

FEASIBILITY REPORT ON ALL-DIRT FIELDS

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June 2016

SportsTurf

SPORTS FIELD AND FACILITIES MANAGEMENT

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STARTING LINEUP

June 2016 | Volume 32 | Number 6

FEATURES

Field Science

- 8 Tournament field preparation for parks and rec facilities
- 12 Dirt field assessment report

Facilities & Operations

- 16 Balancing work and family
- 20 NFL great Ricky Proehl preaches the P.O.W.E.R. of play
- 24 Safety netting recs aren't rules: should your facility follow them?
- 26 Four hats the next generation of sports turf managers will wear
- 32 How to maintain a successful career and not get lost in a budget crunch

The SportsTurf Interview

- 30 Heather Nabozny, head groundskeeper for the Detroit Tigers

Irrigation & Drainage

- 34 Catch can vs. soil moisture-based water audits on sports fields

Tools & Equipment

- 38 Managing turf irrigation conserves nature's most valuable resource
- 39 Newest utility vehicles on the market

2015 Field of the Year

- 42 Professional Baseball: Ed Smith Stadium, Sarasota, FL

DEPARTMENTS

- | | |
|------------------------------|--------------------------|
| 06 From the Sidelines | 47 STMA Chapter Contacts |
| 07 STMA President's Message | 48 Marketplace |
| 19 John Mascaro's Photo Quiz | 49 Advertisers' Index |
| 46 STMA in Action | 50 Q&A |



ON THE COVER:

Sports Turf Managers Association's 2015 Professional Baseball Field of the Year winner Ed Smith Stadium in Sarasota, FL, the spring training home of the Baltimore Orioles, is managed by head groundskeeper Daniel Thomas. The Field of the Year Awards program is made possible by the support of sponsors Carolina Green Corp., Ewing, Graff's Turf, Hunter Industries, Pro's Choice, and World Class Athletic Services.



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HONOR ROLL

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We would be remiss if we didn't give a shout out to two of our own who have recently been honored, as well as to a living legend in our industry:

Dr. Grady Miller, professor and extension turf specialist at North Carolina State and our bi-monthly "Q&A" columnist for the past 15 years, was honored last winter by the Turfgrass Producers International with its prestigious Turfgrass Educator Award of Excellence. This award recognizes personal commitment, dedication and positive influence in helping to educate consumers, turfgrass producers and industry professionals.

Our other "Q&A" columnist, Pamela J. Sherratt, the turfgrass specialist in Ohio State's Horticulture & Crop Science department, also was recognized earlier this year by England's Institute of Groundsmanship at its IOG Saltex Conference for her "Outstanding Contribution to Groundsmanship." The IOG was founded in 1934 with its original purpose being to "improve the status of groundsmen and the standard of groundsmanship."

So yeah, we present you with two of the world's finest at their jobs each issue!

"MARQUIS DE SOD" IN HALL OF FAME

STMA Founding Father George Toma was inducted into the Missouri Sports Hall of Fame last month. Here are some excerpts from the HOF's press release:

"At age 10, he went to work on a vegetable farm, but not by choice. The family needed the money after his dad, a coal miner in eastern Pennsylvania, passed away."

"Despite friends warning Toma to avoid taking a job in 1957 at Kansas City's



George Toma working another Super Bowl

Municipal Stadium, saying the field was cooked, and the weather would cook him, he was told. After seeing the field, Toma thought to himself, 'if I mess it up, nobody will ever know'."

"Toma has handled field prep work of all 50 Super Bowls. He also oversaw the infields of the Los Angeles Coliseum and Atlanta's Olympic Stadium for the 1984 and 1996 Summer Olympics, respectively, and several fields of the 1994 World Cup Soccer. For the 1996 Atlanta Games, alone, Toma led the installation of 13,500 yards of sod in 24 hours with 12 hours of sod bed preparation."

"The cheapest insurance for an athlete is a good, safe playing field," Toma said. "And I liked to do it without taking too much money out of the owners' coffers."

"Toma for years never had a full-time assistant. 'If it weren't for the boys from Lincoln High School and Central High School, there would be no George Toma,' he said, explaining teenagers from those nearby schools would drop by and help ready Municipal Stadium's field. 'We had the best baseball field in sports.'"

"As I look back now, I was a pioneer," Toma said. "I love Kansas City. I didn't want to leave Kansas City. I could've worked for other ball clubs. But this town has taken care of me."

Just as he has taken care of its prized fields.

Eric Schroder

SportsTurf

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The Official Publication Of
 The Sports Turf Managers Association

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SportsTurf (ISSN 1061-687X) (USPS 000-292) (Reg. U.S. Pat. & T.M. Off.) is published monthly by EPG Media & Specialty Information at 75 Pike Street, Port Jervis, NY 12271. POSTMASTER: Send address changes to SportsTurf, PO Box 2123, Skokie, IL 60076-7823. For subscription information and requests, call Subscription Services at (845) 856-2229. Subscription rates: 1 year, \$40 US & Poss.; 2 years, \$65 US & Poss.; 1 year, \$65 Canada/Foreign Surface, 1 year, \$130 Airmail. All subscriptions are payable in advance in US funds. Send payments to SportsTurf, PO Box 2123, Skokie, IL 60076-7823. Phone: (847) 763-9565. Fax: (847) 763-9569. Single copies or back issues, \$8 each US/Canada; \$12 Foreign. Periodicals postage paid at Port Jervis, NY and additional mailing offices. COPYRIGHT 2016, SportsTurf. Material may not be reproduced or photocopied in any form without the written permission of the publisher.

ENVIRONMENTAL STEWARDS

Jeff Salmond, CSFM
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Summer is in full swing in the US. No better way to enjoy the summer than to get to your closest ballpark whether it be MLB, MiLB, independent, or local parks and recreation complex to hear the crack of the bat, the smell of freshly mowed grass and the enjoyment of a cold beverage and hot dog. Please be sure to give the Sport Turf Manager guys and gals of our summer's pastime a shout out through any social media outlet to express your appreciation to them for their dedication to provide the ultimate dog days of summer experience for all fans.

Sports Turf Managers provide the best, safest and most aesthetically pleasing playing surfaces for athletes and viewers; however, they also have another important and vital task. Being environmentally conscious as overseers of the resources of the earth to provide soil, water, and air for our playing surfaces. We are ever in the public eye in how we conduct the agronomic principles to sustain the pristine surfaces that are seen by millions each and every day.

STMA 2 years ago embarked on a mission to develop certification for facilities that meet the proper criteria that makes them environmentally sound. This certification program development has been through the piloting process and will soon be available through the association. The procedure to become a certified facility is completed through a thorough self-examination of best management practices (BMPs) in 10 environmental areas. In addition, an attester is engaged to validate these practices. Achievement of 80% in each of 10 areas and confirmation by the attester

will bring the distinction of being a STMA Certified Facility for Environmentally Responsible Management. Although your particular facility may not align with this new innovation, we as sports turf managers must be mindfully aware of how we conduct our maintenance and pesticide applications each and every day. Yes, we know that our turfgrass fields and surfaces are some of the best filtering systems in the world, but the public perception sometimes doesn't see it that way. We need to always be checking our practices to ensure that we are the best environmental stewards and advocate for the sports surface systems we each manage.

Our natural turfgrass systems are of great benefit to the environment. Here are the facts: Traps 12 million tons of dust and dirt annually; along with trees, our natural grass fields produce enough oxygen to support 22 million people; natural turf fields help remove 5% of carbon dioxide from the atmosphere; rain water that filters through natural grass fields is up to ten times less acidic than water moving off of hard surfaces; and, turfgrass can be as effective as shade for reducing the amount of energy used for air conditioning by 20-30% compared to hard surfaces, as it provides a cooling effect for the surrounding environment.

Turfgrass is a great contributor to our environment and validating your good stewardship in managing your playing surfaces will greatly contribute to the professionalism of the industry. Consider becoming a STMA certified facility for environmentally responsible management.

Jeff Salmond

TOURNAMENT FIELD PREPARATION FOR PARKS AND REC FACILITIES

■ BY NEIL CATHEY

Tournaments or larger events can be intimidating to think about and overwhelm you and your staff if you are not properly prepared. As a parks superintendent in northeast Utah, my team and I have had the great opportunity to host several important tournaments including Cal Ripken and Babe Ruth Pacific Regionals, and the largest annual adult softball tournament in Utah. We were able to make our facilities shine for these events because we took the approach that tournament preparation was a yearlong endeavor and not a one-week crash course. The most important consideration when tasked with holding a large event at your facilities is not to panic. This is an opportunity to showcase your facility, your community, your staff and yourself.

When you are planning a trip the first thing you do is locate the destination and map out a route to reach your target. Planning for a tournament is very similar with one large exception: map your course in reverse. You first want to set a goal and once that goal is established you need to set all your benchmarks to reach this goal. If you want to accomplish x, y, z you have to plan out and schedule a, b, c.

Inform your staff as soon as possible the event's dates, the dates of benchmarks leading up to it, and that these dates may be blocked out for vacation. This should go a long way in helping them balance their home and work lives and allow for optimal buy in. Make sure that user groups and your higher ups are also well informed and have bought in. Remember that your facilities are there to serve your user groups and this is in all likelihood their tournament and they want it to be as successful as possible. The problem is they know where they want to get to; but they do not know how to get there. The same thing can often be said about your higher ups, particularly your board members. While they may be great people who want only the best for your community and facilities, never forget that you are the expert and you were hired to lead. Use this opportunity

to work with your decision makers and educate them. Many times these tournaments are decided upon after your budget has been set. Be prepared to show your board the economic impact this event will have to your community and justify the extra funds needed to make it a success.

Setting your cultural calendar for the year will have the largest effect on your event's success. Do as much as you possibly can; this event may be the excuse you needed to get things done that you previously did not have means to do. Ask for more money; if you don't ask the answer is always "no." Beg, borrow, and steal (okay, don't steal); but maybe the local golf course or school district has a piece of equipment that you can borrow, maybe your vendor can let you demo some equipment or trade use of equipment for advertising at the event. The point is that if you know something needs to be done, find a way to make it happen. Most small communities have an "us against the world" mentality; play to this and make this a community event but be prepared to return the favor. If you still don't have all the necessary resources then implement the "field within a field" philosophy and do the areas that you can. Below is the cultural calendar that we followed annually:

I like to dethatch my turf in early spring using the spring tines on a groomer. I try to do it shortly after the snow has

UINTAH RECREATION DISTRICT: ASHLEY VALLEY BASEBALL

INPUTS	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT
Fertilization: 1.5lbs N; rotary walk spreader		organic		Ext Rel			organic	
Foliar Fertilizer: Based on soil test; bi-weekly								
Growth Regulator: Bi-weekly; low rate								
Wetting Agent: Bi-weekly								
Aeration: 2" spacing as deep as possible		Core		Solid			Core	
Topdressing: 1/2 - 1/2" per application		Sand					Compost	
Dethatching: 2x before mowing begins								
Interseeding: High traffic, stressed areas								
Oversdeegin: Drill seed; two directions								
Post-emergence herbicide								
Soil Testing: Dependent on soil temperature								

melted and before mowing begins; removing the dead turf greatly improves color and promotes new growth.

Seeding should be done as much as possible but can be quite expensive. Push for a minimum of twice per year in conjunction with fall and spring aerifications. And any supplemental seeding you can do throughout the year is a plus especially in high traffic areas. I prefer to use a drill seeder as much as possible and we always go two directions. Rates will vary on your climate and turf types, but always go as heavy as you can.

Weed control is an essential component of any turf management program, but can be a relatively easy task by keeping your turf healthy throughout the year. On athletic fields we never used pre-emergence herbicides. I want to have the ability to seed or aerate at any time, and if we are doing everything else as planned weed pressure was never a big deal. Having said that we were not completely immune to weeds and applied post-emergence herbicides in early spring and late fall. If you only have the budget for one application I strongly recommend the fall app over spring.

Aerating throughout the year as much as possible is a must and will yield the most tangible results of any of your cultural practices. Parks and recreation fields are often overused and compaction can become a huge problem. We used a mechanical aerator on our sports turf versus a ground driven unit on general turf. This allows us to be more aggressive while not doing unintentional damage to the turf. With limited applications we worked on 2-inch spacing with the largest tines available for the aerator. Note what direction was used to aerate and vary the direction of the subsequent aeration to provide for optimal results. We always aerated, drug (after ample time for cores to dry), mowed, blew, fertilized, topdressed, re-drug and then irrigated. Your budget will dictate how much of this you are able to accomplish, but at a minimum the cores should be collected or drug in. Ideally I would have liked to remove all the cores and topdressed heavily, but I had neither the time nor resources for either. We would however collect cores from infield turf and stockpile these cores to use as topdressing for seeding operations in high traffic areas.

Topdressing is necessary to prevent thatch and promote a safe and level playing surface. We planned on topdressing twice a year in conjunction with fall and spring aeration using either a compost material of USGA sand at a rate of 1/4 to 1/2 inch. To determine what best suits your needs a soil test and analysis should be performed annually.

Fertilization should be dictated by your soil test. My soil tests were very consistent and my needs did not vary much from year to year. On an average year I would fertilize with my spring and fall aerations with an organic slow release fertilizer. We also did an early June application of an extended release fertilizer. I also spoon feed as many athletic fields each year as budget allows; this program varies based on soil tests, budget and number of events. In addition to our fertilizer applications

we focused on other chemical inputs as well.

We applied growth regulators twice a month at the lowest recommended rate supplemented with iron throughout the growing season. I am a huge advocate of growth regulators and this would be the last chemical input I would cut from my budget outside of the three granular fertilizer applications. We also applied a specialized long-term soil surfactant type wetting agent twice per year depending on weather conditions. In our high desert environment in northeast Utah we did not have to apply fungicides but I recommend keeping a broad spectrum curative fungicide on hand just in case.

While it is important to map out these important inputs with all of them leading to the common goal of making your facility shine; you cannot lose focus on the day to day operations that are imperative to your success. Daily, weekly and monthly schedules should be created and distributed to your crew ensuring that everyone is well informed of the processes that are vital to your shared success. All of these schedules should be tailored to your individual facilities and expectations.

Weed control is an essential component of any turf management program, but can be a relatively easy task by keeping your turf healthy throughout the year.

We always tried to be on the lookout for ways to save money and time while not sacrificing our end product. We tried to eliminate as much hand watering of skinned areas as possible by both installing skinned area automatic irrigation systems as well as using roller base irrigation heads. This allowed one person to water several fields at once. One person could water seven fields for us at once while handling other tasks such as picking up trash or cleaning restrooms. We rid ourselves of costly puddle pillows and began using memory foam pillows; this saved on average \$20 per pillow and performed just as well. Try spending money to save money. For checking irrigation systems we purchased a remote control for \$750. Making this a one-person job instead of two paid for itself within a couple of months. Keep good inventory of all supplies eliminating costly downtime and runs to the store.

2 WEEKS OUT

You've worked hard all year and you are on schedule now it's crunch time. The last 2 weeks of tournament prep are essential to its success. If any sod needs to be laid it should be done so no later than 10 days before the tournament starts. This allows the sod to root and blend in while providing a safe playing surface. To ensure that the sod matches in color and depth use sod from your own facility and then either replace the nursery

area with new sod or seed. Now is also the time for one of your four edgings per year; use a string and paint to guarantee straight and true lines. Set a mowing pattern and begin to "burn" in the lines. Go with something bold and distinct but don't paint yourself into a corner by trying to imitate something from the MLB All-Star game; remember they have more guys for one field than you may have for all your fields, parks and facilities. Make sure at least two people are comfortable and familiar mowing this pattern in case someone is pulled off for some other task. I recommend mowing yourself before or after everyone else is gone for the day. This will allow you to see every square inch of the field and makes notes of any tweaks that may be necessary.

