employees, dealing with paperwork, deadlines, unrealistic output expectations by upper management, and "unworkable ranges of responsibility," often encountered by working supervisors (those expected to not only manage employees but perform tasks as well). All of these were noted as items that not only increased stress levels, but also made the individuals feel their effectiveness as managers was reduced.

As sports turf managers, can't we identify with all of these? One day you're trying to convince management on the necessity of increasing pay to attract and keep part-timers. The next day you may be trying to get buy-in from staff on a new policy/procedure that even you may not totally believe in. One day you're trying to meet management's field turnaround expectations from a late night event to a 1:00pm kick-off the next day, while at the same time trying to stagger staff to stay out of overtime and prevent everyone from being burned out and turning on each other. And this is just an ordinary week!

So as a manager, when you begin feeling a bit claustrophobic between the rock and hard place, what do you do? On any given day I may or may not feel like I've got a true handle on this; as some of you know who I've called on to "talk me down" a time or two. I definitely feel like as a manager I am a work in progress; I'm always looking to learn better supervisory techniques and improve work relationships. These are a few of the strategies I have learned thus far, and I'm open to any others that you all want to send my way.

## COMMUNICATION

It always seems to come back to this, doesn't it? But truly any investment of time or energy to keep others in the loop on the front end is well-spent verses having to back track or clean up problems caused by lack of communication. With upper management it's important to keep them informed of the good and the bad. I try to send weekly updates of what our area will be working on, what went well for us or where we've accomplished set goals, and also to let them know where we may be having some difficulty. When upper management is better informed of all we do, they can better support our department and adjust for our challenges. And the more I can communicate, inform, and educate upper management about different aspects of our industry, the better budgetary decisions they can make on large-scale projects involving our area in the future.

With staff, I know the more I communicate and inform them of all the things that are going on at the stadium, the better they operate. When staff members have the big picture of what's going on (and not just what is happening within our own department), it gives them a better informed perspective from which to make decisions. It shows them how their work can impact other departments, allows them to better use their resources like time and equipment, and allows them to make informed suggestions on how operations might run smoother. I try to incorporate stadium-wide briefings into our morning departmental meetings. At these same meetings we also discuss what each member of the team will be working on that day so if another team mem-


ber should finish their activities early they can assist someone else when needed. Better communication helps us to function more productively and cohesively as a team.

## PERSPECTIVE

It can be easy for me to get so focused on my own job and responsibilities (in and outside of work) that I can forget that I am surrounded by individuals who all have their own jobs and responsibilities that they are focused on as well. Every member of upper management to every staff person within my department; each one has things they are trying to accomplish, deadlines to meet, and responsibilities outside of work that I quite honestly may know very little about. When we take a step back to "humanize" the individuals we work with, remembering that we all are just trying our best to be successful in our jobs while balancing a work and home life, it gives us a better perspective by which to handle situations where we may not always agree. In some scenarios, the job they are trying to accomplish from their perspective and the job I'm trying to accomplish from my own perspective may cross, but when we take the time to try and understand each other's perspective it usually works out better for all parties involved. This definitely is one of those "easier said than done" philosophies, especially when egos or past negative experiences may be involved. But any time you can negotiate a win-win scenario for both parties, life and work are much more enjoyable. It may even build bridges to help in future issues that may arise.

## EDUCATION

I stated it earlier and I'll say it again: as a manager I am a "work in progress." There is always something more to be learned; whether it is ways to better supervise staff, to better communicate with upper management, to the newest strategies in turf management. I believe the better educated I am as a manager, the better prepared I am to handle the stressful scenarios associated with management. I look for opportunities to learn by reading industry articles, attending seminars, taking classes, and joining associated industry committees. The more educational opportunities I involve myself in, the more confidence I have in my day-to-day decision-making abilities as a manager. And when I run into a problem I am not sure of, I don't try to "reinvent the wheel." I belong to a supportive, tight-knit industry community where I can call other sports turf professionals who may have knowledge of or experienced the same thing and I know I can count on their help and guidance.

Between a rock and a hard place can be a difficult place to operate, but when you involve positive coping strategies like improved communication, understanding perspectives, and the preparation of continuing education, it can make the space between the "rock and a hard place" easier to negotiate. 

*Darian Daily is the Head Sports Field Manager for Paul Brown Stadium and the Cincinnati Bengals. And, more importantly, husband of Carole Daily.*



# THE *SPORTSTURF* INTERVIEW: ERIC FASBENDER, CSFM

**Editor's note:** : In the third installment of our new monthly feature, "The SportsTurf Interview," we get to know Eric Fasbender, CSFM, the sports turf manager for Louisiana State University in Baton Rouge. Eric currently serves as the STMA Student Challenge Committee chairman and has been active in the organization for many years.



Eric  
Fasbender,  
CSFM



**SPORTSTURF:** It is a long way from the Schaumburg Flyers to the LSU Tigers; what wisdom can you share with younger turf managers about being successful in the profession?

**FASBENDER:** Be active within the industry. Volunteer your time, serve on committees, share your ideas and don't be afraid to fail

**ST:** You know a lot of sports turf managers. What are they saying are the biggest obstacles to overcome for them to be successful today?

**FASBENDER:** I think many of the challenges we face are environmental factors. Water restrictions, pesticide restrictions or bans, and an increased expectation with water quality. All of these are things are challenges we face now and we will continue to face in the future if we do not adapt and try new products and practices.

**ST:** What are your biggest challenges working in the high-profile Southeastern Conference?

**FASBENDER:** Our biggest challenge at LSU is the expectations of having everything game ready 365 days a year. Our athletic fields are the easier part of that component. Meeting the expectations with our facility landscapes and hardscapes has proven to be more challenging. The other big challenge that we deal with is retaining staff. We have had a lot of talented individuals come to LSU Athletics and have made a real impact. They have shown that they can grow and learn new things and have helped to raise the bar. The problem with hiring talented people is that they move on when opportunities present themselves and I can't fault them for that. It's just something we have to contend with once in awhile.

**ST:** How has social media impacted your work?

**FASBENDER:** I will say this. It has become a blessing and a curse. If used properly, social media has given sports turf managers a vessel to show off our work and educate the public about our profession. In the past, we were in situations where we only made headlines when things went wrong. Now we have the means to put ourselves and what we do in front of the community when things are going well.

I feel the downside of social media is that our surfaces and facilities need to be perfect or close to perfect year round. You never know when someone is going to take photos and post them on a chat board without knowing the circumstances surrounding your maintenance schedule. I am thankful for the media training I have received over the years. It has really helped with understanding and managing this issue.

**ST:** What's your favorite on-field maintenance task that you still enjoy performing?

**FASBENDER:** When given the chance, I still love getting on an infield drag and picking up a 1-inch braided hose. That is where I got my start in this industry and it takes me back to learning the techniques at the University of Tennessee with

Bobby Campbell. I think one of the things that I like the most about infield skin maintenance is that, like most things in this industry, it's a science and an art. For the most part, that is like our signature as sports turf managers. You can tell a lot about a person by the way they prepare and work with clay.

**Equipment automation**, evolution of hybrid fields, and improved turfgrass varieties are just a few of the things we can look for in the next decade.

**ST:** How do you think the profession and industry will change in the next 10 years?

**FASBENDER:** One word: technology. Look at all the advancements that have been made in the past 10 years and think about what the future holds. Equipment automation, evolution of hybrid fields, and improved turfgrass varieties are just a few of the things we can look for in the next decade.

**ST:** How do you think the natural turf vs. synthetic turf issue will play out over the next decade?

**FASBENDER:** I am a great believer in history repeating itself and looking to the past to predict future trends. I think these two surfaces will ebb and flow with popularity. When synthetic surfaces first came out you saw a huge increase of artificial fields in the 70s and 80s. As techniques were refined and improved for the maintenance of natural surfaces, you saw a swing away from synthetic. In the early 2000s, with the advent of infill synthetic systems, we saw a swing back toward the synthetic side. I think that most players when surveyed prefer to play on grass and I believe that the industry has started to swing back that way again. One thing is for sure, synthetic turf is here to stay. As much as I love working on natural grass, I am very thankful for the synthetic surfaces we have at LSU. They are a useful tool that can be used in the right application.

**ST:** What are your passions and interests outside of work?

**FASBENDER:** My family is what drives me in my life. My wife, Liz, and I have been married for 14 years and we both know how to work around our crazy schedules. She coaches varsity soccer for the high school where she works so things can be hectic in the late fall and winter. My daughter, Peyton, is six and is interested in gymnastics and dance and has shown an interest in hunting. She loves being outdoors so it seems, for now; she will be coming along on more trips with me. My son, Parker, is three and loves anything that has wheels or tracks attached to it. He has acquired a vast empire of full-sized Tonka trucks and equipment and loves digging holes in our back yard. Whenever I have some free time, away from family obligations, I am headed to the woods. Deer and turkey hunting has really become a passion of mine in the past few years and I love sharing that with my family. **ST**



# SELECTING YOUR SOIL PHYSICAL TESTING LAB

■ BY NORMAN W. HUMMEL, PHD

**T**he athletes on your favorite sports team are pros. Their sport is their profession and they work full time to condition their bodies and to hone their skills so they can be the best they can be. Their teams and careers depend on it. They are not part-time athletes.

The construction of a new sports field is a major investment. The soils lab you decide to work with for your construction project will be your teammate. Why then, would you even consider someone or some company that only performs these tests on a part-time basis? Also, what assurances do you have that the lab you are working with is even

qualified to perform the testing required for your project?

I have wanted for some time to write an article explaining what lab accreditation is and what it can mean to those who require soil physical testing. Now that I am out of the testing business, I feel free to do so without giving the impression of promoting my own business.

Whether the field is sand- or soil-based, testing the physical properties of the soil- or sand-based mix is a key component to the field's success. In the case of the soil-based field, it may be just a matter of finding out the soil texture and organic matter content to provide you or the owner with some reasonable

expectation of how the soil and field will perform. The testing may provide some guidance on how to improve the soil with amendments.

The sand-based field requires more extensive testing. Soil physical testing of the sand-based mix and under drainage stone materials is a risk assessment. Rootzone mixes that meet certain particle size and performance properties have a much higher probability of succeeding. If an experienced testing provider is involved, it can go beyond just this "risk assessment" to the point that an optimum mix can be identified with the construction materials available.

The test methods used to evaluate mixes can be found in the American Society of Testing and Materials (ASTM),



so they are available to anyone who wishes to purchase them. It is important to understand, however, that not all labs are equal even though they may be performing the same tests.

In the 1990's the USGA developed new guidelines for greens construction and the test procedures supporting the guidelines. These ASTM procedures are still used today for the evaluation of sand-based rootzone mixes. The USGA also felt that there was a need to involve a 3rd party accreditation organization to recognize soil physical testing laboratories that meet international standards for testing laboratories. Since 1995, the American Association for Laboratory Accreditation (A2LA) has been accrediting labs performing soil physical testing of greens and sports field mixes. To this day the USGA will not recommend a lab unless they achieve A2LA Accreditation.

Accreditation by A2LA is a rigorous program that requires laboratories to follow strict quality control protocols. The checklist of required items is more than 40 pages long and includes traceability of every single measurement in the lab to a national calibration standard (National Institute of Standards and Technology standards). Labs are required to have assessments done every 2 years by outside A2LA assessors who examine among other things, equipment, calibration records, training records, and the test procedures being performed by lab technicians.

In addition, all accredited labs are required to participate in proficiency testing (PT) programs for all of the test procedures they are accredited for. A PT program is one whereby rootzone mixes or other samples are sent by a PT provider to all participating labs for testing. There is a PT program specifically for sand-based mixes; that program originated at Colorado State University. The test data is sent back to the PT provider, analyzed, and compared to that of all of the participating labs. If any of the 69 test values submitted by a lab deviate from the median of all participating labs by some set amount, that lab is issued a warning for that test. The lab is then required to perform an investigation on that deviation and to correct the problem, if one exists.

Minimally, any lab that performs physical testing on sand-based rootzone mixes should be participating in a PT program. If not, there is absolutely no way they can validate the accuracy of their test data. Their data could be way out in left field without the lab or their clients even knowing it.

Lab accreditation is very expensive for those labs that participate in the program. As the owner of a lab that was accredited for 18 years, I often looked at the cost/benefit of the program. Strictly from a business standpoint, it made little sense to maintain accreditation since it is unlikely that it resulted in any significant increase in business. Where I saw the most benefit in accreditation, however, was in my confidence that our data was good data. I also felt that the data from an accredited lab would be more defensible than a non-accredited lab should the data ever be called into question in a legal dispute. I can envision a good attorney easily discrediting the data from a non-accredited lab, especially if that lab does not perform the tests regularly or

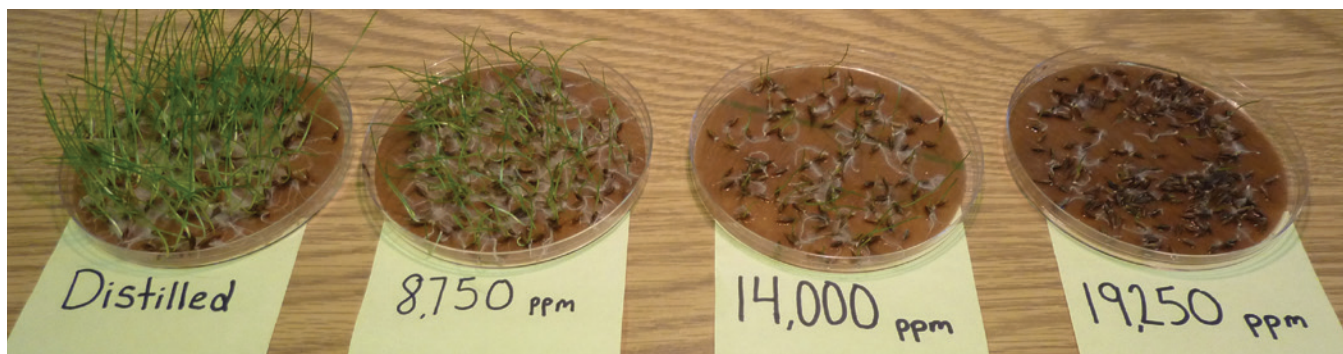
if theirs is a part-time test lab in the basement or garage of their home. Accreditation not only offers some protection to the lab, but also to the contractors or suppliers that use a lab, and certainly the designers that specify an accredited lab.

An oft-misunderstood requirement for accreditation is a minimum educational/experience level for staff. I stress the term "minimum." While all accredited labs perform the tests the same way, the level of agronomic expertise within the lab to interpret test results and make recommendations will vary among labs. Most labs are adequately staffed in this regard to compare test results to a construction specification. It will be in cases where the project is more complicated that differences in agronomic expertise will separate out the accredited labs.

No professional sports team would bring an unqualified wannabe off the streets onto their team to save a few bucks. Selecting a soil physical testing lab that is accredited provides you with some assurance that your team mate is a pro and qualified to properly carry out the testing you need. [S1](#)

*Dr. Norm Hummel owned and operated Hummel & Co. Inc laboratory for 20 years and now works as an independent soils consultant. The former Hummel & Co. lab now operates as Turf and Soil Diagnostics with labs in Linwood, KS and Trumansburg, NY.*





# ALL VARIETIES ARE NOT THE SAME WHEN IT COMES TO SALINITY

■ BY JAMES W. CROSS

Turfgrass covers more land in the continental US than the next 10 agricultural crops combined; approximately 40,000,000

acres of turf covers 1.9% of the total land. This fact, coupled with turf's relatively high water demands and the perception it is a purely aesthetic crop, make it a common target for water restrictions. While water

▲ Tall Fescue Seedlings of a single variety 14 days after planting

restrictions can make managing high-quality turf more difficult, they do not make it impossible.

Restrictions come in various forms, but they often will limit both the timing and the amount of irrigation that can be performed using potable water; however, they do not normally restrict irrigation with effluent or grey water. These unrestricted water sources provide turf managers options beyond simply allowing their turf to suffer when water restrictions are initiated. Additionally, effluent water is usually far cheaper than potable water. While effluent/grey water irrigation is a very important tool for turfgrass managers faced with heavy constraints on irrigation, its use does not come without concerns of its own. The use of effluent and reclaimed water for irrigation is regarded by health authorities nationwide as being harmless to humans; however, due to the salts that they often contain they can cause a bevy of harmful effects for turfgrasses and soils. Knowing what issues that irrigation with saline water can cause and how these issues can best be managed can mean the difference between effluent water being your biggest asset or your worst enemy.

While the levels of salts present in effluent water vary, it is important to understand that even when using water

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with relatively low levels of salts, issues can arise. Repeated light irrigation using water even with small amounts of salts can lead to a buildup of salts in the soil profile and without a very deep thorough watering to rinse the soil profile, salts will continue to accumulate with each watering.

Though irrigation with effluent or other low quality water is a common cause of salinity issues, there are a number of other ways that salt levels can become a concern for turf managers. Salts can build up along from ice melts used in winter months, or from runoff from improperly applied fertilizer. In both of these cases, runoff into irrigation ponds can transform the issue from an isolated concern into a more widespread problem. In addition to man-made salinity issues, high levels of salts can occur naturally from ocean spray, saline ground water intrusion, or simply from dissolution of natural minerals in the environment. It is estimated that almost 5,000 acres of irrigated land is degraded by salt every day, and that this has been occurring at this rate for more than 20 years. This leaves us today with an area about the size of France (153 million acres), effected by salts. This is up 38% from the level in the early 1990's.