Rebuild your mounds and homeplate areas. This ensures that they are done each year and that they are perfect for your tournament. Time your micronutrient fertilization program; and boost it if necessary, to provide for optimum color during the tournament. Hopefully you have your fields on a rotating laser-leveling program; if not try and get at least this field or fields done shortly before hand. If the fields you are using are not in this year's rotation then change the rotation. You only get one chance at a first impression, and you want these tournaments to return to your facility year after year. Be careful when selecting someone to laser level; use only a contractor with proper experience and equipment. This is one case where you definitely get what you pay for.

Check and double-check your inventory. You want the tournament week to be as smooth as possible with no distractions. Make sure you have ample supplies of: infield mix, conditioner, field dry, paint, set of new and extra bases, trash bags, soap, toilet paper, irrigation supplies, etc. Be sure and review your plans with your team (user group, higher ups and crew). You need a firm schedule 2 weeks in advance from your user group so that you can schedule your crew properly. Don't forget to ask about extra events such as: skill challenges, opening/closing ceremonies and dinners. These are just as important as the games themselves and need to be staffed correctly. Meet with your staff to ensure that everyone is on the same page and fully understands their role for the upcoming events.

Tournament week! Schedule out the entire week for all facilities; not just tournament fields, well in advance so you have no surprises this week. When scheduling your staff employ a "divide and conquer" mentality. Divide them into three equally balanced groups (AM, normal and PM). The AM crew will come in several hours before the first game and is responsible for field prep, trash, restrooms and irrigation. Normal crew will handle all of your regular responsibilities throughout the week at your non-tournament locations. And you PM crew will stay after games are completed to perform field recovery items (mound, homeplate, irrigation, etc.) Be sure that each crew has a leader who is responsible for their team.

Continued on page 14

Ashley Valley Community Park Baseball Complex Daily To Do List:

AM - Recovery:

1. Inspection
 - a. Check that gates are locked and locks are not missing (Report immediately if missing)
 - b. Check dugouts for trash
 - c. Blow out dugouts, bleachers, and walkways
 - d. Clean any spills in bleachers or on concrete
 - e. Wipe down tables
 - f. Clean/stock bathrooms
2. Level Fields
 - a. Remove and plug all bases
 - b. Rake and fill in low spots:
 - i. Home plate and batter's boxes
 - ii. Pitcher's mound
 - iii. Around all bases
 - iv. Baselines
 - c. Use rakes to smooth around bases
 - d. Lightly water skinned area
 - e. Drag skinned area
 - i. Brush or drag mat
 - ii. Spring tines, hard tines, or nail drag once a week
 - f. Water heavy
3. Baselines
 - a. Water lightly
 - b. Hand rake length wise
 - c. Roll
 - d. Water heavy
4. Mound/Batter's Box
 - a. Scrape out depression areas to properly clean
 - b. Dampen area with water
 - c. Insert mound clay into depression and tamp to full compaction
 - d. Place IF mix on top of mound/batter's box
 - e. Water lightly
 - f. Hand rake
 - g. Roll
 - h. Water heavy
 - i. Tarp
5. Lip Maintenance - rake edges
6. Turf
 - a. Seed worn spots
 - b. Hand water IF turf and dry spots

PM - Game Prep:

1. Skinned Area
 - a. Water lightly
 - b. Drag
 - c. Pull plugs and replace bases
 - d. Water lightly
2. Baselines
 - a. Water lightly
 - b. Paint foul lines from batter's box to outfield turf
3. Mound / Batter's Box
 - a. Remove tarps
 - b. Chalk batter's box
4. Turf - Hand water IF turf and dry spots
5. Water
 - a. Skinned areas
 - b. Baselines
 - c. Mound / Homeplate area
6. Gates
 - a. Lock all service gates
 - b. Unlock gates
 - c. Place locks on fence above gates

THE MVP DOESN'T ALWAYS WEAR CLEATS.

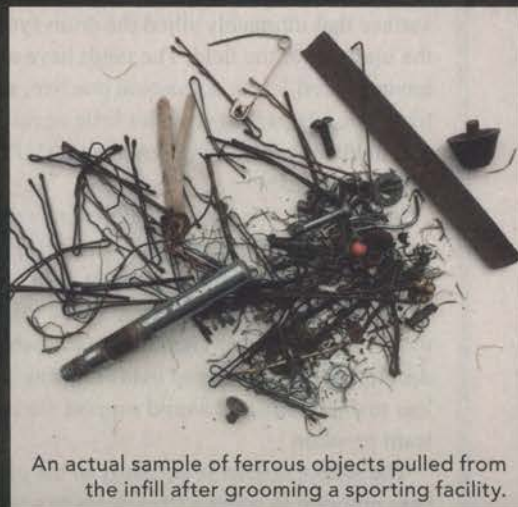


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WORLDWIDE

DIRT FIELD ASSESSMENT REPORT

■ BY DEREK C. MCKEE & GARY HOVER

Our firm was approached by a local California agency to prepare a feasibility study to assess the use of soil-based fields as an alternative to natural grass or artificial turf for athletic sports purposes. The report aimed to identify relevant examples of soil-based field applications and to assess the benefits and drawbacks.

At the beginning, we believed the task would be relatively straightforward. After reaching out to a large number of California cities, counties, sports organizations, regional soccer organizations and related nationwide professionals, what was thought to be a common playing surface yielded few examples. In fact, there were only three examples found anywhere in the United States, two in the State of Washington and one in California.

In Bremerton, WA the Pendergast Regional Park has two full size "dirt" soccer fields that included sports field lighting. The fields were built in 1995 using a sand/silty sand mixture that included a full sub-drainage system designed to accommodate the 50 to 60 inches of rain the area received annually. The goal was to create a low-cost facility that could recover quickly from a rain event. Early on, the fields worked well with only light maintenance required, however over time the heavy rains created significant channeling in the play surface that ultimately silted the drain system, compromising the integrity of the field. The fields have sports lighting, but are only used for an occasional practice, not for organized play. The city, which provides little or no maintenance to the two fields, is considering synthetic turf if or when funding becomes available.

In Bellevue, WA the school district created small dirt based fields that could be used by the Lake Hills Soccer Club. The fields were created to complement each campus with an alternative to natural grass, which had difficulty surviving the areas wet season. The dirt surface, which resembles decomposed granite more than soil, was believed to require less maintenance and would support the club's growing micro team program.

The school district is currently in the process of a multi-year program to convert their fields to synthetic turf because children tracking in mud and dirt into the school buildings caused significant damage to floors, walls and doors in the school's hallways and classrooms.

"THE PIT"

The community of Trona is located in the California desert near the China Lake Naval Weapons facility. The facilities staff from high school developed an all-dirt field opposing

Outside of the US, the use of soil-based fields (native material) is quite common, especially in developing countries.

football teams like to call "The Pit." The dirt football field was ultimately created, as a last resort, to provide local nighttime football to the small desert community. The fact that potable water is such a premium, coupled with the effects of the high desert heat, the high salt native soil, and the relentless wind, left the school with limited options for providing the community with a sports field. Synthetic turf was not an option not only because of the initial cost or the extreme heat typical with turf fields, but the difficulty of keeping the wind driven sand out of the infill. According to staff at the school, a field could be completely covered with sand overnight. Only after all attempts to grow natural grass failed did the school decide to experiment by building a dirt field at the school's Griffin Stadium. The Los Angeles Times produced a 2009 article and video documenting the dedication required for the small community to enjoy Friday night football. The school appears quite happy with the field, especially when it gives their team a home field advantage.

Outside of the US, the use of soil-based fields (native material) is quite common, especially in developing countries. The use of maidans, or large, unprogrammed open spaces, is prevalent throughout India, the Middle East and parts of Europe. Maidans are used for a host of community activities in addition to sports. There are also examples of soil-based fields in certain regions of Japan where local clubs prefer to introduce very young players to fast-paced play, all the while discouraging unnecessary falling.

After researching precedents, we began to study the theoretical application of soil-based fields. A number of professionals with knowledge in soil design were contacted to learn how they might approach developing a usable soil-based field. The surface universally recommended is similar to a quality baseball/softball infield. Most infields are a mixture of sand, silt and clay that is imperially developed to the desired mix. If maintained properly, these fields will require frequent watering to provide for a resilient surface.

POSSIBILITIES

Using that as our general approach, we present three design alternatives with varying drainage methods and soil composition. Each alternative provided the client with

design choices depending on the field location and site-specific requirements with subsurface drainage systems terminating in a catch basin, a siltation area, or infiltration pond/detention area. Additionally, there were three soil profile options that ranged from an amended local soil to a more sophisticated engineered soil section.

FINDINGS

The study concluded that the initial development cost ranged from \$800,000 to over \$1 million depending on existing site conditions. A number of factors need to be addressed during design phase that include selecting a preferred plan and soil profile that best fit the site. It will be important to work with a soils engineer to develop a suitable mix for blending of local soils mitigating the heavy clay typical in the area and to identify areas where the topsoil containing organic material will need to be removed. A well-designed automatic or manual irrigation system will be needed to insure maintaining proper soil moisture. The amount of water required will depend on the soil profile, climate and frequency of play. In addition, the design will need to address storm water quality, to comply with the California Regional Water Quality Control Board the Agency, Storm Water Prevention Plan of SWPP, and environmental requirements relative to dust control.

Aside from costs, there were a number of other factors that need to be considered. Beyond the obvious challenge of faster play, there is the anticipated increase in player injury from scrapes to more serious injuries such as concussions. Other considerations are the increase in ball scuffing and dust as the field dries out. Soil-based fields do need to be maintained with a specific routine for watering and grooming; these fields cannot be built and forgotten or they will quickly become unusable.

A life cost analysis of the soil-based field was developed which compared them to a traditional

natural grass and synthetic turf field. The 20-year comparison took into consideration the initial cost, annual maintenance, the cost of local water, and a scheduled field renovation/replacement program. The total cost for field development and maintenance was divided by the annual hours of availability

beyond maintenance, field rest and rain events, all reduced to a cost per hour of available play. The natural grass field allowed for nearly 1,500 of sustainable soccer play and the soil-based fields allowed for nearly 3,000 hours of annual play for soccer while a synthetic turf field can provide up to 3,600 hours. Because the initial cost of the synthetic turf field was higher, the cost per hour of play was also higher than the soil based field examples. The natural grass option cost was nearly double the cost when compared to the soil-based field.

It was recommended that the agency develop one or more test plots to learn more of the pros and cons for the recreational athletic use of the soil-based field. Developing more than one plot would allow the opportunity to experiment with soil mixes including adding SBR crumb rubber to the soil recipe. This would provide an opportunity to test each option for surface hardness by either G-max test or the Head Injury Criterion (HIC), which is said to be a more accurate head concussion test. Currently, only synthetic turf fields are subject to impact tests and neither baseball infields nor natural grass fields are subject to either impact test. In either case, the results will be an important component for how a field will need to be constructed and whether or not "dirt" fields are a viable, cost-effective solution for California's drought conditions. At this point, we shouldn't rule out any options. ST

Derek C McKee is Principal / Verde Design, Inc., and Gary Hover is Project Manager / Verde Design, Inc., Santa Clara, CA. Verde Design is an STMA Commercial Member.



Pendergast Regional Park in Bremerton, WA.



A dirt field in Tasilaq, a town in the Sermersooq municipality in southeastern Greenland; with just over 2,000 inhabitants, it is the most populous community on the eastern coast, and the seventh-largest town in Greenland.



Trona (CA) High School field known as "The Pit."



We probably won't see this spot during the Summer Olympics. San Carlos Favela, Rio De Janeiro, Brazil.

Continued from page 10

During a tournament I completely shut down automatic irrigation practices. You will have enough to worry about this week; the last thing you need is a stuck valve to delay or cancel games. You will still need to irrigate; but make sure someone is manually turning valves on and off, and watching the irrigation system either before games begin or after they end. Be sure to have an inclement weather plan in place and share this information with your team beforehand. This should closely mirror your normal inclement weather plan so most team members should be familiar with it.

Tournaments can bring long hours and stress for everyone involved. To try and curtail this, monitor staff morale and try to stay ahead of any problems that may come up. Lead by example; stay level headed while also showing the importance of event details and deadlines. Stay calm and cool under pressure, your crew will mirror your behavior. Be neat and professional; do not let long hours compromise who you are, and hold your crew to these same standards. Keep your crew, especially crew leaders, informed of everything that is going on. Surprises and change can quickly derail staff morale. Keep a positive attitude and do not waiver to fatigue. Stay visible and work with each crew as much as possible. Rest only when no one is looking; it's just one week. Keep your crew well fed; do not let them become "hangry." Supply meals for each crew; either put it in your budget or work with user groups and concessionaires to provide meals.

After the tournament is over try and reward your staff as much as possible. Have a group meal, look for a team building activity such as a softball game and if you can, shoot for a light workweek. Your field most likely needs some rest as well.

Ashley Valley Community Park Baseball Complex Weekly To Do List

- Check irrigation
- Edge pitcher's mound and homeplate area
- Paint OF foul lines
- Inspect backstop pads, batter's eye, and nets
- Power wash bleachers and concrete around concession stand (Monday)
- Brush concrete walkways (Monday and Thursday)
- Paint bases
- Mow; 3X per week – vary direction

All edges and arcs should be edged as close to monthly as possible. Try and do this at least four times per year. We would edge before and after each season or league as well as before any tournament. If you are performing your daily lip maintenance this is not a labor-intensive task.

Look for stressed areas that may need sod or fertilizer; irrigate as much as needed and roll and level your skinned areas.

I believe the most important element in turfgrass management is that every day matters. Of course we all have events, tournaments and inputs that require extra work and effort; but if we manage our facilities properly day to day, those events can be much easier to deal with. Plan everyday like you are going to have a prestigious event at your facility; you never know when you may get one.

Neil Cathey, CSFM, is grounds specialist for SSC: Services for Education. The experiences he describes in this article came from his time as parks superintendent at Uintah Recreation District, Vernal, UT.

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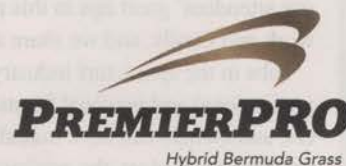
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Dr. Mike Goatley, left, talks bermudagrass trials at a field day event.

BALANCING WORK AND FAMILY

■ BY LISA GOATLEY & DR. MICHAEL GOATLEY, JR.

For a few years now we have given a presentation under this title at STMA Conference, building upon Mike's understanding of the turfgrass industry and its challenges, and Lisa's career as a Licensed Professional Counselor. We also draw upon our own experience as a dual career couple married for 26 years. We continue to learn from our attendees' great tips in this never-ending quest to balance work and family, and we share a few of those strategies here.

Jobs in the sports turf industry are very stressful on both professional and personal fronts. Supervisors, coaches, players, and owners can have unrealistic expectations. You may not have the budget, the equipment, or the labor force to meet the expectations of these groups. And no matter how hard you work, expectations can be shattered by the realities of Mother Nature in a matter of minutes. And perhaps the person that is most important in meeting expectations is YOU, the sports turf manager. There is no more passionate group of people than sports turf managers, and their passion and commitment to excellence often result in very unrealistic expectations of a personal nature when it comes to the job. With these pressures, it is easy to overlook the basics in maintaining healthy relationships with your spouse and family. Below are some suggestions for maintaining healthy relationships that we have learned from our own personal experience and from your colleagues in the sports turf industry:

Define rituals that matter to you and your family. Rituals

create connections and connections are critical to relationships. Rituals require intention, coordination, and commitment by multiple parties. The ritual at the Goatley house has long been dinner where we sit as a family at the table every night possible (Lisa found some research data from the counseling field that showed that eating meals as a family resulted in children having better grades, lower incidences of truancy and drug use, and being better adjusted). Even though Mike travels a lot for his job, he maintains the evening meal ritual by texting photos of what he is having for dinner that night. Hence, we still share meals, even when Mike is out of town. What rituals best fit your family? Perhaps meals don't work, but maybe it could be "game night" or "pizza night." Maybe your ritual can be established for homework, bedtime or at breakfast? Find something that becomes your ritual and stick to it. And even if you are away from the family, find a creative way to still participate in the ritual.

Bank positive time. Think of this as essentially establishing your very own rainy day fund that considers personal capital rather than financial. There are seasons in your job that are by nature very busy and seasons that are less busy. During times that are inherently less busy, focus on spending more time participating in family activities when you may have greater flexibility to do so. There are also seasons in your relationships. Some life stages are busier, such as starting a career and raising a family. These life stages often overlap with competing priorities. So as you climb the career ladder, it takes a conscientious

effort on your part to bank the positive time for your spouse and family. Positive time doesn't have to involve exotic vacations. It often can be as simple as meeting for lunch. And if married, designating some of this banked time specifically for your spouse is very important too.

Create special connections and then stay connected. One terrifying trend is the number of marriages that fail after 25 years. Why does this happen? At 25 years, the kids are typically out of the house and the husband and wife essentially don't know each other anymore because their lives have revolved around the children. Therefore, couples need to be very careful in creating their own special connections. There are lots of ways to establish connections. One very simple way that we stay connected is through the wallpaper on our smart phones. This gets updated once a year with a photo of us or our family from our most recent vacation. Think about how many times a day you peer at your phone, and what better way to think about your loved ones than to see their picture as the wallpaper on your phone? Then, when that picture jogs your memory, take a moment every now and then to contact your loved one. It might be a quick phone call at lunch or a text message. Find a way to connect with your significant other during the day every day.

Another strategy to stay connected is to engage in meaningful activities as a couple. For many years, we taught the 2nd grade sacramental preparation class for the Catholic Church we attended, both in Mississippi and then in Virginia. These were great opportunities for us to live our faith together, set an example for our kids, and support our church all at the same time. Think about how many opportunities there are for you and your spouse to do some great things together as a couple.

Another strategy that a lot of sports field managers already do is to involve your spouse/family in what you do. Invite them to your work. When possible, perhaps you can arrange to have your family come to STMA Conference with you to combine work and vacation together (the 2017 Conference at Disney will certainly be conducive to this). And the sports field manager should be sure to show interest in their spouse's work as well.

The myth of quality time. Couples are very happy when dating because they spend so much time together doing mutually enjoyable activities. Then, marriage comes along and you don't get to do as many of those fun activities any more after having kids. A relationship requires quality time, but there also is a certain quantity of time together that is important. That concept of balance returns as you try to figure out what are the right amounts of activities for the family. We made the decision that our children would pick out one or two extracurricular activities that they would be involved in and that we would not spend all of our time on the road shuttling kids back and forth to that day's activity. We think they have turned out just fine and are not scarred for life because they didn't play every sport or instrument on the planet. Each family has to make their own choices in this area, but try to determine what is that balance between priorities and commitments.



Mike and Lisa Goatley share a selfie!

During times that are inherently less busy, focus on spending more time participating in family activities when you may have greater flexibility to do so.

Do the right thing. This tip is much easier said than done! When you work in an industry that is all about determining winners and losers on the field, it is hard to accept the fact that sometimes you might win the argument, but lose the war. Don't keep score and debate about who has done more. If something needs to be done, take care of it without worrying about whose job it was. When you are in an argument with your spouse, no one wins. And don't wait for your spouse to change; you start first.

Remember the important dates. This one is particularly important for all of the guys. Most women have an innate ability to remember the birthdays of nieces, nephews, second cousins once-removed, and so forth. Make sure that important dates are marked on your calendar. Electronic calendars make it easy to combine and share your schedule, reducing opportunities for miscommunication and hurt feelings. It is likely that a sports turf manager's job calendar will overlap with some important dates on the family calendar. It is very important that these conflicts on the calendar be understood well in advance so that there are no hard feelings about missed events or miscommunications.

Be present. The digital age has us more connected with the world than ever before, and probably more disconnected with

each other than ever before. When you spend time with your spouse and family, make sure that you are present in those moments. How many times in a day do you see friends, couples, or families gathered together, but instead of talking they are peering at their smart phone rather than engaging with each other? Are you one of those people too? It is an easy habit to get into and it is a hard habit to break, even for a moment. But make a conscious effort to disengage from the digital world and be present with your family when you can spend time together.

There is no more passionate group of people than sports turf managers, and their passion and commitment to excellence often result in very unrealistic expectations of a personal nature when it comes to the job.

Does your personal life need help?

A good sports field manager would not hesitate to work with a consultant on improving their sports fields. A licensed professional counselor can serve that same role as a consultant in your family life. Those in male-dominated professions often overlook counselors as resources; counseling simply is not a strategy many consider. However, consulting with a good therapist can be the difference between happiness and frustration in your personal and professional life.

The greatest gift? That would be giving someone your time. When you give your time you are giving a portion of your life that you will never get back. No one at the end of life ever says that they wish they had worked more. What we do regret are the ways that we neglected relationships and missed opportunities to connect with the

people who are most important to us. You have the opportunity now to make some changes that could make all the difference in your world. **ST**

Lisa Goatley is a Licensed Professional Counselor for The Cascade Group, Blacksburg, VA; Dr. Michael Goatley, Jr., is Professor and Extension Turfgrass Specialist, Virginia Tech, and a Past President of the Sports Turf Managers Association.

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John Mascaro's Photo Quiz

Answer on page 37

John Mascaro is President of Turf-Tec International

Can you identify this sports turf problem?

Problem: Dark green line of grass

Turfgrass area: Municipal sports field complex

Location: Chesterfield, Missouri

Grass variety: Bermuda, fescue, ryegrass



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Ricky coaching a child at Proehlfic Park.



NFL GREAT RICKY PROEHL PREACHES THE P.O.W.E.R. OF PLAY

Creates a sports facility for kids, pros & turfgrass research

■ BY STACIE ZINN ROBERTS

Editor's note: The author wrote this article on behalf of her client, Sod Production Services.

Ricky Proehl played in four Super Bowls during his NFL professional career as a wide receiver, winning two appearances in "The Greatest Show on Turf" with the St. Louis Rams and Indianapolis Colts. Earlier this year, as a wide receiver coach for the NFC Champion Carolina Panthers, his team went to the Super Bowl again. Yet even after achieving the highest levels in football, Proehl says his passion remains working with kids through his P.O.W.E.R. of Play Foundation (where P.O.W.E.R. stands for Play, Opportunity, Work, Excellence & Respect) at the sports facility he and his wife, Kelly, built in Greensboro, North Carolina, called Proehlfic Park.

"We started the park to give back, to create a place for the youth of our community to thrive, to have a place to go to where they could realize their dreams," Proehl says. "My upbringing was so positive. You're a product of your environment. I had so many positive influences through middle school, high school, in college and in the pros. When you're around people who want to be successful, who work hard, you become who you're around. You become inspired, motivated to be successful. I want children to feel that, to understand what that feels like."

The need for such a place in the greater Greensboro area certainly exists. According to Tyler Wilson, director of the P.O.W.E.R. of Play Foundation, 23% of children in Guilford County, the region served by Proehlfic Park, are food-insecure — meaning they are unsure where their next meal is coming from or when. One in five people live below

the poverty level, and 59% of Guilford County School students (42,708 children) qualify for free or reduced-price meals. This level of poverty can create an atmosphere ripe for crime and drug abuse. But statistics show that children who are mentored are 46% less likely to start using drugs, 27% less likely to start using alcohol, and 52% less likely to skip school. And that's where Proehlific Park comes in.

"The goal of the foundation, what we strive to do is meet children where they are and provide them with opportunities they wouldn't regularly have such as playing on a sports team or providing after school care. We try to support them in any way they need. We work with other non-profits to get them clothes, shoes, food, snacks," Wilson says.

The 22-acre Proehlific Park facility opened in 2008, says Mike Pusey, groundskeeper, and includes 7.5 acres of managed turfgrass over three soccer/multipurpose fields and three baseball fields. It also has three indoor artificial turf fields, plus a gym, fitness center, weight room, kid's club and locker rooms. In all, Proehlific Park serves more than 81,000 annual visitors who participate in league sports, summer and winter sports camps, tournaments and other activities.

Running a facility of this size, serving a population with limited financial resources, "became such a huge undertaking time-wise, financial-wise, it became a strain," Proehl says. "Through God's blessing, I was fortunate to get an offer from the Carolina Panthers to be the receivers coach."

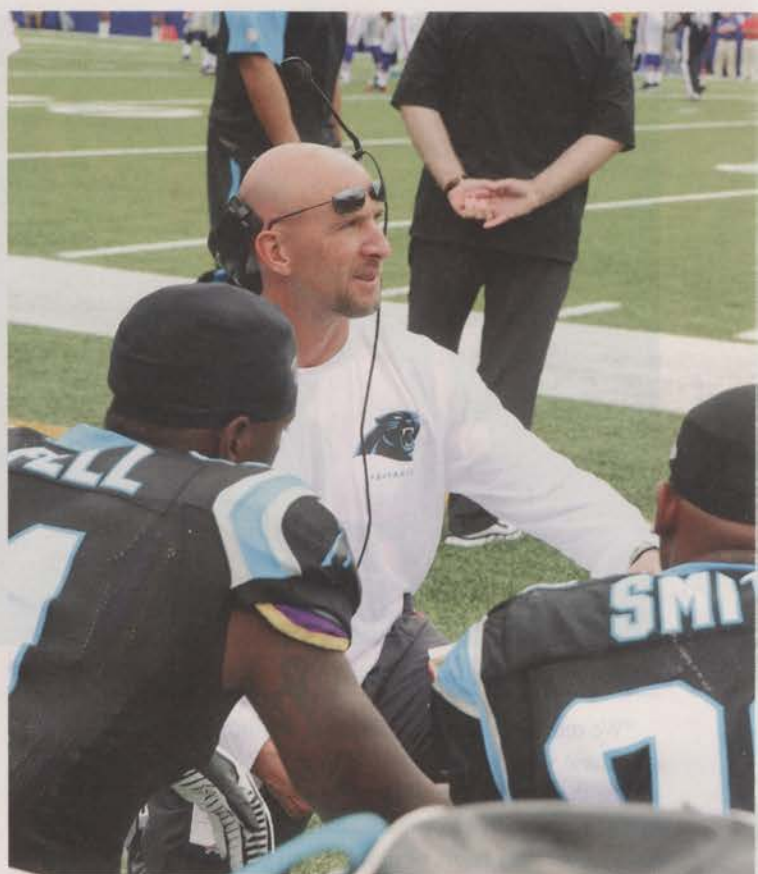
Still, even with the aid of a coach's salary, the park requires the support of contributions from donors and other corporate sponsors. Learning of the situation, members of the turfgrass industry stepped up to help.

In the winter of 2014/2015, the grass on the three multipurpose fields experienced extreme winter kill that looked like "half grass/half dirt every 2 feet" says Mike Kennedy, president of Proehlific Park.

Brian Walker, vice president of business development for Sod Production Services, a division of Riverside Turf headquartered in Charles City, VA, knew of the park's mission. "We kind of adopted the complex," Walker says. Along with the help of Steve Smith of Specialty Turf Services in Chesterfield, VA, they renovated Field 1, and planted it last summer with PremierPRO, a durable, cold tolerant variety of bermudagrass.

"We had a great year as far as wear and tear with the PremierPRO," says Pusey. "They sprigged it and we did not overseed it. It's held up really well."

**To support the P.O.W.E.R. of Play
Foundation & Proehlific Park,
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Ricky Proehl coaching the Carolina Panthers.

The renovations on the first field were so successful that Walker enlisted the help of more industry professionals to complete renovations on the other two soccer/multipurpose fields this year.

Field 2 will be renovated with construction help from the Nolan Thomas Company of Oxford, NC. Field 3, which requires extensive renovations such as removing four-inches of soil and re-adjusting the crown of the field, will be completed by Carolina Green Corporation of Charlotte. Both fields will be grassed with PremierPRO bermudagrass.

As an NFL professional, Proehl has found that many of his colleagues coach "through fear and intimidation. I don't. I coach through encouragement, through understanding." This philosophy permeates Proehlific Park, and because of that, what began as a sports facility for kids has grown into so much more. Proehl's reputation as an empathetic and skilled coach draws pro athletes to the facility to train and benefit from his positive philosophies. And turf industry professionals like Walker who, at first were attracted to the facility as donors to the program through field renovation and maintenance consulting, have realized the unique combination of charitable work, high traffic youth athletics, a low maintenance budget, and high-level professional training lends itself to something unexpected — a perfect environment for turfgrass research.



Children playing on the multipurpose fields at Proehlific Park.

"We realized the potential that Proehlific Park has to showcase what natural grass can do," Walker says. "We could utilize the park as a real life research center, with real traffic, real players, with a low maintenance budget, and that we could track how many hours of play we can get out of these fields."

Other cooperators like well-known sports field consultant Jerad Minnick agreed to guide Pusey and the Proehlific Park staff through his innovative maintenance protocols to get more out of the natural turf. Todd Jones of GT Air Inject, developers of the Air2G2 aerating machine that injects air into the soil column, also sees the potential of testing and recording the effectiveness of his machine under such strenuous real-world conditions. All play, maintenance and results will be tracked consistently by the park's staff.

The program is in its infancy but more information should be released soon to the industry about the research to be conducted at the facility.

"We're starting down the road of finding better ways to maintain natural grass fields," Walker says, which fits right into his company's mission.

"We want to show the excellence and versatility of PremierPRO," Walker says. To do so, Sod Production Services created a team concept, Team PremierPRO, to bring together researchers, sports turf managers, sod producers, equipment manufacturers, and other industry professionals in order to share information and promote the benefits of improved natural grass varieties.

In the end, if the fields are successful, the kids thrive and the park achieves its mission of growing a stronger community.

"The more time kids spend on sports fields," Walker says, "the better it is for everyone."

ST



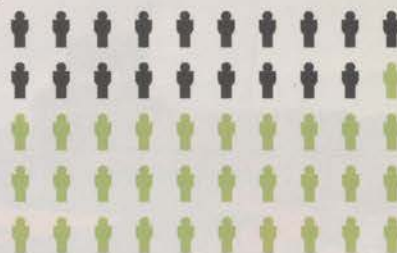
Stacie Zinn Roberts is a writer, speaker and marketing consultant. Her company, What's Your Avocado?, is based in Mount Vernon, WA; she is author of "How to Live Your Passion & Fulfill Your Dreams."

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SAFETY NETTING RECS AREN'T RULES: SHOULD YOUR FACILITY FOLLOW THEM?

■ BY MARY HELEN SPRECHER

Play ball . . . safely.

To nobody's great surprise, Major League Baseball in December announced new recommendations concerning safety netting at its ballparks. This came on the heels of a particularly bad 2015 baseball season in which fans were struck by everything from batted balls to flying shrapnel from broken bats. *[Editor's note: already in 2016 a fan was struck by a batted ball in Tampa Bay; the team has added extra netting.]*

The wording used by MLB was less than strong, however; to wit:

"After an in-depth study, Major League Baseball has recommended that all teams should lengthen the safety netting at their ballparks to increase fan safety. . . Teams will be encouraged to add netting, or some sort of protective barrier, to shield fans from balls and bats that sometimes go into the stands in all field-level seats between the near ends of both dugouts and within 70 feet of home plate."

So while it wasn't actually a rule, per se, it was a recommendation. But given the fact that it's easier to take visible steps to prevent an injury than to deal with the aftermath of one, it's not a surprise that many ball clubs have endorsed the measure, which you'll be seeing this season. In fact, Minor League Baseball has thrown its support behind the recommendation as well.

The question, of course, is whether it'll be followed at lower levels than just MLB and MiLB. After all, as sports facilities become ever more sophisticated, with college, high school and even Little League fields increasing in scope and in number of amenities, it's a fair question.