When turfgrasses are grown in saline environments the salts have a litany of detrimental effects on them. Irrigation with saline water can denature plant proteins, weaken cell membranes, inhibit respiration and photosynthesis, and even restrict plants' ability to take up available water in the soil, a phenomenon known as "physiological drought." All of these issues will combine to stress the turf, stunt growth, and cause an overall thinning of the stand.

Depending on the level of salinity and the species and variety of grass used, these effects can range from minor and manageable to catastrophic. While salts will affect all turfgrasses eventually as salinity levels increase, there is a great deal of variation between species in their ability to grow in saline environments. In addition to variation among species there is also a great deal of variation observed within each species.

#### **BREEDERS WORKING ON IT**

The goal of turfgrass breeders is to develop the best possible varieties that are able to meet the specific needs of the end user. One of the ways that we work to do this is to develop varieties that can thrive when conditions are not optimal, such as environments with high levels of salts. The first step in the process of producing varieties that are capable of growing in locations effected by salts is examining how current varieties perform while experiencing salt stress.

Recently, a survey of 37 perennial ryegrasses, 44 tall fescues, and 41 fine fescues was performed. This analysis of salinity tolerance began where all turf begins, at germination. Seeds were germinated on germination paper saturated with water ranging in salinity from distilled to 15,750 ppm total dissolved solids (TDS) (15,750 ppm  $\approx$  45% salinity of seawater). While salinity levels in effluent irrigation water would likely never reach these levels, overtime salts can build up in the soil to significantly higher than that of the water that is being used to irrigate.

These studies found that increased salinity levels lengthened

the time that it took for seeds to germinate. Perennial ryegrass seeds in the distilled water treatment took only 4 days for more than 2/3 to germinate (coleoptile extend from seed) compared to 8 days for those in the highly saline water treatment (14,000 ppm TDS  $\approx$  40% salinity of seawater). Tall fescue exhibited a similar germination inhabitation with over 80% germination after 8 days in the distilled treatment compared to 19 days in the highly saline treatment (15,750 ppm TDS  $\approx$  45% salinity of seawater). Germination inhibition was comparable for fine fescues, which as a whole, took 16 days for half of the seeds to germinate in the highly saline treatment and only 6 days for over half of the seeds to germinate in the distilled treatment.

In addition to slowing the overall rate of germination, salts also negatively affect the total number of seeds that germinate. As a group, the total germination of all entries in the perennial ryegrass study was 94% in the distilled water treatment. This was significantly greater than the 72% observed in the highly saline treatment. Similarly, total germination of tall fescues in the distilled water treatment was 91%, compared to only 80% in the highly saline treatment. Total germination in fine fescues also dropped from 85% in the distilled water treatment to only 67% in the highly saline treatment.

Differences among fine fescue species were also observed. Hard fescues and slender creeping red fescues exhibit the smallest germi-

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nation inhibition with only 12% and 15% declines, respectively, in overall germination under the highly saline treatment. Chewings fescues were the most salt sensitive of the fine fescue species with a more than 30% drop in total germination in the highly saline treatment compared to the distilled water treatment.

Varietal differences in germination within species were also very evident in the highly saline treatments. Perennial ryegrass varieties exhibited a range from less than 1% to more than a 60% reduction in total germination. In tall fescues, varietal differences ranged from having no decrease in total germination to a 38% reduction. Fine Fescues also varied greatly ranging from no decrease to a 58% drop in total germination. Of the perennial ryegrass varieties tested those that showed little reduction in germination under saline conditions were Stellar 3GL and Apple SGL. Top performing tall fescue varieties included Black Tie and Firecracker SLS. Beacon hard fescue and Navigator II strong creeping red fescue demonstrated the least germination inhibition of the fine fescue varieties tested.

While germination under saline conditions is very important, and has been shown to correlate positively with salt tolerance as mature turf, this germination survey is only the first step in the development of more salt tolerant varieties. It is important to also evaluate selections as mature plants. The highest performing varieties of each species for germination under saline conditions were selected for use in our breeding program. Seed from these sources was sown into trays and irrigated with highly saline water. The most rapidly germinating 10% of seedlings were individually planted and grown to maturity. Once mature, these entries were watered with overhead sprinklers applying highly saline water. Plants were rated for their ability to stay green and continue to grow while being irrigated only with saline water. The top performing plants from this mature plant screening that also exhibited dark green color and fine leaf texture have been selected and are being used to develop high-quality turf-

grass varieties able to survive and thrive even in highly saline environments.

Using varieties developed for increased salinity tolerance can help turf managers cope with irrigation restrictions, low quality water, and naturally occurring saline environments. As water restrictions and salinity issues continue

to become more prevalent it is becoming increasingly important for turf managers to understand the problems that they can cause, but also realize that with the proper tools and know-how, high-quality turf is achievable. **SI**

*James W. Cross is the plant breeder for Peak Plant Genetics, Albany, OR.*

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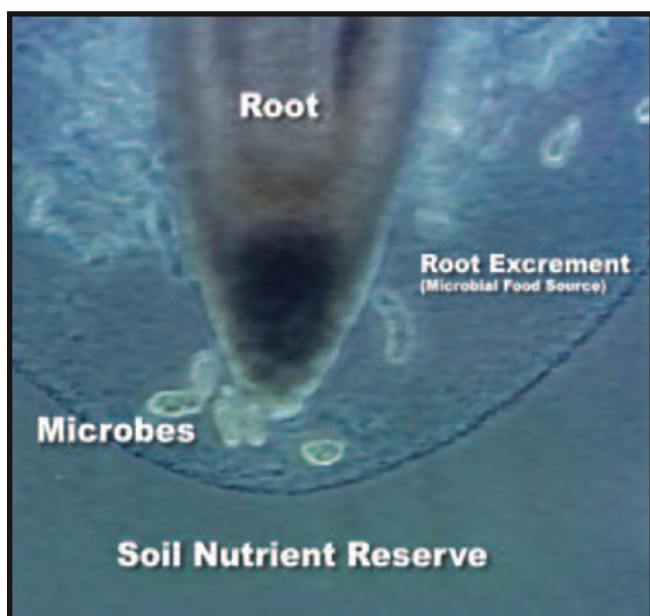
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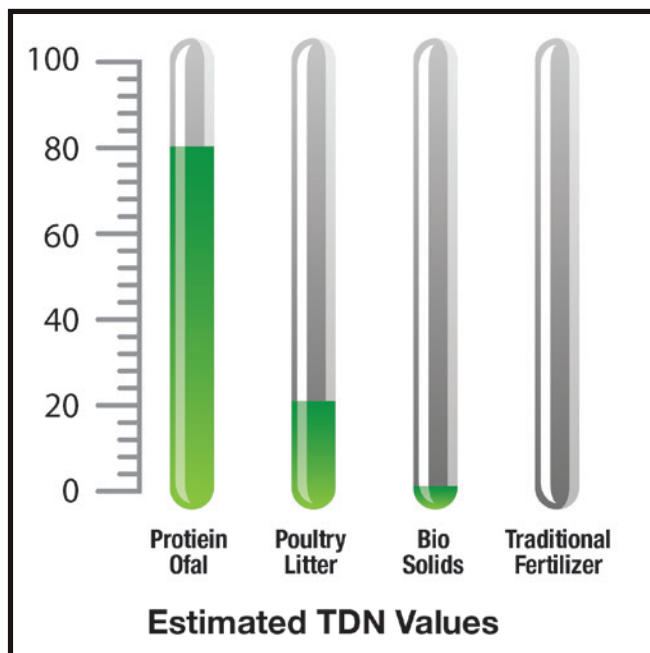
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# BUILDING QUALITY TURF STARTS WITH HEALTHY SOIL

**Editor's note:** This article was written by Len Conley, the owner of The Sanctuary Products. Conley has nearly 40 years of experience in all aspects of turfgrass management. He has provided agronomic consulting to many sports turf managers, lawn care companies, and golf course superintendents.



▲ Microbe



▲ Protein Ofal TDN

■ BY LEN CONLEY

**A**s an industry, we are expected to deliver outstanding turf quality and resilience in all types of weather. Over the years, there has been improvement in many of our traditional products such as seed, fertilizer and pest management tools. Yet, we at times still struggle with the same turf related problems. We often ask, "Is there an alternative way to manage some of these same turf stress and disease problems?" The answer is yes; there are biological tools that add new dimensions to managing these same old problems. And, it all begins in the soil.

Over the past 25 years, there have been huge strides in the development of biological products that offer new sustainable methods to solve every day turf problems. We can continue to rely on traditional methods that tax our natural and financial resources or, we can integrate some of these new biological approaches that provide differences:

- A more natural nutrient management approach that reduces our annual usage rates while enhancing plant resilience and quality.

- Products that complement Mother Nature's approach to plant health, which are built on more cost effective sustainable methods.

- A water and nutrient conservation program that squeezes more efficiency from fewer resources and offers budgetary savings.

In short, there are new biological products that can play a key role in managing high quality turf while reducing water and nutrient usage. These biological products will deliver the agronomic, economic and environmental benefits that exceed budgetary expectations. These budgetary savings help to stretch your water, fertilizer and pest control dollars. These biological products are much more than a fertilizer. These natural and organic products will influence the physical and biological make up of the soil and the turf.

As we move forward into the 21st century, we need to explore ways to develop more sustainable approaches to nutrient and water management. With an increase in turf quality expectations, we need to consider alternative methods that provide for the sustainable future of our industry. This includes the integration of more efficient delivery methods that are biologically based. These biological methods are safe, effective and sustainable long into the future generations.



## IT STARTS IN THE SOIL

In the soil, microbes deliver nutrients to the turf. These microbes release nutrients that are locked in the organic matter, in the soil profile or from all fertilizer products. Microbes need nutritional energy to multiply in the soil. In the past, this energy came from rich organic matter in the soil. Today, our sand-based systems lack this energy reducing nutrient efficiency.

Natural fertilizer products contain both nutrients for the turf and nutrition for the soil microbial population. These natural products contain an energy level to build microbial populations that effectively deliver turf nutrients. Organic performance is all based on their energy value. Not all natural products deliver the same nutritional energy level for microbial stimulation.

This energy value can best be defined by its “Total Digestible Nutrient Value” or TDN Value. The TDN Value estimates the energy derived from a natural fertilizer product. A high TDN Value translates into increase microbial populations and microbial biodiversity. Microbial biodiversity assures a competitive balance in the soil to deliver nutrients and combat agronomic problems like wear, stress and disease management.

This competitive microbial balance promotes overall soil health and turf quality. Soil health is a key to reducing agronomic issues and promoting more sustainable agronomic solutions. Natural biological solutions deliver energy to the soil, which increases microbial populations. These microbial healthy soil systems help to improve nutrient uptake. The soil microbes:

- Assimilate nitrogen into their bodies reducing nutrient leaching
- Are mini bags of fertilizer, which reduces the amount of required fertilizer
- Mine nutrients from the soil unlocking stored nutrient reserves.

The science is simple: Natural products increase the soil microbial populations that promote a natural sustainable approach. This reduces the amount of nutrients needed without jeopardizing the turf and plant health, nor negatively impacting the environment.

## MICROBIAL ROLE IN TURF RESILIENCE

The soil microbial populations play several key roles in nutrient management and turf resilience. In fact, the turf excretes an energy rich food source from the root to colonize microbes along the root system. These microbial populations play a critical role in moving nutrients into the turf.

This interaction between the root and microbes plays an essential role in overall nutrient uptake. This process is critical for turf quality and resilience. Without this interaction, the turf can be prone to more stress and disease related problems. Biological nutrient products provide the food energy to build and enhance the overall soil microbial populations.

A bio-nutrient management approach builds overall soil microbial populations while enhancing nutrient release; enhances the competitive microbial balance that improves stress tolerance; and combines natural and traditional nutrients to reduce overall fertilizer costs.

Microbial life provides the immune system that manages average levels of stress and disease problems. Research shows that chemical solutions can negatively impact this natural microbial balance by reducing this soil health balance. This microbial balance or soil diversity is essential for delivering nutrients on a timely basis. This nutrient delivery system is especially critical during periods of increased stress or wear.

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## If pest control products are required, then feed the soil with a natural-based fertility product that contains both the turf nutrients and the microbial nutritional aspect.

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Therefore, bio-fertilizers help build back the damage to the soil health caused by these products. The use of bio-products provides the nutritional vehicle to off set the negative impact of pest control products. If pest control products are required, then feed the soil with a natural-based fertility product that contains both the turf nutrients and the microbial nutritional aspect. This is a WIN-WIN agronomic approach to nutrient and pest management.

A simple sustainable program combines the agronomic benefits of both organic and traditional turf nutrients. Traditional fertilizer products deliver a cost effective nutrient source to address key nutrient deficiencies. Plus, there are a variety of traditional nutrients that offer a wide range of release characteristics to deliver color, growth and rooting at any type of weather conditions. There are traditional products that are better suited for cool and warm temperatures. Simply, traditional nutrient products can better address temperature and growth related issues.

Regarding biological products, these bio-fertilizer products provide the nutritional energy to build and stimulate the natural microbes in the soil. The key benefit of using bio-fertilizers is their ability to build microbial diversity. These bio-diverse microbial systems build the immune system in the soil to repair damaged soils, unlock tied up nutrients and provide a diversity microbial system to address agronomic problems. Bio-fertilizers resolve agronomic issues by building soil health.

A combination approach using both traditional and natural products can be the backbone to a more effective soil fertility program for high quality sports turf management. When developing your program, one should consider all the agronomic factors that reduce stress and wear issues, disease problems and nutrient deficiencies. Then, select products that deliver these agronomic benefits to solve those repetitive issues. By adding bio-fertilizer dimensions, one will squeeze more from their nutrient and nutritional fertility program. **ST**



# STABILIZED NATURAL TURF SYSTEM TYPES AND BENEFITS

■ BY PAUL SCHINNER

**T**he practice of stabilizing a natural grass playing surface is not a new idea. There have been numerous products introduced to the market over the past 20 years that have been engineered to do just that. Some of these are designed to work in the rootzone, while others are designed more to stabilize the surface. Rootzone type stabilization products are typically some type of fiber or mesh that is mixed into the rootzone. Surface stabilizing products or mat systems, are typically grown on a farm and installed as big roll sod, but can also be grown on site when schedules allow. The idea is to increase shear strength and spread the load over a larger surface area, while pro-

tecting the crown of the plant and root system.

The need for stabilized natural grass surfaces was created due to the popularity of high sand content rootzones. These sand-based rootzones are terrific at allowing water to drain through the profile, but offer very little shear strength or load bearing capacity. This is especially noticeable on newly installed fields where thatch and root development are more immature. The increased demand for venues to hold special events also contributes to the demand for stabilization. Stabilization helps the playing field support concert stages, car shows, flea markets and other types of events, in conjunction with

field protection systems, allowing the field to return to play faster than a field without stabilization.

Products that work in the root zone are typically installed during field construction. After the rootzone is installed and laser graded, the fibers or mesh pieces are carefully spread out at a pre-determined rate and mixed into the profile with a mechanical tiller in several directions to a controlled depth. This process can also be done in conjunction with sod replacement after the existing sod is removed and the rootzone is graded. Other systems have fibers that are injected or sewn into the soil through the rootzone on site and can be done just about any time. The basic principle is for the fibers or mesh is to spread the load over a larger surface area. The grass roots grow through, around and intertwine with these materials to increase durabil-

**Stabilization** helps the playing field support concert stages, car shows, flea markets and other types of events.



ity and increase shear strength, which reduces the tendency for divots and sod slippage. These types of products are also used to stabilize overflow grass parking lots and allow for vehicular traffic over grass surfaces without rutting.

Surface stabilization systems are typically constructed with a 12 to 15-foot wide mat of a biodegradable/synthetic mesh backing. Synthetic turf fibers are tufted into this backing, creating an open mesh mat allowing for the root system to readily penetrate into the underlying rootzone base. The finished mat is rolled out on a sod farm and infilled with the same rootzone mix specified at the venue. At a predetermined depth, seed, sprigs or washed sod is installed and the mat is filled up to a finished level, which varies depending on variety of grass and the length of time the product is anticipated to be on the farm before harvest. The grass is then grown as usual on the sod farm. Once the grass has filled in and ready for harvest, it is cut into big roll widths, typically 48 inches and rolled up using standard sod harvesting equipment. These rolls are then installed as big roll sod at the arena and are immediately playable.

In November 2014, three major Australian stadiums were reconstructed using Eclipse stabilized turf and were played on immediately by "League" rugby and AFL teams. Eclipse is also installed at Great American Ball Park in Cincinnati, with replacement turf growing at a local farm for concert replacement, as well as any damage that may be caused by Major League's All-Star game activities in 2015. Products like this have been used for NFL fields, international tournaments and Olympic Games because of the ability to hold up to play immediately. In addition, if time allows, they can be installed directly at the venue. The mat product is simply rolled out and infilled with rootzone mix, then seeded or sprigged and allowed to grow in as normal natural grass. Once it is mature enough for a few mowings, it is ready for play.