Problem is, nobody is committing to a statement. On the other hand, field builders and suppliers of equipment, who have the inside track on the industry, have been able to share some insights on the issue.

Josh Hicks of Promats Athletics notes, for example, that his company, a division of Sportsfield Specialties in Delhi, NY has seen an uptick in inquiries about safety netting.

"Promats has quite a few Minor League Baseball teams interested in expanding their ball safety netting," he notes. "There are also many colleges making plans to install safety netting, often in conjunction with renovation and construction projects. I see a consistent recognition that there is value in providing spectators with additional safety at all levels of play."

One of the concerns on the MLB side has been decreased viewing ability for spectators who are seated behind netting. An article on the MLB website noted this. Trying to combine safety with a positive fan experience may take a balancing act, particularly in the first year.

"We understand that our fans differ in their opinions about sitting behind protective netting and we will do our best to

accommodate those different preferences," Phillies executive vice president and chief operating officer Mike Stiles said. "We anticipate that [this] will require us to expand our protective netting behind home plate about 10 feet in width on both sides, reaching to the near side of each dugout. We also plan to replace all of our existing netting with newer material, which is as strong but thinner and more easily viewed through."

In addition, ball clubs will likely need to indicate in the seat selection function of their websites which seats are behind netting and which are not.

"Major League Baseball prides itself on providing fans in our ballparks with unparalleled proximity and access to our players and the game taking place on the field," Commissioner Rob Manfred said on the MLB site. "At the same time, it is important that fans have the option to sit behind protective netting or in other areas of the ballpark where foul balls and bats are less likely to enter."

But since many fans consider the ability to catch balls and even interact with players to be part of the baseball experience, the new safety regulations will be, at best, a work in progress.

Hicks notes that a safety audit should be done periodically by facilities, particularly in light of the new recommendations.

"For MLB and MiLB baseball applications, safety netting should be a minimum of 30 feet high and extend to the end of each dugout," he notes. "This would also be applicable for a lot of Division I venues where spectators are seated behind the dugouts. In venues with smaller programs, fans usually sit behind the backstop. In these cases backstop netting is sufficient."

At some lower level facilities, where several sports share common areas, other types of safety issues come into play. Megan Buczynski, PE, LEED AP, of Activitas Inc., Dedham, MA says that youth fields should be checked for safety.

"Where we do see a great demand for safety netting is in track and field facilities when track and lacrosse are both vying for field time in the spring. In a few facilities we have installed 10-foot high netting around the inside perimeter of the track to provide a barrier between the track and the field. This allows the school or institution the ability to hold practices at similar times. There are certainly considerations and construct ability considerations for using this type of system, but we have seen it used very successfully from a range of clients."

And, notes Matt Moyse of Sportsfield Specialties, that comes into play even more in the case of throwing events.

"Protective cages are required for discuss and hammer, but we do have requests for extensions in locations where throwing events interact with other activities at the facility. In regards to batting cages, we recommend installing netting at least on the home side of the baseball/softball facility."

In some ways, the netting issue is a bit like helmet issues in bicycling or other sports – for everyone who acknowledges the need for safety, there will be someone else who chafes at the restrictions they add.

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THE NEXT GENERATION OF SPORTS TURF MANAGERS

■ BY KEVIN MERCER, CGM, CSFM & LICM

The next generation of sports turf managers could wear four additional hats before they even start working on their fields: environmental stewards, budget consultants, human resources officers and project managers.

We have seen a lot of changes happen within the grounds/sports turf industry through the past 20 years. What once was maintaining the agronomy and safeness of a freshly mowed, striped athletic field has now turned into, "What have you done for me lately?" and "I need that report by tomorrow."

What has happened over the past two decades that is making us work longer hours and spend more time away from home? I recently signed up for a time management class and found out that the things I was working on that I felt were important and critical, were in actuality a secondary thing and not a priority or urgent need at all. To do more daunting tasks, I had to first prioritize urgent and non-urgent needs. Below are some ideas that have worked for me.

TIME MANAGEMENT

Because sports turf managers have to do more with less, the need to prioritize their time off the field is just as important as if they were preparing for a big game, but every operation is different. Below is list of things that might help you formulate your own plan in regards to what needs to be done *now* and what can wait. Remember this quote from William Penn: "Time is what we want most, but what we use worst."

DO TODAY	PLAN FOR TOMORROW
Emergencies and complaints about life safety crisis issues on and off the field.	Planning, preparation, scheduling
Higher management or stakeholder's objectives	Research, investigation, designing, testing
Planned tasks or project work now due	Networking, relationship building
Meetings and appointments	Thinking, creating, modelling, designing
Problem resolution, fire-fighting/life safety, fixes	Developing change, direction, strategy

■ Vendors: I have one day a week for my vendors. Most of them know to call ahead and make an appointment either with

my administrative assistant or me. The time of day is yours, not your vendors.

■ Don't re-invent the wheel; if it's not broken, why fix it? If someone went through all the pain and mistakes for you already in one area, repair something that is still broken. Nobody has a perfect operation.

■ Learn to say "no" politely and constructively. Be careful about accepting sideways delegation by your peers to you. You may find it easier explaining inefficient reasons to justify your position with your peers then explaining to your boss why you came up short and failed in completing tasks and responsibilities.

■ Never try to promise more than you can deliver. Sometimes we all have tried to complete large tasks in one day from sacrificing the normal daily tasks and then force our crew to play catch up all week along to get things back to normal. If you take an hour of the day to eat away at a large task for a week or two, you and your crew will finish the job without altering productivity.

Environmental stewardship. Sports turf managers might have to understand unique concepts for suitability practices at their facility. They should have a basic understanding of best management practices (BMPs) to reduce energy consumption, solid waste and slowdown or capture storm water runoff. The Sports Turf Managers Association has an environmental certification process to help you manage this process within your facility.

One of the more trending topics these days is storm water management. On the 25th anniversary of the Clean Water Act, then-Vice President Gore directed the Environmental Protection Agency and the Department of Agriculture to work with local agencies and the public to prepare an aggressive plan outlining the next generation of clean water protection. President Clinton and VP Gore released the Action Plan in 1998 that contained almost 100 action plans that consisted mainly of existing programs, including some planned regulatory actions that agencies have had underway, now to be enhanced with increased funding or accelerated with performance-specific deadlines. The turfgrass industry has been affected from several states adopting new storm water regulations and some governmental state agencies monitoring our nitrogen and phosphorus applications and mandating a fertilizer certification with an annual recertification. The environmental laws most likely are going to get tougher over the years, but being proactive and

conscious about your ecosystem is great start within your turfgrass program. Also, being a good steward could also be talking about fertilizer or selective grass cultivars within your community.

Budget. In 2008, when our economy weakened, senior management invented a new catchphrase: "doing more with less" (aka, you're going to do the work of three people, and here's why). The folks on your grounds team that retire or move onto another job weren't being replaced to save money for unforeseen high petroleum costs, which literally had a trickledown effect overnight that inflated prices for almost everything we purchase.

Furloughs were forced on many employees within the local, state, and federal government agencies. We had to salvage budget without altering the function or appearance of the sports fields and grounds within our facilities. Equipment purchases were halted for most of us, because any allocated new equipment funds were used for other department budget shortfalls. Just when we couldn't find any more room or areas within our budgets to shave spending, we had to get creative and wave our magic wands to find ways to make our budget dollar stretch even more.

Planning contingencies for unforeseen things you may come across is not only an excellent management skill, but will showcase your budgeting skills to your senior administration. Dealing with a tight budget is hard to do, but here are two examples that work for me; perhaps they could work for you:

When purchasing supplies, I will typically follow yearly trends on the stock market and here's why. If you take a look Investopedia (www.investopedia.com) you can see the last 88 years of the highs and lows from the New York Stock Exchange (Figure 1). Why is this important? Because if you know the months that bring high returns on investment and the low returns, you can estimate when the market is busy and when the market is not; however, your vendors know this information too from their monthly profit and loss statements, so a poker game will have to be played for

purchases you make.

Most fiscal years start in July, which is the highest month on the stock exchange for return on investment, so it may not be the best time to bargain shop for seed, fertilizer, and chemicals. However around the end of September to October, vendors are scrambling to make room in their warehouses because space is being taken up for out-of-season bulky products is money wasted. In fact, this is the time you can save anywhere from 10%-30% on seed, fertilizer, chromo rubber, or any other bulky item that is taking up space at warehouses. The drawback is some turf managers might not have adequate space to do this, but if you can find the room to sit on it for few months, it does provide a good return on investment compared to in-season market prices.

The next thing I did was try to zero in on the dollar, without wasting product. Computer-aided design (CAD) is primarily use for engineering specifications for construction projects; however, I just recently learned a concept to capture grounds maintenance cost in a easy-to-read legend without several pages of boring Excel sheets that can be repetitive, and sometimes hard to follow, if presenting a forecast

(Figure One)



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The first thing I did was to showcase all of the campus high profile grounds lawns that are considered high "view areas" or "event areas" that could be selling points to potential new students, donors, or alumni.

If your property already has a mapping in CAD that captures your roads, parking lots, sidewalks lawns areas and beds, most of the work is already completed for you. This is an excellent tool for breaking down square footage and costs associated with them from each individual legend. Please see below what I have captured for each building landscape associated upkeep cost. Please note there are several online calculators for calculating the square footage costs for mulching, acreage mow per hour, and fuel and maintenance costs.

CAD examples for Budgeting out Lawn Areas: Total square footage for individual lawn costs for herbicides, fungicides, insecticide's grass seed, fertilizer, labor hours, equipment maintenances and fuel cost.

CAD examples for Budgeting out Bed Areas: Total square feet and plants inventory per bed and replacement cost for each of them. The maintenance cost can cover items like mulch, herbicides, fungicides, insecticides, labor hours and equipment maintenance and fuel costs.

CAD examples for Budgeting out Athletic Fields: Total square footage for individual athletic field costs for herbicides, fungicides, insecticide's grass seed, fertilizer, mound clay, skin area, labor hours, equipment maintenances, fuel cost, etc.

CAD Examples for Budgeting out Tree Cost: Developing a tree pruning maintenance cost can vary, depending on your location; however, a safe figure could be anywhere from \$90-\$120 per tree, if contracted out. An additional \$15-\$20 per tree could be added, if you wish to add a "tree risk report." Adding this could also reduce your insurance policy premiums by being proactive in identifying hazardous trees on your property and having a program for the removal of them.

CAD examples for Budgeting out Roadways and Parking Lots: Total square feet for individual roads for winter salt use and paint costs for all parking stalls. Also, total all of your signage and identify costs for each of them or total them all together per area. You can also identify costs for milling and repaving, based on your geographic location for specifications and asphalt cost.

Once completed you can format and customize your legends

to fit your operations budget for all areas of your facilities and grounds. Then, you can build on it with labor tracking and additional expenses tracking, from a quality control standpoint, using the baseline you developed with accurate information regarding square footage from your property. This is also a very user-friendly way of presenting all of your high profile areas with associated costs and how to build upon it with either additional funding, labor, or both. Presenting is fairly easy, because it typically speaks for itself without being too wordy or drug out from excessive pages of Excel sheets or PowerPoint.

Human resources. When I think of employees, I like to refer to one of my favorite quotes from Willard Marriott: "Take good care of your employees, and they'll take good care of your customers and the customers will come back."

Below is a list for things you might want to ask your employees to have a productive labor force:

- Ask your crew a couple times a week what the coaches or athletes are saying positive about the field, even if you already know. Everyone likes telling the boss the good stuff, but this will also help your evaluation process with respect to things not mentioned. This is an easy way of finding out the bad, while letting

your crew tell you the good.

- Tell your crew often that their success is your success and their failures are your failures. Let them come up with "out of the box" ideas to help you make the field and complex a little safer, cleaner, aesthetical pleasing, and environmental friendly. A few opinion or think-tank meetings with you and your crew could offer some great ideas or solutions to existing problems with your facility or grounds. This again will offer them buy-in and a sense of value for your operational maintenances plan. Make sure everyone on your team understands the key role they play in contributing to the

Personal note

We are gaining momentum though our hard work and professionalism on and off the field. We are starting to see the current tides for safer athletic field surfaces within our local committees from the local and national news media. The Board of Directors, members, educators, and staff of the STMA are working hard to have us all ready to ride the wave when the floodgates open. I had the honor of sitting with the late Leo Goertz at the STMA Awards dinner at their conference in Denver in 2015. Unfortunately, I would not have guessed that it would be my last time last time seeing my Texas friend. I remember asking Leo about his views on our organization and where does he see it going. He thought about it for a minute and then looked me right in the eyes then said, "It starts with you and me." People don't like to be pushed into things that they feel they are forced into doing, and sometimes that's how you make some of us feel, Kevin, with your environmental views." Humbled and appreciative at the same time, I just looked at him and smiled. He just patted me on the back and we started talking about how and why the things below are so important to all the STMA committees and how they strengthen our organization as a whole. Thanks for the great talk, Leo. Like so many others, I will truly miss our talks each year and how you got your point across.

success of the department.

- Positive reinforcement equals positive outcome every time. Your crew doesn't want to let you down.

- Respect for a management position is a given, but respect for who you are as a person is earned.

- Cross training: I can't stress this one enough! Employees will get sick and take vacation time; however, the operations can't slow down or stop just because your all-star player is out. Cross training all crewmembers is vital to any organization. This provides a little competency amongst your crew and is an honest approach to giving everyone a fair shot for at mastering all facets

of your operation.

- Work with each employee to create his or her own personal development plan. Then, provide them with coaching and mentoring, and help them increase their skills and their sense of competence and accomplishment.

- Help employees learn through the national STMA conferences or local field days your local chapter might provide.

- Listening to your team promotes you care. When you show you care, they will show they do too with in their work.

- Hire wisely and have your more experienced team members sit in on the interview process. Encourage them to provide feedback.

- Push yourself to become a better leader by setting your own personal goals.

- Encourage working smarter, not harder.

Project management. When renovating a field for safety or function remember the old saying, "pay now or pay later." You'll need to keep in mind that the bean counters care about the bottom line and justification. The coaches worry about safety and playability and the balancing act will fall on you. To start, you might want to do a comparison of smaller projects in-house vs. contracting (only if you're comfortable with the scope of work). Below are some principles that I have used to help me with the decision-making process:

- **Design development:** Can you afford it? In this phase, the architect will develop blueprints showing exact field dimensions. You should carefully read these blue prints and see if it's sustainable by your grounds budget and if it's within the guidelines of what your facility needs. Remember, revisions can be complicated and costly.

- **Construction Documents:** Before talking with contractors, the architect will develop a scope of work that should clearly define a timeline for completion.

- **Bidding:** With final blueprints and construction documents in hand, it's time to open the project to bids from general contractors and subcontractors. After the bids are reviewed, the project is awarded to a general contractor. You should proceed with purchasing the equipment from capital expenditures during the construction of the field; however, put a replacement plan in place for each piece of equipment to avoid equipment purchase delays from equipment funds not allocated.

- **Construction:** Visit the site often. If something isn't being done according to the agreed-upon plan, be sure to discuss your concerns with the architect and administration and document it.

- **Grow-in:** Try to have the field ready and scheduled for seed during the months that thunderstorms won't wreak havoc on your laser level field. This can get costly, if this is not part of the contract work.

Field builders can be found through organizations such as STMA or the American Sports Builders Association (ASBA). Discuss your project with them to get ideas for items listed below.

FINAL THOUGHTS

Speak from your own experience. If you have something you would like to share with the STMA members, bring it up and share it. Not everyone will agree and that's okay, it's a start to fix a problem together as a group.

Let others speak. Sometimes I can be so passionate that I railroad my conversations and force my point across, rather than trying to get others to buy-in on the subject. Everyone looks at a problem differently and several minds working together are better than one working alone.

Face challenges. Lean into discomfort, don't avoid it or rush hard into it. Slow and steady wins this race. There are a lot of folks that make up several great committees for the growth and professionalism of the STMA. This is why we are "Experts on the Field, Partners in The Game."

Also, get involved with your local STMA chapter, this is a great resource to take advantage of and also provides excellent networking opportunities.

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Kevin Mercer, CGM, CSFM & LICM, is Manager of Grounds, Facilities Services and Campus Safety for The Lawrenceville School, Lawrenceville, NJ.

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THE SPORTSTURF INTERVIEW: HEATHER NABOZNY

This month in "The SportsTurf Interview," we feature Heather Nabozny, head groundskeeper for the Detroit Tigers.

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

NABOZNY: I would say the biggest obstacles facing my fellow sports turf managers are balancing the high demand for field use outside of baseball. Such as concerts, football, soccer, weddings, high school baseball, baseball tournaments, corporate events, etc. It is especially difficult for those that have elements of weather to deal with i.e., snow and rain. Warm weather teams have dealt with events year around for quite some time. However, the cold weather teams are now getting more and more winter events. This can be extremely difficult for a sports turf manager to get their fields ready for Opening Day. They are dealing with frozen soils, snow, rain, low light, and cold temps. Consequently, if they don't start off with a strong healthy field in the spring they will find themselves playing catch up for the rest of the season.

SPORTSTURF: What are your biggest challenges working in such a high-profile capacity with the Tigers?

NABOZNY: My biggest challenge is balancing outside events and baseball. I think I can speak for all groundskeepers when I say we want our fields to play and look the very best. With the heavy field use it is very difficult to balance and figure out that threshold. With the high cost of operating a baseball club, teams are looking to other avenues to generate more funds. The field is a good source to generate these funds. It is difficult for me to watch all of the events that we host here yet I try hard to be considerate to the business side because I know these events are not going away and the challenge is managing the balance between the two.

SPORTSTURF: Do you still look for advice from your fellow MLB groundskeepers? Give us an example of what you might reach out to them for.

NABOZNY: I absolutely reach out to my fellow MLB groundskeepers. They are one of the best tools that I have. Many of my questions to my counterparts have to do with outside events. For example, concerts one club might have had a concert with the same artist that may be heading our way next. Finding out the good, bad and ugly helps us better prepare for their arrival. Other questions may have to do with equipment, netting, new products, performance of new turf cultivars, etc.



Heather and her favorite crew member, Dottie, her bull mastiff.



Pulling the tarp in Detroit.

With the high cost of operating a baseball club, teams are looking to other avenues to generate more funds.

SPORTSTURF: You put in a new Kentucky bluegrass field before the 2014 season; how has it performed its first 2 years? What maintenance adjustments have you had to make, if any?

NABOZNY: We installed a new field in the springtime of 2014 following the Winter Classic Alumni hockey game. Our turf has done fabulous!!! The only maintenance that we changed was our height of cut. We went from 1 inch to $\frac{3}{4}$ inch; this turf performs better at a shorter height of cut. The turf's soil matched up with our sand rootzone fantastically. The only negative I would add is that we have more *poa annua* than I would like. However, luckily this turf is lighter in color than some of the midnight types therefore, the *poa* is easier to mask.

SPORTSTURF: What advice can you share with younger turf managers about being successful in the profession, specifically in regards to professional baseball?

NABOZNY: Starting off as a new turf manager in baseball is a little different now than it was when I started out 24 years ago. The main difference is the amount of events that take place on the field. Thankfully vendors have come up with products and services that make our job easier. When I started out I did not have to deal with too many events besides baseball; however, now we rarely have a day that goes by without some type of on field event. I think going in with this knowledge will better prepare you to get a plan, have parameters, check out new products and services available, inform your team of the risks so that they have knowledge of the possible repercussions (in writing!).

SPORTSTURF: How has social media impacted your work?

NABOZNY: Social media has not greatly impacted my work, mainly because I do not participate with Facebook, Twitter, etc.

SPORTSTURF: You've been an MLB groundskeeper for a pretty long time; how do you think your job might change in the next 10 years?

NABOZNY: My job will have some changes over the next 10 years. Player's salaries are not going down so I predict we will be hosting more outside events.

SPORTSTURF: What are your passions and interests outside of work?

NABOZNY: I love to take trips on my motorcycle! I also have a show dog, a bull mastiff that is absolutely a joy to be around. I bring her to work with me daily.

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Jim Leyland, left, talks with Heather when he was manager of the Detroit Tigers.



Heather directs her crew before an event at Comerica Park.



Leading the discussion at yet another non-game event at Comerica Park.

DON'T DRIVE THE BUS... or how to maintain a successful career and not get lost in a budget crunch

■ BY MICHAEL ROI

Of all the factors that can determine the success and longevity of sports turf managers, budgets can be the most impactful. Just remember...don't drive the bus! What am I talking about? You may be the only person at a small, private facility or maybe someone who wears a shirt and tie and oversees the maintenance of several fields, but most readers know someone who is in the position I'm going to describe.

Let me make the connection by saying our industry is under a constant downward spiral of resources versus wants, and we usually end up covering more than one (or all) of the bases to bridge the gap. It is no secret the quality and appearance of the fields you are managing is

a direct reflection of the budget you are given. It is easy to look at a world-class field and know there is money helping make it that way just as you might look at the non-profit facility and see the obvious deficiencies.

Here is what most people *don't* realize. The long arm of the budget reaches further than just the field, which affects the level of quality and experience of each and every one who helps manage and use those fields. Abundant and flowing resources bring new and plenty of high-quality equipment, labor, and education, whereas budget restrictions cause a discounting of those elements, forcing turf managers to make tough decisions as to where to use the money most wisely.

Unfortunately, in these bad budget situations, there are usually no winners. Those who use the fields are subject to unappealing or unsafe conditions. Proper and regular maintenance ends up being a case of shifting resources from the finer aspects to "just the basics," leaving the crew (or one person!) feeling worn out and unappreciated due to any complaints despite best efforts and intentions.

I found myself in this very situation when I agreed to manage a newly built, \$3.2 million athletic complex for a non-profit organization. There was just one problem. I take that back...there were many issues concerning where to spend the money. The laundry list of "wants" far exceeded the reach of the budget. Those in power (read where the money was) were going to get what they wanted, even if it meant

cutting a few corners along the way. I later learned, at the first Sports Turf Managers Association meeting I hosted after only 2 months on the job, that the entire subsurface amenities package had been scratched and some critical drainage elements were dumbed down. Unfortunately, the only person involved in the project even remotely associated with the green industry was an architect with book smarts from the 1970's.

After touring the nearly completed project with the (clueless) principal and clearly seeing the deficiencies in maintenance that

lay ahead, I felt obligated to advocate not only for the donors, but also for the safety and pleasure of the students preparing to enjoy those fields. After a few answered prayers, I was given a vision...learn and do everything needed to maintain the entire facility within the given budget and then pass on the task to

some type of student or supported effort. With a renewed vigor and blessed mission in mind, I committed myself to 7 years of smelling fresh cut grass, putting my hands into the earth, fixing sprinkler heads, and testing out new equipment. What could be worse...right? Read on, please.

THERE IS MORE MONEY

The first change I initiated was for me. The original plan included one \$8.50 per hour laborer to maintain the entire 65-acre campus including the 15 acres of fine sports turf. They agreed to my \$10 per hour request. This was my first lesson in learning that even though they say there is no more money...there really is! My second lesson would be a bit more painful.

The sheer volume of turf alone would stymie even the biggest grass addict. The school building fronts and surrounds needed to be mowed at least once a week including landscape bed maintenance. Beautiful stands of old oak and cottonwood trees buffed the entire campus from a nearby golf course and apartment complex. Someone obviously was going to expect the "outside guy" to maintain those as well. There were also three separate practice/utility fields totaling nearly 30 acres and the transitions to them. Thankfully, only two of them required regular field marking. I have just described enough work to fill a 40-hour workweek and have not even included the feature components to this world-class build.



Fitted nicely within a superb track and field facility (grandstand and press box included) stood one of the finest bermudagrass football fields in St. Louis. Unfortunately, cool season bluegrass was chosen to be planted directly against the warm season type as an accent between the field and the track, forecasting complaints as to why the edges of the football field “just don’t look right” after a couple of seasons of cross-contamination. Bluegrass was also directly installed against long jump pits and runs complicating the issue as well as adding more time for maintenance.

The rest of the athletic complex included both cool-season baseball and softball fields with fences and concrete bleachers in need of trimming, line marking, cleaning, and clearing of wasps. Two soccer field gems remained, one planted in lush, cool season bluegrass and one in bermuda. To save money, the entire irrigation relied on two main connections with no booster pumps, which starved the sprinklers to operate on half pressure, creating crop circles of bright green swamps within backdrops of haystack brown drought. If that wasn’t challenging enough, everything was built on a once unusable wooded ravine with a 100-foot altitude drop between one end and the other, leaving no shortage of death defying 30-degree angled strips of turf separating each component.

Supplied with only a 48-inch Ransome belt drive walk-behind for the more than 50 acres of cool season grass, and a 42-inch Toro belt drive reel-type mover for the bermuda fields, I spent 60 hours a week for the next 2 years doing my best to make ends meet on a limited budget in an era where terms like sports turf manager and soil compaction were still being corrected by Word.

I continued to get the most out of the resources I was given all the while being told there was no more money. Once my aching carpal tunnels told me I would no longer be able to operate the antiquated tools provided to me, I was miraculously blessed with a 72-inch Exmark z-turn mower for the flats, a 60-inch Exmark walk-behind with sulky to lay stripes on the hills, and a 71-inch hydro-drive John Deere reel type for the warm season fields. This was just the boost I needed! Though it took some cutting on me (surgery), I finally got to a point where I felt comfortable with the amount of time I was spending versus the overall results.

There was always something else to do, but at least I was keeping up with the growth rate. JrcO loved my idea of putting their spreader on the back of my Gator so much they added it to their applications list. It handled the flats quickly and hugged

the hills. However, the owners decided it would be best to subcontract services such as fertilization, aeration, and overseeding, giving me more time to focus on aesthetics and field marking. Eventually the field was so good one referee told me it was the best high school football field he had ever seen.

THE REST OF THE STORY

Everything my STMA peers said would happen did...and then some, as George Toma would say. No matter how much I accomplished, there was always something else wrong. My reputation was taking a beating. Grasses were dying from both poor drainage and lack of water. Drains clogged and soils became hard. Trash began to accumulate faster than the complaints. Expectations continued to grow as fast as the grass.



STMA meeting invitations to educate those of power were ignored. Petitions for a part-time assistant manifested into students serving as summer help, including my own son! My dream was coming true...or at least partially. But, I was learning a valuable lesson. Money is there if it is for something they want. It didn’t matter

if the monuments honoring alumni were being built directly above areas of erosion. Lesson learned. The priorities of turf managers rarely reflect those of the money holders.

What about driving the bus? Well, it got to the point that no matter how well I kept things, they would always come up with something else for me to do. It started with helping “the inside guy” with building maintenance issues during winter months leading me to other projects and learning experiences. I discovered shoddy plumbing in the newly remodeled weight training room. I also learned to repair the boiler heating system! Then came...you guessed it...managing the bus pool.

Once we deviate from that which makes us famous, successful, happy, or just what fits us, we are spread out too thin to support the root of our belonging. We come to the fields because we love them. We care for them because they care for our children and us. I thought I was doing a favor until I looked in the mirror and saw those kids. I looked down at the steering wheel. It wasn’t a hydrostatic zero-turn lever mechanism. I looked out the windshield. It wasn’t green grass. I looked at the kids, again, and asked how I would best be serving them. My answer came in the form of an alumni/subcontractor with a tractor...several of them, in fact who cuts all the grass at cost. Mission accomplished.

Michael Roi shares his 25 years of success in the turf industry through consulting and freelance writing.

CATCH CAN VS. SOIL MOISTURE-BASED WATER AUDITS ON SPORTS FIELDS

■ BY CHASE STRAW, GERALD HENRY, PHD & STEPHEN RICHWINE

The catch can audit is a common method to determine irrigation distribution uniformity and efficiency of sports fields. In the case of catch can audits, efficiency is defined by how evenly distributed irrigation water is applied across a field. However, overall efficiency is best determined by how well irrigation water infiltrates the soil profile and becomes available to turfgrass roots. Soil type, soil compaction, surface hardness, slope, drainage, and environmental conditions all impact water infiltration and availability. Therefore, solely determining the distribution uniformity of your irrigation system may not tell you whether it is "efficient."

Soil moisture sensors have become common tools employed by turf managers to measure volumetric water content of the soil profile (in the upper 3 to 6 inches). Many sampling devices are now equipped with GPS, which permits the user to map the spatial distribution of soil moisture across a field. Soil moisture-based water audits can be conducted in conjunction with catch can audits to provide insight into water fate (i.e. infiltration, runoff, etc.) following application. This article discusses two case studies where catch can and soil moisture-based irrigation audits were compared using current methods of analysis and mapping technology.

[Editor's note: For more information on how to conduct and analyze a standard catch can irrigation audit visit the link from STMA.org in the references.]

SITE DESCRIPTIONS AND DATA COLLECTION

Irrigation audits were conducted on two high school American football fields in Georgia. Field 1 had a sandy loam soil in the top 5 inches (72/16/12% sand/silt/clay, respectively) and field 2 was sand capped in the top 5 inches (94/4/2% sand/silt/clay, respectively) with clay beneath. Neither field had subsurface drainage systems. Soil moisture data were collected and georeferenced (i.e. latitude and longitude coordinates) with the Toro Precision Sense 6000 (PS6000), a mobile multi-sensor sampling device. Soil moisture was measured at both sites one day following a typical irrigation event. Measurements were recorded during a dry period (no natural rainfall); therefore, soil moisture distributions were indicative of the irrigation systems. Petri dishes (2.75 inch diameter and 0.5 inch depth) were used

on each field as catch cans at 120 locations where the PS6000 collected soil moisture data (see Figure 1; each black dot represents a sample location). Three catch can audits were conducted on separate days and averaged to account for wind and random fluctuations in irrigation system performance. Spatial maps were created from the 120 sample points in order to compare soil moisture and catch can distributions across each field.

Additionally, two other statistics were calculated for further comparison, the lower quartile distribution uniformity and a correlation coefficient. The lower quartile distribution uniformity is one of the most common methods used to determine distribution uniformity of catch can data. It can also be used to measure the distribution uniformity of moisture in the soil profile. The calculation for distribution uniformity (DU) is:

$$DU = \frac{\text{Average in lower quartile of data}}{\text{Overall average of data}} \times 100$$

A DU of 100% would indicate a perfectly uniform distribution. In general, a DU value greater the 70% is considered acceptable and less than 55% is deemed poor.

The correlation coefficient (Pearson's r) in this case study represents a measure of dependence between the soil moisture and catch can data (i.e. the direction and strength of their relationship). Pearson's r is between -1 and 1, where a negative value indicates a negative relationship (e.g. when soil moisture goes up the amount of water in the catch cans go down) and a positive value indicates a positive relationship (e.g. when soil moisture goes up the amount of water in the catch cans goes up). The closer r is to -1 or 1, the stronger the negative or positive relationship, respectively.

FIELD 1 (SANDY LOAM)

The soil moisture and catch can distribution maps for Field 1 are displayed in Figure 2. The soil moisture map represents percent volumetric water content in the soil profile, while the catch can map reveals the amount of water (in ml) that was caught by the catch cans in response to this irrigation system. The white dots represent irrigation heads.