A tremendous amount of advancement has been made in these types of stabilized systems over the past few years making them increasingly popular. Improvements in backings, fibers and engineering have made them user friendly for all normal maintenance operations including, core aeration and slit seeding. Improved methods of installation at the farm have been developed, whereas previously these mat type products were grown on plastic causing a "root-bound" condition. They now incorporate new technology which allows for easy removal of the bound root mass by a specialized process exposing fresh root nodes, ready to thrive in the rootzone mix.

This category of mat stabilization technology can be used quite successfully on a smaller scale as well. Soccer goal box and penalty kick areas, run out areas for baseball fields and areas between the hashes on football fields can all be stabilized as local areas and not necessarily requiring the entire field be stabilized. This localization can save on installation and maintenance costs, as well as improve player safety from uneven ground, divots and mud holes. Even in cases when the grass is scalped off of the surface, the exposed fibers continue to hold

**A tremendous amount of advancement** has been made in these types of stabilized systems over the past few years making them increasingly popular.

the rootzone in place and the green color fibers blend into the grass making these areas less noticeable.

Today's groundskeepers and venue managers that are looking to keep surfaces natural do have alternates to synthetic turf infill systems. Stabilized natural grass systems allow for an increase in the number of events held, along with decreased divot potential and rutting. If you do your homework and select the correct product for your needs, employ a quality installation team and follow the maintenance guidelines of the manufacturer, you can manage these systems for as long, if not longer, than a new synthetic turf system at a very competitive cost. **ST**

*Paul Schinner, CFB, is vice president of operations, The Motz Group, LLC, and a Certified Field Builder member of the American Sports Builders Association. He can be reached at [pschinner@themotzgroup.com](mailto:pschinner@themotzgroup.com).*

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**Left:** A “paper test” is a quick and easy check that will let you know if your reel and bedknife are cutting properly. To conduct a paper test, simply insert a piece of paper between the reel and bedknife and rotate the reel slightly to see if it cuts the paper cleanly. **Right:** This photo shows a new 5” diameter reel on the right and a used 5” diameter reel on the left. Notice the diameter of the left reel has been reduced significantly from excessive wear, making the reel essentially useless.

## PROPER REEL MOWER MAINTENANCE CRITICAL TO FIELD QUALITY

*Editor’s note: This article was supplied by Jacobsen.*

**F**irst designed by Edwin Budding in 1830 and licensed for manufacture by Ransomes (now part of Jacobsen), the reel mower still provides the best quality-of-cut on most types of grasses.

For sports turf managers consistently cutting at or below 2 ¼ inches, especially on warm-season grasses, reel mowing will provide far superior results. Rather than chopping the grass like a rotary blade, reel mowers use a scissor-like action that shears each blade of grass. The result is a superior after-cut appearance and healthier plant tissue.

Reel mowers are inherently more sophisticated than rotary models and require more maintenance, monitoring and adjustment.

The scissor-like action of a reel mower is created by two main components: the reel cylinder and a bedknife. The bedknife is a long blade that stands up the grass before the cylinder blades swing through and shear it. It is critical that the reel and

bedknife are both sharp and the space between them is uniform and consistent. Industry standards call for between .001” and .003” clearance between the reel and bedknife.

Quality-of-cut issues most often arise from dull reels and/or bedknives. Sharpness should be at the top of your mower maintenance list and be viewed as a starting point for proper setup.

“Going out to mow with dull reels and bedknives is like running a stock car race with improperly inflated tires,” said Lynn Westbrook, principal engineer at Jacobsen. “You’ll never get the performance you need and the results will be less than perfect. It’s amazing how many guys out there either forget or neglect reel and bedknife sharpness.”

Most sports field managers will regularly send out their reels to be ground and sharpened. But reels can come out of adjustment during transport, daily service or mowing. So how do you know when it’s time to bring in your reels for service?

“Reel issues will almost always show themselves in the grass,” says Greg Walker, technical training manager for Jacobsen. “Take a close look at the grass after a fresh mow. If you’re seeing an uneven cut, defined lines or marking in the grass after mowing, you may have an issue. Also, take a look at the clippings: are the blade edges nice and straight or ragged and torn? The latter result may indicate a need for more frequent service.

“One simple maintenance practice that shouldn’t be overlooked is backlapping,” adds Walker. “It’s easy for any operator or field manager to do in just a few minutes at the end of the day. You just spread some compound on the reel and set it to backlap mode, which spins the reel in reverse at a low RPM. It’s a quick and easy way to stay sharp with every mow and extends the life of the reel and bedknife and the time between grinds.”

In a pinch, sharpening the front face of a bedknife with a facing tool or hand grinder will provide great results in an emergency.



In addition, a simple “paper test” should be done before and after each mow. To conduct a paper test, simply insert a piece of paper between the reel and bedknife and rotate the reel slightly to see if it cuts the paper cleanly. Repeat this all the way down the length of the bedknife. If the reel does not cut the paper in any areas, it may be time for a grind.

While your reels and bedknives are being ground, it’s critical not to overlook the rollers, roller bearings, reel bearings, etc. to ensure a stable grind. Any play in the rotating components can cause the reel or bedknife to move during a grind. Ask your grinding service if they check related components before grinding.

Although reels and bedknives were made to be regularly ground and sharpened, they will eventually wear down past the point of repair. Reels were designed to work within certain parameters. Going beyond the manufacturer’s reel diameter tolerance limit alters the original geometry of the reel and bedknife setup. “For example, on a 5-inch reel, you don’t want to get below a 4.5 inches in diameter,” said Westbrook. “When you see the reels worn past that diameter, the reel is simply unable to provide a good quality-of-cut.”

When it is time to replace reels and bedknives, it always pays

to buy OEM parts. “If there’s any two parts you should buy directly from the manufacturer it’s the reel and bedknife,” said Westbrook. “They are designed to work together and have very precise metallurgy to ensure the highest performance. When you add in a ‘may-fit’ reel or bedknife into the mix, the performance of the machine will be sacrificed and the results will show up in the grass. Another benefit of sticking with OEM bedknives and reels is that you have the backing and support of a manufacturer if you happen to run into any issues.”

You will also want to make sure that your mowers are cutting at the desired height. There is typically a variance between the bench setting (what the height-of-cut is set at when it leaves the shop) and what height the grass is actually cut at. It’s worth the investment in a turf prism, which will give you a more accurate reading of the quality-of-cut your mowers are providing.

To maximize the investment you’ve made in your mowers, ensure optimal machine performance, and ultimately provide the best quality surface for your players, be sure to make reel and bedknife maintenance part of your regular routine. **SI**

# ORIOLES’ MCFADYEN ON GROWING KY BLUE IN TRANSITION ZONE

*Editor’s note: This article was supplied by Macro-Sorb Technologies.*

**N**icole McFadyen can’t imagine life without a close connection to baseball. Growing up in New Castle, DE she was a tomboy who enjoyed all sports. But she zeroed in on baseball after playing outfielder for her high school team and first base for her community college team, before transferring to the University of Delaware to earn a degree in agriculture.

“Once I got into my agriculture studies, I quickly realized my interest was in plant science and turf management,” says McFadyen, who graduated in 2001. “I worked on a golf course a few years during college, but I always knew sports turf management was more up my alley.”



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**Nicole McFadyen**

After stints as assistant groundskeeper at the Baltimore Orioles and head groundskeeper for the minor league Trenton Thunders, McFadyen returned to the Baltimore Orioles in late 2006 as head groundskeeper. She is only the second female head groundskeeper of a Major League Baseball field in the country (the first was Heather Nabozny, who is still with the Detroit Tigers).

Apart from the challenges of being a woman in a traditionally male field, McFadyen's biggest hurdle is growing two acres of Kentucky bluegrass smack in the middle of the transition zone.

"I arm myself with anything and everything to get it through the season," says McFadyen. "It's better to manage cool-season grass through 2 ½ months of hot weather than to struggle through one of our tough, cold winters with warm-season grass."

## TURF MANAGEMENT "TRICKS"

But McFadyen has a few tricks up her sleeve for managing that Kentucky bluegrass. For starters, she takes data tests twice a day and root-depth tests weekly, from March through November. In summer months, she adds a canopy temperature test to ensure the turf plant hasn't overheated. During the off-season she dials back data tests to once or twice a week.

"The turf plant is a living thing and you want to make sure it keeps living!" she explains. "We take data tests at random spots to measure soil temperature, once in the morning and once in late afternoon. The tests show us how much change there's been and help us determine our irrigation demands."

"Kentucky bluegrass only likes temperatures of 85 degrees and below," notes McFadyen. "When soil temperatures get really hot, the turf root system starts cutting its supply...It's a self-defense mechanism and a natural instinct of the plant."

McFadyen's root depth tests are particularly revealing. "In warm weather, the turf grows closer to top layer so it can benefit from quick rains, whereas roots stay deeper during cooler tem-

peratures," she adds. "Our root depth tests allow us to manage water and nutrients so the plant has all it needs to get through both hot and cold days."

Once temperatures reach 55 degree F. for 3 consecutive days, McFadyen begins her fertility program. Every 2 weeks throughout the growing season, she makes a granular application of nitrogen and potassium, followed a few days later with a liquid micronutrient package. For 7 years now, she's used a five-product package from Macro-Sorb Technologies to give turf "that extra push" and facilitate green-up.

The liquid package includes:

- Macro-Sorb Foliar to increase stress tolerance and improve photosynthetic capacity
- Macro-Sorb Radicular to enhance root mass production
- Quelent Ca for readily available calcium
- Quelent K for increased potassium
- Quelent Minors for additional micronutrients

"When I first started as an intern at the Orioles back in 2001, they were using these products," notes McFadyen. "The groundskeeper before me saw a great response and swore by the package. I took the program to New Jersey with me and continued using the package after returning to the Orioles. Applying all five products together as a package, with a little added iron, gives us the best output."

From the picture window in her office behind the right-field fence, McFadyen views everything happening on the field. Mowing, spraying, painting and all turf activities fall under her strict scrutiny. But in addition to her data tests and technology, she relies on visual observation of the turf. She can definitely see the grass green up after her liquid package application.

"Looking at the field and being out in it every day, I see the response," she adds. "You can also see it after cutting when you lop off the tired part of the turf plant. Once we go through a 10-game home stand and the plants are starting to stress a bit, we can give it a jump with the Macro-Sorb package and it looks better right away."

McFadyen mows at 1-1/4-inch all season long. With a stadium that seats 48,000 and sell-out crowds for many games, she relies on her crew of 26 fulltime, in-season employees to keep the 23-year-old field and facility ship-shape. They irrigate on an as-needed basis and try to pull out the tarps only when necessary.

Still, McFadyen wields a lot of power at the ballpark. "I provide input whenever I can when it comes to rain delays or canceling a game, but it's ultimately up to the ownership," she says. "Any torrential thunderstorm has to be taken seriously since there's a lot at stake....not only for the fans, but for the players and ground staff, as well."

Fortunately, the biggest storm to hit the area recently, Hurricane Sandy in 2012, struck during post-season when no games were scheduled. It was particularly lucky for McFadyen. "I got married 3 days after Sandy, so my attention was elsewhere at the time," she jokes. **ST**





## DEERE UPDATES 3E SERIES OF COMPACT TRACTORS

The 3032E and 3038E are equipped with emissions-compliant Final Tier 4 engines with 31.1 (22.3 kW) and 37.3 (27.4 kW) hp, respectively. A hydrostatic transmission with Twin Touch pedals provides operators with simple, comfortable-to-use controls to find the right speed for the job at hand. It's as easy as pressing a single foot pedal to go forward and another foot pedal to go in reverse. Automotive-style cruise control is optional. Intuitive controls are color-coded (orange for throttle and shifting; black for hydraulics; yellow for power take-off (PTO) for easy operation. Both models feature a flat, uncluttered, open station operator platform. A new, higher back seat provides added comfort for long days of work. A foldable, certified rollover protection structure (ROPS) is designed to provide easier storage. Without tools, the operator can manually fold the safety device down for easy parking.

**John Deere**



## ALL-NEW TRUCKSTER XD UTILITY VEHICLE

Jacobsen announces the launch of the all-new Jacobsen Truckster XD heavy-duty utility vehicle. Serving as a replacement for the Cushman Turf-Truckster, the turf industry's original heavy-duty utility vehicle, the Truckster XD sets new standards for capacity, power, strength and comfort. It boasts a class-leading 3,550 lb. standard payload capacity, with steel up to 75% thicker than comparable boxes and 20% more volume. Jacobsen's new utility vehicle also leads under the hood, where it again is at the head of its class with the gas model providing 32.5 HP and 51.6 ft.-lbs. of torque and the die-

sel 24.8 HP and 52.7 ft.-lbs. of torque. Although the new Truckster XD was built to handle the daily rigors of a maintenance crew, Jacobsen engineers also put a priority on comfort, giving the cabin 25% more room than the competition.

**Jacobsen**



## ULTRAMAX HOSES FROM UNDERHILL

Underhill International now features a full line of heavy-duty UltraMax hoses for athletic and recreational areas. The series includes four models with a range of performance values and price points: UltraMax Clear (Economy); UltraMax Green (Economy Plus); UltraMax Red (Super Strong); and UltraMax Blue (Premium). All hoses have machined brass couplings and are available in 3/4" and 1" widths, and 50', 75' and 100' lengths. Custom lengths can also be specified. UltraMax Clear and UltraMax Green are fabricated from Pliovic material and reinforced spiral yarn for strength. Clear is lightweight and has a 600 Psi burst pressure; Green has a thick outer wall and 800 Psi burst pressure. UltraMax Red is made of EPDM synthetic rubber and reinforced with spiral synthetic yarn for extra strength under high working pressure.

**Underhill International**

## MOW THIS KY BLUEGRASS 1X/MONTH

This spring, Jacklin Seed by Simplot is introducing a Kentucky bluegrass that can be mowed as little as once a month. Most remarkably, this new grass, named My Holiday Lawn, can go weeks with that freshly clipped look. Left unmown, it doesn't look like a tall hay pasture. This lawn grass was developed over 14 years by bluegrass specialist, Dr. Doug Brede. My Holiday Lawn has a low-growing canopy and the grass maintains green leaves below the mowing height even when left unmown for weeks. When it is mowed, the new growth is only partially removed, keeping your lawn looking fresh and green, and not brown and stemmy like ordinary lawn grass. My Holiday Lawn can currently be

sourced from turfgrass sod producers.

**Jacklin Seed**



## GROUND LOGIC SPREADING EQUIPMENT

Ground Logic spreading equipment includes the Rover and Rover XR plus the Pathfinder and Pathfinder XC spreader/sprayers. The hopper capacity is 120 lb. on the Rover and Pathfinder, 220 lb. on the XR and XC models. The spray tank capacity is 12 gallons on the Pathfinder and 16 gallons on the Pathfinder XC. Several features that we believe make our machines an excellent choice for your business are all of our machines are constructed entirely of stainless steel. We use only commercial grade components and utilize tapered roller bearings in our sulky hinge allowing smooth and effortless steering.

**Ground Logic**

## CONSERVE WATER & BOOST NUTRIENT EFFICIENCY

H2OExcel is a 100% biodegradable solution made up of all-natural ingredients assembled to function as a water conservation agent and nutrient efficiency booster. This unique product is a proprietary formula from Brookside Agra that uses the power of natural extracts from desert plants, which have an increased ability to absorb and store water more efficiently than others. H2OExcel has the unique ability to reduce soil and water surface tension thereby allowing soils to absorb and retain water much faster than normal. H2OExcel affects the soil capillarity in a way that water can infiltrate faster and deeper than normal. A Purdue University study was conducted from late May 2013 to early August 2013. The study area consisted of a sand-based rootzone conforming to USGA rootzone specifications and a mature stand of creeping bentgrass. The turf was maintained according to typical, moderate putting green management practices for the region and fertilizer, insecticides and fungicides were applied on an as-needed basis.

**Brookside Agra**



# FIRST YEAR WITH NEW CENTRAL IRRIGATION CONTROL SYSTEM

**Editor's note:** We asked Shawn Mahonski, athletic field manager at Towson University, Baltimore, MD to share with us his experience after about a year of his using a new central control irrigation system on campus. Here's what he relayed:

**O**ur system is a Toro Sentinel Central Irrigation Control connected to a Vantage Pro2 weather station. The Sentinel computer constantly monitors real-time weather data provided by the weather station. This allows automatic rain shutdowns and will eventually allow the system to automatically adjust runtimes and rates based on real evapotranspiration data coupled with information gathered from soil sensors, which we are beginning to install this summer.

I felt this system was necessary to improve the efficiency of our operation because of the irrigation controllers for different sites on campus being so spread apart. In order to make a change to a program, I would have to travel to the facility, access the controller, make the changes and then move to the next facility. It also helps diagnose problems like wet spots or dry spots.