It is evident from these maps that there are large amounts of variability (i.e. differences) across this field for both soil moisture and catch can data. Detailed soil moisture and catch can patterns clearly indicate deficiencies in uniformity and efficiency down to individual irrigation heads. Several conclusions can be derived from examining these maps; however, we will only discuss a few. In general, similar distribution patterns exist between the two maps, except for a few areas around some of the irrigation heads. The northern part of the field appears to have the lowest soil moisture values, while the southern part of the field has the highest. Similar conclusions can be drawn from the map of catch can data. However, the northern part of the field appears to be receiving higher levels of water, although the soil moisture map does not reflect that it is infiltrating the soil. The contrasting results in the northern portion of the field indicate that although the area is receiving water, there is some other factor (i.e. soil compaction, localized dry spot, etc.) influencing infiltration into the soil. High soil moisture and catch can values in the southern portion of this field may be due to poor irrigation system design (the last row has an extra irrigation head). The dry area in the central part of the field is likely due to reduced efficiency of the heads in that area.

Further analysis indicates a DU of 61% for soil moisture and a DU of 58% for catch can data. Therefore, this irrigation system is performing at just above poor. The correlation coefficient for the soil moisture and catch can data was 0.45. A positive value was expected, since typically the more irrigation water an area receives the higher the soil moisture; however, the strength of the relationship was moderate. This further demonstrates that other factors may be influencing water infiltration.

FIELD 2 (SAND CAPPED)

The soil moisture and catch can distribution maps for Field 2 are shown in Figure 3. Unlike Field 1, there are no circular soil moisture or catch can distribution patterns around any of the irrigation heads in the map of Field 2. Low water holding capacity of the sandy soil may have impacted the soil moisture of Field 2, because less runoff and quicker water infiltration is typical for coarse textured soils. Examination of the catch can map reveals that the irrigation system is performing well and distributing water evenly. The design of this system appears to be sufficient, but comparison of the two maps shows conflicting distributions.

Soil moisture is highest in the northern part of the field, specifically in the northeast corner. The catch can map, although somewhat uniform, depicts higher values in the center and southern portion of the field. This might lead one to believe that the slope of the field is responsible for the differences, which is partially correct. The field is crowned, but predominantly directed toward the northern half. Although there is no subsurface drainage within the field, there are drains

Field 1 (sandy loam)



Field 2 (sand capped)



Figure 1. Soil moisture and catch can sample locations (black dots) on Field 1 (sandy loam) and Field 2 (sand capped).



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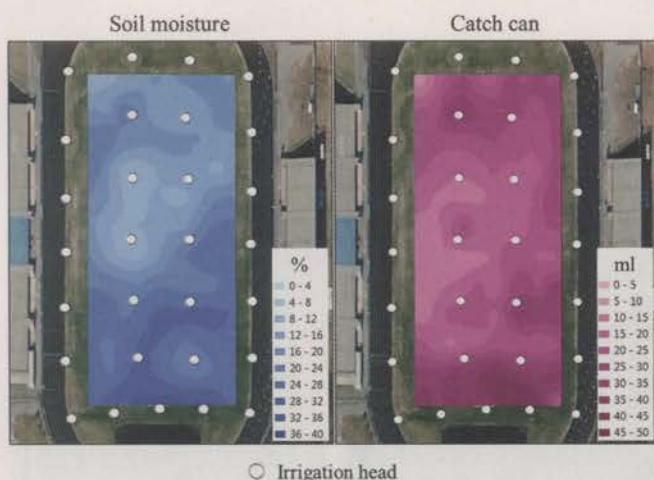


Figure 2. Soil moisture (left) and catch can (right) spatial distribution maps for Field 1 (sandy loam).

located around the perimeter. Unfortunately, the drains on the east side of the field were installed behind a track and field runway (Figure 4). This lengthy concrete pad acts as a dam and causes water to puddle in that portion of the field.

The DU for soil moisture and catch can data was 71 and 73%, respectively. Therefore, the irrigation system is performing at an acceptable level. The correlation coefficient for soil moisture and catch can data was 0.34. A positive value was again expected; however, the strength of the relationship was still moderate. This is likely due to the concrete runway blocking drains on the east side of the field and the presence of a 5-inch sand cap on top of a clay subgrade that allows for lateral water movement along the clay layer.

CONCLUSIONS

The objective of the case studies was to introduce a new, novel approach to examining irrigation efficiency, the soil moisture based audit, and compare it to the standard catch can audit. Results and interpretation differed substantially between our examples. This was expected due to the variation between sites with respect to soil type, irrigation system design, field construction, and other plant and soil properties that were not measured. The moderate correlation between soil moisture and



Figure 4. Locations of drains on the wrong side of a concrete runway causing water build up in the northeast corner of Field 2.

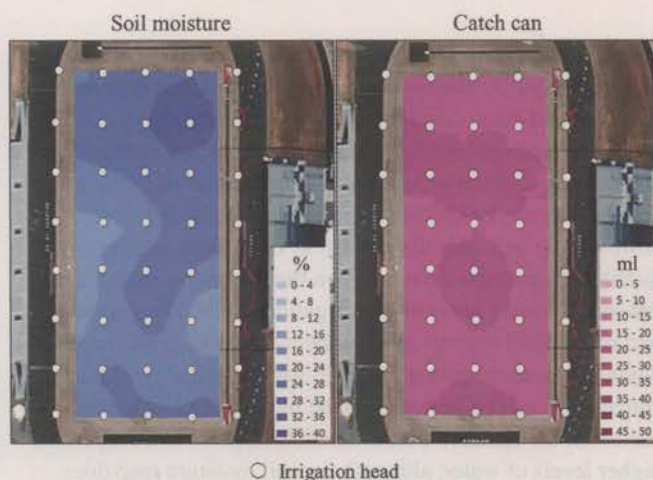


Figure 3. Soil moisture (left) and catch can (right) spatial distribution maps for Field 2 (sand capped).

catch can data suggests that additional agronomic conditions may be affecting irrigation distribution and efficiency. For this reason, further data collection and site analysis (i.e. surface hardness, localized dry spot, etc.) may be warranted.

The current method of irrigation system evaluation, which relies solely on DU values to interpret uniformity, may not be sufficient. DU values for soil moisture and catch can data were nearly identical for each field example. These results could be deceiving and lead sports turf managers to believe the distributions to be similar. However, spatial maps were able to reveal differences through a more detailed analysis of the distribution, which could not be concluded from DU values alone. Technology used to create spatial maps in turfgrass is becoming more prevalent, but unfortunately adoption by sports turf managers has been slow. Future research, development, and awareness of GPS technologies and capabilities should be considered to aid in the management of sports fields.

ACKNOWLEDGEMENTS

The authors would like to thank Troy Carson and Kathy Rice, The Toro Company, for technical support with the Precision Sense 6000.

Chase Straw is a graduate research assistant, University of Georgia; Dr. Gerald Henry is an Athletic Association Endowed Professor, University of Georgia. Stephen Richwine is with the Oconee County School District, Watkinsville, GA.

REFERENCES

- IA, 2003. Irrigation Association. Certified golf irrigation auditor training manual. Irrigation Association of America, Falls Church, VA.
- STMA. Conducting an Irrigation Audit. Sports Turf Managers Association, <http://www.cosatx.us/home/showdocument?id=10396>.

John Mascaro's Photo Quiz

Answers from page 19

John Mascaro is President of Turf-Tec International

This municipal sports complex has bermudagrass sports fields with fescue/bermuda common areas. Because they are located in the transition zone, they overseed their bermudagrass fields with perennial ryegrass in the fall for winter play. As you can see by the trail of ryegrass leading up to the overseeded field, what happened was an employee was transporting the bags of seed to the athletic field to be overseeded and they noticed that there was a hole in one of the bags that caused some seed to leak out. However, they did not realize how much was coming out onto the turf. After a week or so the Sports Turf Manager started to notice the trail but at the time the bermuda was still growing and it did not stick out quite like it does in the photo, after the bermudagrass went into dormancy. Just after this photo was taken, an ALS inhibitor selective herbicide was applied for removal of the overseed in the unwanted areas.

PHOTO SUBMITTED BY BRIAN WINKA, CSFM, CVAC,
PARK SUPERVISOR FOR THE CITY OF CHESTERFIELD, MO.

Editor's note: See page 12 in last month's issue for a full article on growing grass in the transition zone by Brian Winka.

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



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PUMP TECHNOLOGY

MANAGING TURF IRRIGATION CONSERVES NATURE'S MOST VALUABLE RESOURCE

■ BY JOHN COLLINS

Editor's note: This piece was supplied by John Collins, global product manager-booster packages, at Xylem Applied Water Systems.

Sports turf irrigation is becoming increasingly sophisticated with the help of advanced technology that enables minute-by-minute system control and complete customization of irrigation systems to create flexible and responsible water management.

Turf management has advanced beyond simply tracking weather patterns and the cycles of grass dormancy, vigorous growth and stress periods that correlate with changing seasons. Thanks to smartphone connectivity, turf managers have the power to literally control the irrigation system at their fingertips.

Older electro-mechanical controls had no program flexibility, but newer digital units are highly customizable to meet a variety of water needs or to fit water conservation guidelines. Today's controllers enable the user to separate certain areas of the landscape, from the playing field to the sidelines, and deploy different watering levels for each. This flexibility ensures that each area is watered to optimal levels, while conserving water where possible.

Larger, more advanced systems use satellite weather data to provide the user with daily evapotranspiration values to better manage water use. These smart controllers take into account local weather conditions, whether it's cloudy or sunny, lightly sprinkling or soaking rain, and automatically adjust irrigation schedules to prevent over or under-watering.

Systems also can be set up to monitor the amount of moisture in the soil. A probe measures moisture at the root, compares the reading to optimal conditions for the turf and soil type among other preprogrammed variables. It then responds accordingly by overriding the system if the soil is too wet or allowing it to operate as programmed if dry conditions are detected.

Additionally, real-time updates are available through Ethernet or smartphone applications. Human-machine interface displays and advanced controls can make a turf manager's day easier by providing immediate feedback and authorizing supervision when they are away from the facility. Turf managers can customize a system to compile reports on usage, alarms and system history, valuable information in fine-tuning a system to optimize efficiency.

One of the advantages of an Ethernet network is its versatility. Any two machines on the network can potentially talk to one another. The networks are also infinitely extendable through the Internet. This means that if a machine is on a network that has access to the Internet, it can be accessed by other authorized

users who also have Internet access. This connectivity is important for pump station communications and requirements. To view the data on a pump station from any location, both locations must have access to the same network, either directly or through the Internet.

BETTER PUMPS

For irrigation systems that include pump stations, technology has also helped improve pump performance. New software programs comprehensively manage power and efficiency with the use of variable frequency drives (VFDs). Advanced software improves system efficiency with simple touch-screen controls and highly accurate flow-meter technology.

VFD technology enables the control of the AC motor speed and torque by varying the input frequency and voltage to match the system demands. As demand increases, the VFD speeds up to match the needs of the irrigation system, controlling flow, which improves efficiency. For example, Xylem's Flowtronex branded Pace Integrated Pump Controller uses advanced VFD control logic by operating the pump at the best overall efficiency, thereby reducing overall energy consumption.

These pump software programs and better integration with irrigation controls can make today's pump stations up to 30 percent more efficient than those previously on the market.

CONSERVATION MEASURES

In addition to flow and moisture sensors to better manage how much water is used, an increased focus on water conservation is creating demand for water reuse systems. For example, at Levi's Stadium in Santa Clara, CA the irrigation system is connected to the city's recycled water system for playing field irrigation as well as irrigation of the stadium's 27,000-square-foot green roof. About 85% of all water used in the LEED Gold-rated stadium is recycled water.

Salts such as calcium, potassium magnesium and sulfate and sodium chloride have an osmotic effect on roots and also affect soil permeability. If too much salt accumulates in the root zone, turf managers might be forced to change turf species. Salt can also harm trees and other plants. As interest grows in using recycled water for turf irrigation, turf managers must be sensitive to higher salt content that can occur from municipal water treatment processes or treated commercial effluent. Reverse osmosis (RO) systems are effective at removing salts and many dissolved organics from water as they pass through a semipermeable membrane. RO systems offer a convenient and cost-friendly method of filtering out unwanted contaminants in

PUMP TECHNOLOGY

water that comes from both natural bodies of water and through recycled processes.

As turf managers struggle with diminishing water quality and availability, particularly in drought-ridden areas of the United States, along with rising energy costs and pressures to increase productivity, there are a number of technologically advanced resource management tools — from VFD-driven pumps to

intuitive controls and filtering systems — that can help level the playing field and contribute to water savings.

John Collins is the global product manager-booster packages at Xylem Applied Water Systems. He holds a Bachelor of Science degree in construction management from Washington State University.

UTILITY VEHICLE ROUNDUP

TORO WORKMAN GTX UTILITY VEHICLE LINE

The all-new Toro Workman GTX utility vehicle is one of the most versatile grounds and turf crossover vehicles in its class. Combining superior comfort, control and versatility, the Workman GTX provides all the features to help tackle a multitude of tasks.

Turf managers are able to select from several models to match the right vehicle to their specific needs. Among these options are four- and two-seat configurations, a variety of front and rear attachments for garbage cans, hose reels or walk spreaders, and a number of flatbed options to haul even the bulkiest materials. With over 300 configurations to fit almost any application, the Workman GTX is a highly versatile and cost-effective machine.

Operation of the Workman GTX is simple, thanks to an automotive-grade rack and pinion steering system that provides exceptional control with minimal steering effort, allowing operators to focus on the task at hand and get the job done faster. In addition, coil-over shocks surround the vehicle and provide a smooth ride that minimizes operator fatigue.

The Workman GTX comes with low maintenance hydraulic disc brakes that require no cable adjustment and less pedal force for a reliable stop every time. This practical and comfortable vehicle comes with either the 429 cc gasoline or 48-volt A/C electric model. At just 47 inches wide, its narrow frame also allows access for working in tight areas with ease.

The Toro Company

BOBCAT COMPANY INTRODUCES MODEL YEAR 15 3600 AND 3650 UTILITY VEHICLES

The Bobcat 3600 and 3650 utility vehicles feature a 24-horsepower Kohler diesel engine, the same engine used to power the MY15 3400 and 3400XL models. The 3600 and 3650 offer industry-leading payload and towing capacity, exceptional durability and optimal comfort year-round. Additionally, the 3650 takes utility vehicle versatility to

a new level with the ability to operate front-mounted power-take-off (PTO) and non-PTO attachments.

The 3600 and 3650 utility vehicles can handle and haul more materials for grounds maintenance professionals, agriculture producers or homeowners with acreage. Hydrostatic drive is ideal for tasks that require repetitive back and forth movements, such as hauling, mowing, sweeping and

snow removal. Operators can drive forward or reverse by pressing their toe or heel to the travel pedal. The vehicles can drive forward to a maximum top speed of 30 mph.

A hydrostatic transmission system offers operators the best of both worlds by combining smooth drivability with a durable suspension. The operator can choose the setting that matches the load requirements to achieve optimum comfort and traction without sacrificing durability.

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JACOBSEN LINE OF UTILITY VEHICLES

Jacobsen has a full line of utility vehicles to serve a wide range of needs, from heavy-duty vehicles to medium and light vehicles. In 2015, Jacobsen released the heavy-duty utility vehicle, the Truckster XD, in both gas and diesel options. The Truckster XD has the largest standard payload capacity of 3,550 lbs. with a 32.5 hp Kubota engine and a thick 12 gauge steel box. The vehicle also features the roomiest operator platform in the industry and has a maximum speed of 23 mph. The medium to light range of Jacobsen utility vehicles ranges from 1,600 – 800 lbs. for payload capacity. Led by the flagship Truckster HX, the HX is the most rugged of the new lineup with the maximum 1,600 lbs. payload capacity and 1,300 lbs. towing capacity. The vehicle has a 22 hp, 3-cylinder diesel engine and comes standard with full ROPS, three-point seatbelts, and an ergonomic cockpit. The next option in the series is the gas-powered Truckster™ MS/MX, featuring a maximum capacity of 1,200 pounds. The vehicle has a narrow width of 49.5", giving it the capability to fit into those tight areas around your work site.

Additionally, for customers needing a quiet, electric utility vehicle option, the Truckster MS-E/MX-E is powered with a 72-volt electric drivetrain and an impressive capacity of up to 1,000 pounds. The unit features a standard on-board charge, allowing you to charge at any outlet within your facility.

The final and lightest utility vehicle in the series is the gas-powered Truckster LS/LX offers an 800-pound capacity and a polyethylene bed that provides years of worry-free service. The compact LS/LX has a lifted suspension and features a 13hp Kawasaki engine and a maximum speed of 17 mph.

Jacobsen

JOHN DEERE GATOR XUV590I AND XUV590I S4 CROSSOVER UTILITY VEHICLES

The John Deere Gator XUV590i and XUV590i S4 crossover utility vehicles were designed for landscape contractors who desire performance, comfort and customization. Equipped with a powerful twin-cylinder engine, independent four-wheel suspension and availability of more than 75 attachments. Landscapers can move around the jobsite faster with a top speed of over 45 mph thanks to quick acceleration powered by a 586cc, 32-hp., liquid-cooled inline twin-cylinder



gasoline engine. The XUV590i offers operators 10.5-inch minimum ground clearance, 800 pound load capacity and 1,100-pound towing capacity. Likewise, the XUV590i S4 has a 9.3-inch minimum ground clearance, 1,200-pound load capacity and is capable of towing up to 1,100 pounds. The Gator XUV590i and XUV590i S4 also come standard with an 875 watt, 65-ampere alternator to run auxiliary attachments. The Gator XUV590i and XUV590i S4 feature a 7.4-gallon fuel tank to keep the vehicle running longer between fill-ups.

John Deere

KAWASAKI MULE PRO SERIES

The Kawasaki MULE PRO series offers a wide variety of options for your work crews. Available in both gasoline and diesel engine models the MULE PRO series features the industry leading Trans Cab system allowing one person to change the seating configuration from six passengers to three in less than one minute on the FXT/DXT models. The FX/DX models feature only a single row of seating but the steel bed is large enough to hold a full-size pallet. Built on a ladder-style frame the MULE PRO is strong enough to get the job done. The Trans Cab models have a cargo bed capacity of 350lbs in six-passenger configuration while in three-passenger configuration the capacity increases to 1000lbs or 600lb for the California model. With a 2000lb towing capacity the MULE PRO series has the power to get the job done. All models feature speed sensitive electronic power steering and four-wheel dual-wishbone independent front and rear suspension to give everyone a comfortable ride. The MULE PRO series is assembled in Lincoln, NE and is backed by 3-year Strong Limited Warranty.

Kawasaki



CUSHMAN OFFERS HAULER PRO AND PRO-X IN UTILITY VEHICLES

Cushman's line of Hauler utility vehicles now includes the Hauler PRO and the PRO-X. Both vehicles offer a 72-volt AC drivetrain that provides the range and power once exclusive to gas-powered machines in a silent, zero-emissions vehicle. The Hauler PRO and PRO-X feature a 72-volt AC electric drivetrain, upgraded from more traditional 48-volt systems, which offers up to 50 miles of range between charges. The patented AC Drive technology also ensures that the vehicles maintain consistent power and performance without the noisy drone of a gas engine.

The AC Drive technology is up to 25 percent more energy-efficient than DC technology, and also provides for unique features such as regenerative



UTILITY VEHICLE ROUNDUP

braking that recharges the batteries whenever the vehicle's brakes are applied, on-board charger for convenient recharge and also speed control to maintain constant speeds up and down steep slopes. An optional limited-slip differential provides for greatly improved traction on wet or loose soil, while helping to protect ground erosion and grass damage due to wheel slippage.

Both the PRO and PRO-X provide a maximum load capacity of 1,000 pounds and come standard with a 9.5-cubic-foot cargo bed. A 14.9-cubic-foot aluminum cargo bed will be available as a factory-installed option for facilities that require more cargo space.

Cushman

HONDA PIONEER 1000

Honda's Pioneer 1000 and Pioneer 1000-5 feature a 999cc parallel-twin engine and the side-by-side industry's first and only 6-speed fully automatic Dual Clutch Transmission (DCT) that gives a blend of raw power and driving performance that delivers unmatched capability on the jobsite, and on the trails.

The Pioneer 1000's six-speed dual-clutch transmission has many advantages, but among the most attractive is its multiple modes. Depending on driver preference or the conditions encountered, the DCT on EPS models can be switched between two fully automatic modes (Standard and Sport), or Manual paddle-shift. In Automatic, the Advanced Transmission Logic senses the driver's style and adapts. The system even detects descents and provides real engine braking. Multiple drive-system modes enable correct driveline selection for almost any situation: 2WD (locked rear differential), 4WD (locked rear/limited-slip front differential), Differential Lock (locked rear/locked front



to maximize available traction), Turf Mode (2WD with limited-slip rear differential, to protect lawn or crops).

With Pioneer 1000's big power and torque it is able to haul 1,000 pounds (600 pounds for California models) and tow an amazing 2,000 pounds. It is available in four different versions, two with a three-person configuration and two with a five-person capability.

Honda

KUBOTA'S K-VERTIBLE 4-PASSENGER RTV-X1140

Kubota introduces the RTV-X1140, featuring the innovative K-Vertible cargo conversion system, which transforms the vehicle from two passengers and a large cargo bed to four passengers and a cargo bed. Featuring sophisticated technology, the RTV-X1140 offers an impressive array of comfort and performance features, with tilt steering, simple inline shifting, lockable storage and a long-travel four-wheel independent suspension that enhances handling in most off-road conditions. The new five-point ROPS design increases RTV-X1140's legendary workhorse characteristics allowing for more cargo volume and side loading.

"The RTV-X1140 has a unique ROPS design that makes it easy to convert from crew to cargo," said Eric Goins, Kubota RTV product manager. "With the RTV-X1140, Kubota offers industry-leading cargo capacity and comfortable seating for four adults in three simple steps – when you need to move your crew, swing in the cargo bed sides, fold the bed up, and flip down the rear seat – conversion is quickly and easily performed by just one person."

Kubota



NEW PRODUCTS

JACOBSEN EXPANDS & ENHANCES LF MOWER LINE

Jacobsen has launched the all-new LF557/LF577 seven-reel mower, in addition to enhancements to its current LF550/LF570 mower series. The all-new LF557/LF577 is the industry's only Tier 4 Final, seven-reel mower, offering unrivalled productivity. The LF557 is equipped with 5-inch reels and the LF577 is equipped with 7-inch reels, with both mowers boasting a massive cutting width of 139 inches, allowing the ability to mow up to 11 acres per hour. A new AdaptiThrottle automatically manages engine speed based on demand, thus reducing fuel consumption and noise. The mowers' InCommand Control System delivers pass code-protected, programmable max transport and mow speed settings to control cut frequency, removing tools and operator input from the equation. A new nine-bladed reel is also now available for all 5-inch reel LF models. In addition, the new mower series features maintenance reminders that are displayed automatically on-screen and scheduled intervals to aid in proper service and increased up time.

Jacobsen



Tools Equipment continued on page 49

ED SMITH STADIUM

SARASOTA, FLORIDA



WHY STMA SHOULD CONSIDER YOUR FIELD A WINNER?

First and foremost, the credit for even having this opportunity to be considered Field of the Year goes to the people that support our efforts and most importantly the members of the grounds crew that have bought in to my detailed approach and the values that I believe makes a field safe, environmentally friendly and aesthetically pleasing. Without the support from our Director of Operations, Trevor Markham, and office staff, none of this would be possible.

Our motto on the grounds crew is being "All In," with everyone pulling in the same direction. The first step was bringing in people that wanted to be a part of something special, that they could take great pride in. Though we only employ seven full-time staff (including myself) and 10 part-time workers for 30 acres of baseball fields and 5 acres of common grounds, it is the training and development that we hang our hat on. We are not reinventing the wheel when it comes to growing grass. Through the hiring of Assistant Head Groundskeeper Nick Wilz, his experience working under Larry DeVito at Target Field, and my own personal experiences working for many great turf managers has helped in the development and training of our in-house staff.

This development has been reflected in the quality of Ed Smith Stadium and the entire facility. Through the National STMA, Central Florida STMA, and the local University of Florida extension office we have encouraged crew members to get involved in training programs, clinics, certifications and memberships that educate them and provide resources for development as turf managers. Reaching out to those that have been "in the trenches" as turf managers has also given us new angles to pursue and methods to try. Never being too proud to ask for help can go a long way in this industry. After all of our efforts, trial and error is sometimes the most valuable tools a groundskeeper possesses.

The Baltimore Orioles began using Ed Smith Stadium, also known as "Birdland," and surrounding practice fields (total of 5 1/2 fields) for Spring Training in 2010. The stadium was originally built in 1989 on the former site of a landfill. This leaves behind sinkholes and depressions that we are constantly fighting through a continuous topdressing program. An aging irrigation system and lack of drainage has kept us

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



busy addressing line breaks and irrigation head adjustments. Other challenges that we have been able to address has been less dependency on synthetic fertilizers. We now use Upstart Products with Custom Agronomics to lean more on organic methods through the use of the Holganix line. We started using Holganix in the fall of 2014 and have seen major increases in turf stability, strength and tolerance to the Florida sun and heat. Root mass has increased resulting in a healthier plant that is able to take in more nutrients that we put out.

Rob Dillinger at Upstart Products and Mike Williams at Custom Agronomics have helped address issues that we found through soil testing, which we perform routinely. We have tailored a program that is safer for the environment and yields better results for our specific situation. We have managed to save over \$2,000 in just 12 months on the program by cutting out many of our synthetic fertilizer and pesticide applications. We have not sprayed a single post-emergent herbicide application in the stadium this year due to implementation of pre-emergent weed control, taking advantage of the 419 bermudagrass aggressive nature through verticutting/coring and resorting back to pulling weeds by hand to keep our chemical costs down. Decreasing our environmental footprint has been a goal of ours from day 1 and will continue to be going forward.

Never being too proud to ask for help can go a long way in this industry.

Small field renovations such as the infield lips and horn being removed and resodded successfully, irrigation head adjustments and a more aggressive aeration, verticutting and topdressing plans have improved the quality of the playing surface dramatically. Upgrading the bullpens by removing hard to grow grass from shady areas along the walls/corners and replacing with a crimson stone has made it function better and look more aesthetically pleasing. We have upgraded our skinned area by working with Grant McKnight and his Dura-Edge and Field Saver products. We have transformed our infield skin to be capable of handling large amounts of rain that can happen without notice here in Florida. Our current sand content is 68% with a silt to clay ratio of .45. This allows a firmer and tighter playing surface during rain events. An annual laser-grading program has been implemented for all of our fields including Ed Smith Stadium. Future improvements include continuing to dial in our skinned area chemistry to match our geographic area and weather conditions as well as acquiring all new equipment through a cooperative with Sarasota County.

We have managed to make significant changes to the way we develop and "grow" our grounds crew as well as altering spending habits from previous years. While we have seen spending increases in some areas, others have dropped more

Category of Submission: Professional Baseball

Sports Turf Manager: Daniel Thomas

Title: Head Groundskeeper

Education: Bachelor's degree in Sports Management, Lincoln College

Experience: Fall 2013-Present: Head Groundskeeper, Baltimore Orioles, Sarasota, FL; Assistant Head Groundskeeper, Orioles, Sarasota; Full-Time Grounds Crew, Orioles, Sarasota; Head Groundskeeper, Clinton Lumberkings/Ashford University, Clinton, IA; Assistant Head Groundskeeper, Peoria Chiefs/Bradley University, Peoria; Grounds Crew Intern, Peoria Chiefs, Peoria; Grounds Crew, The Oaks Golf Club, Riverton, IL; Property/Landscape Maintenance Worker Holland & Barry Funeral Home, Lincoln, IL

Full-time staff: Bob Kull, Jeff Owings, Jim Duffy, & Rob Albritton

Part-time staff: Jed O'Rourke, Colin Driscoll, Joe Thompson, Chris Peklo, Tom Klimchuk, Brian Zdancewicz, & Travis Zimmerman

Original construction: 1989

Rootzone: Native soil, sandy loam, 80% sand, 20% sandy/clay/loam

Turfgrass variety: Tifway 419 bermudagrass

Overseed: Overseed with perennial ryegrass (Paragon & Pangea) into the 419 Bermuda annually in December-April to provide an actively growing playing/aesthetically pleasing surface for Orioles Spring Training. Overseed rates: Infield 12 lbs/1000 square feet, Outfield/Sidelines 10 lbs/1000 square feet (about 1,100 lbs total, not including spot seeding thin areas or wear spots and divot mix). Spot treat areas with divot mix throughout March, typically infield only. Spot seed outfield player spots and around first and third base foul territory as needed.

Drainage: No subsurface drainage; turf areas of field were last graded/resodded in 2007 at a 1% slope from the pitching mound. Sandy soil, plus the land being a former landfill, has led to sinking in small areas of outfield that has affected the grade/drainage during heavy rainfalls. Topdressing frequently to these areas has helped alleviate this problem, but is not a permanent solution. Complete renovation is planned for 2016/2017.

significantly. Much of this credit goes to the good relationship we have with our office staff. As turf managers we are always looking for ways to improve the fields. To this, a well-trained grounds crew, a supportive front office, outreach to peers and organizations like the STMA that are the keys to our success and future improvements here at Ed Smith Stadium.

SPORTSTURF: What attracted you to a career in sports turf management?

THOMAS: The freedom being a groundskeeper provides is amazing, from planning the day to trial and error in field work. It is all part of why I love coming to work every day. Of course the outdoors and being around baseball every day is the cherry on top.

SPORTSTURF: What are your biggest challenges in providing excellent playing surfaces? And how do you approach those challenges?

THOMAS: Our major league spring training site was once home to a recycling center and landfill. We have experienced sinkholes and settling on and off the playing fields. Finding items such as car parts, women's purses, glass bottles and tires only a couple feet in depth. Growing grass can be a challenge in these soil conditions but we frequently monitor through sampling and making adjustments to our fertility programs. Florida weather also plays a major role in my job as a sports turf manager. Afternoon rain showers can drop several inches of rain in minutes. Hand in hand with the rain is drainage, being able to handle large amounts of rain is crucial to allowing the players to be able to train on a daily basis.

Our first priority was to upgrade our skinned (clay) areas of our playing fields. We achieved this through amending the existing clay (82% sand) with the help from Grant McKnight. By annual laser grading we install Dura-Edge Classic material into 7 of our 9 practice fields and Dura-Edge Professional material along with Field Saver products into Ed Smith Stadium and the teams main practice field. This has allowed all of our full-size playing fields to handle more rain by maintaining the integrity of the composition. The upgrades have provided the safety and stability we require in our geographical location. We continue to take samples throughout the year to determine where our sand/silt/clay levels are at and how we plan to proceed the following year. Current and future plans are to perform annual field renovations on the turfgrass portions of our fields. This will involve irrigation upgrades and installation of drainage to many of our fields. We will always have settling issues associated with the former landfill site but through a periodic grading/renovation program we can maintain the grade, safety and functionality of the fields.

SPORTSTURF: What changes if any are you considering or implementing for the winning field in 2016?

THOMAS: Sarasota, Florida has a strong history of being mindful of the environment. Changes to our fertility program will continue to focus around organics and less synthetics. Using Holganix has allowed us to have less inputs (pesticides, synthetic fertilizers) and more yield. Improving the soil allows for better roots and healthier, stronger turf. Incorporating Fraise Mowing into the Ed Smith Stadium plans for better thatch removal and more lateral bermudagrass growth.

SPORTSTURF: What's the greatest pleasure you derive from your job? What's the biggest headache?