The Sentinel's "Watcher" feature sends an alert if it senses a leak or if flows aren't normal, potentially the sign of a broken head. It also alerts me if there is a power failure or a fault. Alerts are sent to me by email and text message. Water use efficiency also played into this purchase. The university pays for its water since we do not operate off of any wells. Water use and waste have become hot topics, particularly in the summertime. Right now I do not have enough information to determine how much less water we are using on the athletic fields for irrigation. I plan to take a look at that this summer since we will be into our second full season with this system.

To purchase the entire system including software, weather station,



new satellites and supplies for those, computer, and support cost the university around \$50K. Hardware includes a new controller and hydrometer for each site, radios, Sentinel computer and weather station. We installed the entire system in-house. The Vantage Pro2 we bought is wireless. A solar panel powers it and it communicates with the console connected to the Sentinel computer through its own wireless signal.

I easily installed the solar panel on a light pole outside my office with a custom-made bracket. It worked out well that we had the entire winter season (2013-14) to get all the parts put together and begin to figure the system out. We are lucky that so far the radio signals travel well enough to each satellite for the system's communication. If the radios could not communicate effectively, we would need the system to communicate through ethernet or wireless signals.

The most difficult part with installing the system was the wiring. The

existing zone wires were used but new wires to communicate with the hydrometers were required. Sometimes the meters are nowhere near the location of the satellite. Additionally grounding plates and rods needed to be installed for each satellite. Our plumbing shop helped with installing the new meters and our electric shop helped with power supplies as needed.

I'm beginning to install Turfguard soil moisture sensors. The new system installation for our softball field includes one. I plan to install more soil moisture sensors as time goes on. These will automatically provide more information to Sentinel so it can adjust system run times and watering frequencies. Software setup and training was organized through Toro. Our vendor has visited quite regularly to help set up the system and show us how to use it.

We have had some issues with controllers and meters. The vendor and manufacturers were very responsive and have fixed everything satisfactorily. ■





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# WAUKEGAN SPORTSPARK, Waukegan, IL

**Category of Submission:** Schools/Parks Softball

**Sports Turf Manager:** Noel T. Brusius

**Title:** Park Maintenance Worker III – Turf Manager

**Education:** AS- Anoka Tech; BS-UW Oshkosh; Field of Study: GIS, Turf Management

**Experience:** 1999-2004: Oshkosh Area School District – Athletic Field Maintenance Worker; 2005: St. Paul Saints – Ground Crew Intern; 2006-2007: Detroit Tigers – Grounds Crew; 2008-2010: Peoria Chiefs/Bradley University – Head Groundskeeper; 2011-Present: Waukegan Park District –

SportsPark/Athletic Fields Turf Manager

**Original construction:** 2010

**Rootzone:** Native soil; 21% sand, 79% other. Other mix is 38% silt and 41% clay

**Turfgrass variety:** 70% Kentucky Bluegrass: Rush, Award, Freedom III, P105, and 30% Perennial Ryegrass: CSI, DoubleTime. Each year the Waukegan SportsPark custom blend seed mix is evaluated for new varieties.

**Overseed:** Due to nature of sport played on our softball fields, overseeding efforts (budget, labor, time) are incorporated with the 13 natural turf soccer fields on site. Softball Field C totals: Seed-a-vating performed 3 times/

year (rate varies); 9/25/13 = 15 lbs, 6/9/14 = 25 lbs, 9/15/14 = 10 lbs. Other areas (corners/edges/sidelines/position areas) seeded as necessary throughout season: 5/16/14 = 7 lbs, 6/13/14 = 15 lbs, 8/20/14 = 3 lbs. Total for season: 75 lbs. Also, soil is amended with gypsum in late fall applications @ 500#/acre.

**Drainage:** All four softball fields were graded in uniform plane diagonally at a consistent 1.25% slope from home plate to warning track.



The Field of the Year Awards program is made possible by the support of sponsors Ewing, Graff's Turf, Hunter Industries and World Class Athletic Services.



## WHY STMA SHOULD CONSIDER YOUR FIELD A WINNER?

The Waukegan Park District converted the former Orchard Hills Golf Course, a 138-acre site, for use as its newest recreation destination, the Waukegan SportsPark. Construction began in April of 2009, with the Grand Opening event held June 2011. The site includes 13 natural turf soccer fields, a championship synthetic turf soccer/football field, four softball fields, two concession facilities, nine restroom facilities, a maintenance building, and a playground with a water spray feature.

A testament to sound maintenance and programming working together is that an average of 2,000 games are played annually at the SportsPark softball fields. Due to our soil issues the soccer fields receive the majority of the cultural and fertility emphasis. However, many more labor hours are spent maintaining the softball fields (prepping, edging, watering, cleanup, etc.) Because we have a unique infield material (77% sand) that allows play after substantial rainfall (2+ inches) and to help meet revenue expectations, we try to encourage as much play as possible on the softball fields in comparison to soccer. The softball fields are very well received throughout the local area and beyond. Local softball leagues have increased 65.6% since the site was built and we now host over 23 weekend tournaments (previously only 3 – a 667% increase) bringing in regional and national guests alike.

Cultural practices play an important role in our operations. We are constantly doing some type of aeration. The overwhelming challenge in maintaining adequate turfgrass on our fields is related to two very common issues that occur when a field is constructed using native soils: 1) the soil was aggressively compacted by the

contractor in order to meet grading requirements, and 2) less than desirable native topsoil was used. Soil testing has shown our soil structure is low in organic matter and high in clay content. The bottom line is that ongoing compaction and drainage issues have made it extremely difficult to grow grass. Also the past two winter seasons have taken their toll on turf conditions, estimating 15-20% of *Poa annua* and perennial ryegrass turf loss. Our aggressive aeration on all fields has become essential with field use that begins in April and goes through October.

The increased scheduling of youth baseball tournaments at the fields created an increased occurrence of errant balls. Although Caution signage was in place, the problem was foul balls were going into spectator areas where people were watching other games. We received a lot of complaints and reports of people actually being hit. In an initial meeting with the backstop installer, estimates of adding protective netting for the four diamonds with overhead coverage of the spectator bleacher area came in at \$85,000. It was in an on-site meeting with our sales rep, Matt Jacobs of Protective Sports Concepts, LLC, who suggested the addition of backstop netting extending out to cover home plate might be sufficient to stop a number of foul balls from leaving the playing field. This option would cost around \$3,000 per field installed, a much reduced cost from the first quotes. With the assistance of our Risk Manager, we successfully received the Capital funding and completed installation in the fall of 2013. This has proven to be successful, dramatically reducing the number of errant balls.

Like most agencies, we face over-usage and budget constraints. Our strategy is to actively and aggressively address each maintenance issue as it arises. A few issues we are currently involved



in include: extending the arcs on the softball fields (moving irrigation/laser grading) and a full replacement of the warning track. Through networking with STMA members, both local and national, we found an abundance of resources available to us. We turned to other members who have had previous similar experiences to help us with our problematic situations. To address our soil structure issues, we have consulted with some of the industry's elite. In 2014 we lowered our height of cut to 1.5 inches with great success. The density and playability have been outstanding. We are now a few weeks away from implementing a compost top-dressing program and have been very aggressive in our cultural practices. The usage and budget issues will always be there, but through weekly meetings with our Recreation Department, we work together to help balance everyone's (including the field's) needs. This team approach sets us apart from the rest.

Our success would not exist without our dedicated staff. Our 2014 staff includes full-time employee Tony Diaz and seasonal staff members: Miguel Gonzalez, Joe Ayala, Tomas Medina, Fernando Fernandez, Paul Fish, Jr., Rich Krapf, Billy Biang, Stan Cieslesz, and Scott Gordon. Also, interning this year is Drew Fleagle, Purdue University student in the Turf Science and Management program. These are the guys that make it happen, and having a staff that buys into the big picture of what you are working to accomplish is extremely important.

**SportsTurf:** What are the biggest challenges to maintaining high-quality turf at the parks and rec level?

**Brusius:** Meeting revenue demands while still providing safe and playable fields, the vast array of staff and user expectations, our poor soil structure, and the importance of retaining talented seasonal staff. At times I feel like I could write a book on each of these and numerous other challenges. However, it's these types of challenges that help make the job fun.

**ST:** What do you find most enjoyable? What task is your least favorite and why?

**Brusius:** Tarp pulls are no longer in my vocabulary! I enjoy making a career out of something I really have a passion for. I appreciate being able to work outdoors and being an integral, but mostly unnoticed, aspect to the sporting events we all take pleasure in. It is also gratifying at the end of a long week to look out at the fields and seeing the direct results of everybody's hard work. The SportsPark is a first-class facility and is a source of community pride. The SportsPark/athletic field maintenance staff view ourselves as leaders within the industry and we strive to be the best.

I thoroughly enjoy my job and the challenges it provides. However with multiple overlapping agendas and vastly different levels of expectations it becomes difficult to satisfy everyone at all times. Being dependent upon Mother Nature can be frustrating as well. However, I feel by keeping an open communication between all involved parties (staff, management, users, vendors, etc) any issue can be solved in an appropriate time and manner.

**ST:** How did you get started in turf management? What was your first sports turf-related job?

**Brusius:** While obtaining a BS at the University of Wisconsin-Oshkosh I worked summers for the Oshkosh Area School District maintaining and prepping athletic fields. Upon graduation I recognized I preferred my summer work more than my area of study. I went back to school and received a Turf degree which placed me into an internship where I developed the passion for a career in sports field management. Working for and with people like Connie Rudolph, Heather Nabozny, Mike Trigg, and so many others I truly feel blessed and look ahead to "paying it forward."

**ST:** What changes if any are you considering or implementing for the winning field in 2015?

**Brusius:** Each year we tweak our fertilizer schedule based on soil tests and other important factors. We plan on increasing our overseed practices to help keep up with the increased usage and we are switching to a substantially more bluegrass grass seed blend to help offset our winterkill issues. Lastly, I hope to lower the height of cut (1.25") once more to provide better playability. Our aggressive cultural practices will continue as turf conditions have improved significantly throughout the entire site since first implementing 3 years ago. We also will continue our compost topdressing program that was implemented in 2014.

**ST:** How do you balance your family life with work demands?

**Brusius:** It can be tough at times. It is probably one of the main reasons I am in my current position now working for a Park District. Having worked 6 years at the MLB and MILB levels I know all too well what kind of hours and stress you have to endure. Surround yourself with reliable and knowledgeable staff and take advantage of the off-season with family and friends.

**ST:** How do you see your job changing in the future?

**Brusius:** It is my hope that turf management will continue to be valued and appreciated in all aspects of the revenue generating process just like anything else. Sports fields will someday qualify for the same status, exemptions, and prestige many golf courses receive. With the predicated increase in usage, regulations, and restrictions I feel it is important that we continue to learn and adapt and to use advances in technology to help us achieve our short and long term goals....safe and playable fields. **ST**

## Softball field equipment list

■ Toro 1200 Line Painter ■ Jiffy Line Painter ■ Toro 5500 Sprayer  
 Club Car Golf Cart ■ Club Car Carryall Utility Cart ■ Toro 4700 Mower ■  
 Toro 4500 Mower ■ Toro 4000 Mower ■ Toro 3505 Mower ■ Kubota 46 HP Tractor  
 ■ Kubota 52 HP Tractor ■ Toro HD Workman ■ Toro MD Workman ■ Lely Fertilizer  
 Spreader ■ Wiedenmann Terra Spike XF Deep Tine Aerator ■ First Products  
 Seed-a-vator ■ Aer-Way Slicer ■ Ryan Renovare Core Aerator ■ Gehl 664D Skid  
 Loader ■ Ryan XRE28 Walk Behind Aerator ■ Toro Walk Behind Greens Aerator  
 ■ Turfco T3000i Spreader/Sprayer ■ Anderson's SR 2000 Spreader ■ Jacto  
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 Sod Cutter Jr. ■ Ryan Ren-o-thin Dethatcher ■ Redmax Backpack Blower ■ Stihl  
 Vacuum/blower ■ Kawasaki String Trimmer ■ Eastman Walk Behind Mower



# STMA RECOGNIZES YEARS OF SERVICE

**W**e appreciate the involvement of our membership in the association! One way that our members show their commitment to STMA and the profession is by continuing to renew the annual membership. These members are celebrating milestone years of membership and will be recognized with a pin that highlights the appropriate number of years of service. Thank you!

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John Souter  
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According to the American Society of Association Executives (ASAE) the number of members who volunteer for committees is an indicator of the health of an association. STMA should be considered very healthy! Our association has many members engaged in committee service. Those members are:

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**3 Do you have the authority to buy, specify or recommend products and/or services for your business or organization? Y ☐ Yes    N ☐ No**

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a tent on the playing surface with a raised floor, carpet, tables and even chandeliers. The equestrian jumps were about 5 feet high; thankfully no horses were allowed on the field until the event. The event was a success due to the many hours the crew put in (this is supposed to be the off season). As you can see there were quite a few divots created by the jumping horses and the divots were filled with green sand and the landing areas were hand watered between horses. After the event, some small areas were re-sodded and a week later, the University of Miami held their spring game and the football field also performed well for that event.

Photo submitted by Tom Wilson, Senior Manager for the Grounds Department, Sun Life Stadium, Miami Gardens, FL. Alan Sigwardt is Senior Director for the Grounds Department.

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## Q&A with Dr. Grady Miller

Professor, North Carolina State University

**Questions?** Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email [grady\\_miller@ncsu.edu](mailto:grady_miller@ncsu.edu). Or, send your question to Pamela Sherratt at 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or [sherratt.1@osu.edu](mailto:sherratt.1@osu.edu)

# PUNCHING HOLES

*Our bermudagrass has not yet come out of dormancy. Is it ok to aerify? We normally aerify in June and August but thought the extra aerification would be good for the fields. We would be using ½-inch hollow tines and picking up cores, then leaving the holes open. Labor-wise it is a good time for us to do this since we are not so busy with mowing. Also, the field is not being used heavily for the next several weeks.*

*STMA member from Western NC*

**T**his is an excellent question that often comes up during the winter. The simple answer that I often tell people whenever they ask if they should aerify is yes, since a turf manager cannot aerify too much. I say that mainly because most field managers do not aerify enough. I generally encourage aerification and more aerification. Unfortunately in this case the answer is not so simple.

But before I address timing, I would like to address frequency. Some of you may be familiar with Jerad Minnick, former head groundskeeper at a 22-field soccer complex in Boyds, MD. The last few years he has spoken at a number of turfgrass conferences. If you have not heard him at one of those, perhaps you have read his popular blog ([growinggreengrass.net](http://growinggreengrass.net)). He is a huge proponent

of using natural grass and he has proven his philosophies can work considering his MD fields hosted more than 350 events apiece each year while still looking great. He attributes much of his high-use success to his cultivation program.

I was in the audience when Jerad spoke at a recent conference in Indiana. He mentioned that he typically accomplished some sort of aeration on his cool-season grass fields weekly. Some of these aerations are without soil removal during in-season, but he tries to remove cores on the majority of the cultivation trips across his field. Sports Field Manager Allen Reed at FC Dallas Stadium also is a big proponent of weekly aerification. He has a bermudagrass-based field that also hosts numerous events through the year. I know these two examples are a bit extreme but they prove the point that most should aerify the fields much more often for optimum performance.


Several years ago, Dr. Beth Guertal at Auburn University conducted deep-tine aeration studies on compacted native soils growing Tifway bermudagrass. Aerations were applied either once (July), twice (April and July), or four times (January, April, July, and October) a year with 0.75-inch solid tines that penetrated 8 inches on 4-inch spacing. Despite the total area impacted by those big tines going down deep, she found that the effects only lasted about 1 month on heavily trafficked turfgrass. This study proved that turf managers should aerate more than just once or twice a year. As a side benefit, the winter/spring aerification improved early spring green-up.

So, this leads back to timing of aerifications. All the literature indicates that warm-season grass aeration should take place when the grass is actively growing; for much of the US that is from May

to September. It is best to not narrow it down by specific dates considering some climates may allow bermudagrass growth year-round. This timing is suggested primarily since there can be increased soil and tissue desiccation due to the aerification holes. If the turfgrass is actively growing, roots will quickly begin to grow in around the hole's walls, cavitation of soil will begin to fill the void, and lateral stems will cover the surface. The plant will get maximum benefit from the aeration hole during this time.

If the turfgrass is not actively growing, either from dormancy or due to a stress such as drought, the turf will not see the same benefit since respiration may be so low. The aerification holes can also increase the stress due to the desiccation with more tissue dieback. In addition, research suggests that the soil may even become re-compacted before the turfgrass resumes active growth.

Open aerification holes in the spring may promote more soil warming since air is more easily heated than soil. This can be good or bad. If there is early green up and a late freeze, then it can increase freeze damage since it results in a more rapid drop in the soil profile's temperature and the greater chance of turf desiccation. Dr. Guertal's research work suggests it can be a positive if earlier greening is not subject to freezing injury and no one minds the open holes for the time being.

Considering your situation, if you have few worries about late spring freezes and your labor situation allows you to easily get an extra aerification in for the year, then my practical side would say "start punching holes." The academic side of me would tell you to wait and try to get an extra aeration in during the growing season for optimum benefit. The final decision is yours. 

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**I know these two examples are a bit extreme but they prove the point that most should aerify the fields much more often for optimum performance.**



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