THOMAS: Simply seeing the field every day and being cognitive of ways to improve it are the greatest pleasures of my job. Groundskeepers are similar to artists in how we are allowed freedom to think and produce an end result. This freedom to produce "artwork" keeps me sharp and motivated each day.

The biggest hurdle we face is time and resource management. With 10 months of Baltimore Orioles related training activities and third party rentals year round we have to be able to adapt and change course. Hiring, maintaining, training and supervising a grounds staff large enough to meet the Orioles needs on 10 ½ fields is a full time job itself. Our current grounds staff consists of only 5 full-time employees and a frequently rotating group of part time staff.

SPORTSTURF: What's the best piece of turf management advice you have ever received?

THOMAS: To get off the roller coaster and always stay grounded. Things are never as bad as they seem and never as good as they seem. With turfgrass management it's easy to get down on yourself when things go wrong and just as easy to have a false sense of accomplishment. Stay in the middle and you will be all right.



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

THOMAS: In 2014 we first started using Holganix, which is a 100% organic bio-nutritional product containing compost tea with no animal or human by-products. Holganix has helped strengthen our roots that are then able to produce a better yield with fewer inputs. This helps significantly lower the amount of fertilizers, herbicides, fungicides, insecticides and water needed to obtain the high expectations and results. In addition we continue to use proper irrigation techniques by watering deep, aeration, verticutting and periodic soil sample testing to make sure we aren't throwing unnecessary chemicals into the earth. Future plans include the implementation of Fraise mowing for thatch removal and healthier top growth.

SPORTSTURF: How are you using social media at work?

THOMAS: I currently don't use social media as often as many members of my grounds crew does. Though keeping tabs through social media helps with upcoming clinics and seminars in the area. It is quickly becoming an area that sports turf managers will need to adapt to and embrace.

SPORTSTURF: How do you see the sports turf manager's job changing in the future?

THOMAS: From my perspective it means more administrative duties than hands-on work. Having worked my way up from the bottom I appreciate the hard work, physical labor and long hours that this profession requires. The job of the sports turf manager requires us to be well rounded. We must be able to make field plans, create spreadsheets, balance budgets, operate heavy machinery, hire/train/supervise staff, diagnose weather conditions/forecasts and have the ability to replace a mainline irrigation pipe in 3 feet of muddy water all in the same week. Expectations are to be a professional at all aspects of the job. The best sports turf managers will continue to expand their knowledge and experience levels to stay ahead of the pack.

Commercial Advisory Council advances STMA's Strategic Plan

STMA's strategic plan guides the work of the association, including the work of its committees and task groups. A new strategic plan began in January 2015, and to meet plan goal 2: *Increase the reciprocal value between STMA and its Commercial members and expand the mutual commitment and engagement of Commercial members in STMA.* 2014 STMA President David Pinsonneault, CSFM, CPRP, and 2015 President Allen Johnson, CSFM, determined that STMA needed insight and guidance from its Commercial sector. That led to the formation of the Commercial Advisory Council in the spring of 2015.

Although members of the Council are volunteers from the Commercial sector of the membership, they were selected by inaugural co-chairs Doug Schattinger and James Graff through a very rigorous process. That process used STMA's priority point system, which was segmented into high, medium and low point companies.

STMA Conference set for West Palm Beach, FL in 2020

The 2020 STMA Conference and Exhibition will be held in West Palm Beach, FL. "West Palm Beach has the ideal convention center size and layout, hotels within walking distance and a rich entertainment district nearby. The weather in January should be a great respite for our attendees from the north, too," says Kim Heck, CEO of STMA. "The Conference & Exhibition continues to be the leading sports turf management industry event in the world, providing a wide variety of educational and networking sessions."

Companies from each sector were invited to participate, taking care to have a broad mix of company types. Council members were asked to serve 2-year terms, with one-half of the group serving 3 years; thus, ensuring some continuity as half of the council rotates off. That will happen at the beginning of 2017. New companies will be selected by the same process.

The council attempts to meet face-to-face twice a year as its work plan dictates. One of those meetings takes place during the STMA

Annual Conference. The Council met for the

first time in Atlanta in July 2015 and in San Diego in January 2016. Throughout the year, the Council also holds monthly conference calls to continue its work and address any new needs of the association.

Currently the council has 11 members: Co-Chairs Doug Schattinger, Pioneer Athletics, and Randy Price, Tri-Trex Grass; Rene Aspiron, Diamond Pro;

Nick Gadd, Aquatrols Corp. of America; James Graff, Graff's Turf; Samantha Miller, Barenbrug USA; Greg Narmour, World Class Athletics; Ray Krebs, Newstripe Inc.; Chad Price, CSFM, CFB, Carolina Green Corp.; Paula Sliefert, The Toro Company; and Jim Surrell, Hydraway.

Topics that the Council has addressed include:

- Input on future STMA Conference locations
- Exhibitor/attendee relationship and how it can be improved
- How Commercial Members can help STMA grow
- Sponsorship input
- How Commercial members can bring innovation to the industry
- Commercial member relationships with STMA Chapters
- How technology can improve STMA/Commercial relationships
- Growing membership
- Improvements to the trade show for commercial and practitioner members
- Locations for future meetings
- Tiered sponsorship

Most recently the council has been discussing new sponsorship opportunities and how those can enhance the annual conference. The

STMA STRATEGIC PLAN GOALS 2015-2017

Goal 1: Communications Plan. Develop and implement a comprehensive communications plan that focuses on brand awareness, public relations and marketing.

Goal 2: Increase the reciprocal value between STMA and its Commercial Members. Expand the mutual commitment and engagement of Commercial Members in STMA.

Goal 3: Environmental Stewardship. Position STMA members as environmental stewards.

Goal 4: Natural Grass Benefits. STMA promotes the benefits and possibilities of properly managed natural grass for athletic surfaces.

Goal 5: Education Programming. Provide education to all members where they are and where they need it.

council agrees that sponsorships are a great way to increase the attendee/exhibitor relationship. "Finding sponsorship opportunities that create a fun, more interactive conference for all attendees is an idea that we want to pursue for future conferences," says Doug Schattinger, founding co-chair.

Also discussed recently was the idea of tiered sponsorship. Gold, Silver, and Bronze levels were suggested to create a segmented format for sponsors based on their financial support. Although this has some merit, the association's current size makes it unnecessary, and it could have an adverse effect. Schattinger adds, "We do not want to create any type of a sponsorship program model that could create a strained relationship between the association and commercial members."

The Council's positive input regarding the functionality of the West Palm Beach Convention Center helped the Board select the location for its 2020 conference and exhibition.

Lastly, the Council is focused on how STMA Commercial members can help the association grow. The relationships that commercial companies have built within the industry, especially with practitioners, are viewed as a possible pathway to growth. "We want to work with our commercial members to empower them to be ambassadors for STMA and promote the value of membership to their customers," says Schattinger.

The Commercial Advisory Council will continue to analyze and implement programs, services and ideas that will help the association be successful. If you have ideas or input for the Council, please contact STMA at 800-323-3875 or STMAinfo@STMA.org

STMA Affiliated Chapters Contact Information

STMA thanks new chapter sponsor, Team Premier Pro, which is part of Riverside Turf. Their latest grass release, PremierPRO, has a versatility not seen in other Bermudagrass varieties.

Sports Turf Managers Association of Arizona: www.azstma.org

Colorado Sports Turf Managers Association: www.cstma.org

Florida #1 Chapter (South):
305-235-5101 (Bruce Bates) or
Tom Curran CTomSell@aol.com

Florida #2 Chapter (North): 850-580-4026,
John Mascaro, john@turf-tec.com

Florida #3 Chapter (Central): 407-518-2347,
Dale Croft, dale.croft@ocps.net

Gateway Chapter Sports Turf Managers Association: www.gatewaystma.org

Georgia Sports Turf Managers Association: www.gstma.org

Greater L.A. Basin Chapter of the Sports Turf Managers Association:
www.stmalabasin.com

Illinois Chapter STMA: www.ILSTMA.org

Intermountain Chapter of the Sports Turf Managers Association:
<http://imstma.blogspot.com/>

Indiana - Contact: Clayton Dame,
ClaytonDame@hotmail.com or Brian Bornino,
bornino@purdue.edu or Contact Joey
Stevenson, jstevenson@indyindians.com

Iowa Sports Turf Managers Association:
www.iowaturfgrass.org

Kentucky Sports Turf Managers Association: www.kystma.org

Keystone Athletic Field Managers Org. (KAFMO/STMA): www.kafmo.org

Michigan Sports Turf Managers Association (MiSTMA): www.mistma.org

Minnesota Park and Sports Turf Managers Association: www.mpstma.org

MO-KAN Sports Turf Managers Association: www.mokanstma.com

New England STMA (NESTMA):
www.nestma.org

Sports Field Managers Association of New Jersey: www.sfmanj.org

Sports Turf Managers of New York:
www.stmony.org

North Carolina Chapter of STMA:
www.ncsportsturf.org

Northern California STMA:
www.norcalstma.org

Ohio Sports Turf Managers Association (OSTMA): www.ostma.org

Oklahoma Chapter STMA: 405-744-5729;
Contact: Dr. Justin Moss okstma@gmail.com

Oregon STMA Chapter:
www.oregonsportsturfmanagers.org
oregonstma@gmail.com

Ozarks STMA: www.ozarksstma.org

Pacific Northwest Sports Turf Managers Association: www.pnwstma.org

Southern California Chapter:
www.socalstma.com

South Carolina Chapter of STMA:
www.scstma.org

Tennessee Valley Sports Turf Managers Association (TVSTMA): www.tvstma.com

Texas Sports Turf Managers Association:
www.txstma.org

Virginia Sports Turf Managers Association: www.vstma.org

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TOOLS & EQUIPMENT

Tools Equipment continued from page 41

NEW PRODUCTS

SUCTION PUMP FOR QUICK WATER REMOVAL



Underhill International introduces the Gulp UltraMax Plus suction pump for quick clean ups of water-soaked areas on turf and landscape, including valve boxes and sprinklers. Three models are available, including a 36" length with 72" hose; 21" length with 18" hose; and 12 oz. syringe version. UltraMax Plus is the industry's first manual pump that completely disassembles for maintenance and features replacement parts for longer life. The O-ring and wiper seal are removable for cleaning or replacement, along with the head assembly and intake foot/filter. The smooth, self-priming pump handles an extra high volume of water and an ergonomically designed handle allows comfortable operation. UltraMax Plus has a clear, heavy-duty high strength polycarbonate cylinder body and aluminum grade pump shaft. A sure-fit discharge hose connector stays intact during all clean outs.

Underhill International

WRIGHT INTRODUCES VELKE HYDRO-POWERED WALK-BEHIND MOWERS

Wright Manufacturing has introduced two new Velke hydro-powered walk-behind mowers. The HC series is available with 32", 36" and 48" cutting decks. The larger LC series offers a choice of 52" and 61" decks. All sizes can be specified with either a fixed or floating deck. The new Velkes' lightweight and large tires are gentle to turf.

The HC series is ideal for mowing medium size properties and tight spaces. While the larger LC models have larger tires, reinforced frames and a wider stance, they still offer low impact on commercial properties. Each model is ideally balanced to mow on slopes and climb curbs. The intuitive controls

are easy to squeeze, and they isolate vibration.

The flat-free

caster tires increase the

mower's excellent maneuverability,

even in tight spaces. An integrated Velke sulky latch is provided on all models. The operator has a choice of walking or riding when a Velke sulky is attached, and the latch secures the sulky in a folded position when the operator chooses to walk.

Wright Manufacturing



JUNE 2016

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1 What is your company's primary business? (check **ONLY ONE**)

- F ☐ Sports Complex G ☐ Athletic Field and/or Park Architect/Designer
T ☐ School, College or University P ☐ Park
H ☐ Other (please specify)

2 Which of the following best describes your title? (check **ONLY ONE**)

- A ☐ EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Athletic Director
B ☐ MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor
C ☐ GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official
D ☐ SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist
F ☐ COACH
E ☐ Other (please specify)

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

4 Yearly operating expenditures (excluding salaries)

- F ☐ Over \$1 million C ☐ \$50,001 - \$100,000 E ☐ \$500,001 - \$1 million
B ☐ \$25,001 - \$50,000 D ☐ \$100,001 - \$500,000 A ☐ \$25,000 and under

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Q&A with Pamela Sherratt

Questions? Send them to 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or sherratt.1@osu.edu

Or, send your question to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady_miller@ncsu.edu

Carrying capacity of an athletic field

I have recently received several questions along the lines of “How many games can a sports field host per year?” My answer to this question is, “Between 25 and 200, depending on your field.” The reason I answer this way is because each field is different, and the field is only as good as the care it receives. In essence, fields with no investment will deteriorate quickly, while fields that are supported by the community and taken care of by a turf professional may host 200+ games. Reading the stories about facilities that have received STMA’s Field of the Year Awards are a testament to the notion that high quality is achieved through education, craftsmanship, and available resources.

Breaking down the question about the carrying capacity of a field, the most important factor to evaluate is the drainage capability of the field. Since the 1970’s, when sports turf drainage systems were introduced, the quality of fields has significantly improved if a drainage system is installed. Improving the drainage of a field results in fewer cancelled games, better playing conditions, greater tolerance of high intensity use and therefore greater carrying capacity. The dustbowl and mudbaths of those early years are now considered unacceptable and customers expect fields that are playable (firm), aesthetically pleasing (have 100% grass cover) and are safe (even). Those three criteria: firmness, ground cover and surface evenness are the benchmarks for what constitutes a “high quality” athletic field and they are achieved by having a field that drains.

Increasing carrying capacity then goes hand-in-hand with improving field drainage. The most cost efficient drainage option is to adopt a rigorous, annual soil cultivation and sand topdressing program, which may or may not be done

in conjunction with sand slit installation every 4-5 years. This operation can significantly improve the carrying capacity of a native soil field and is a common practice at schools and parks facilities. The cost of this operation is several thousand dollars per field/year, but these types of fields can last decades and should be able to host upward of 70-100 events. It is important on topdressed and sand-slit fields that the topdressing is carried out annually, to prevent layering.

More effective and expensive options to improve drainage would include field reconstruction. Construction of a graded and seeded native soil field ranges in cost from \$60,000 to \$400,000, depending on whether the on-site native soil is used, or if sand is imported to ameliorate the soil. Sand cap systems range in cost from \$60,000-\$600,000 (Michigan State’s Spartan Cap System is estimated at \$60,000-\$100,000, for example), and suspended water table constructions, referred to as sand fields, range from \$600,000-\$1,000,000. The upper range of these costs may cover extra items like irrigation, lights and scoreboards. Similar to the upgraded drainage approach, annual maintenance practices like topdressing and organic matter control are also going to dictate the longevity of each field.

In addition to its drainage capabilities, there are many other criteria that dictate the carrying capacity of a field. Fields that are maintained by turfgrass professionals will obviously be produced to a higher quality standard than fields that are not. Turfgrass professionals have the craftsmanship and the knowledge to make informed decisions about turf maintenance, pest control, water and nutritional needs, and soil improvement. Community investment is also critical, since the turf manager needs both money and support to do their job.

At the local park where my kids play

soccer, zero dollars from funds raised by leagues are returned for field maintenance. As such, the field are covered with prostrate knotweed and ankle-sized craters, but until the community speaks up those improvements won’t get made. Intensity of use plays a big part in field longevity, since it will affect how quickly the ground cover is worn away and how much renovation time the sports turf manager has. Ideally, fields and practice locations should be rotated to allow for turf renovation, but small facilities or land locked facilities may not have that option. One of the worst scenarios I see is fields with multi-purpose soccer and football goals set in concrete, which thwarts any kind of renovation plan. Lastly, age of the athlete can also play a role; younger users typically cause less wear than older athletes.

So to summarize, the question “How many games can a field host?” is far too broad in nature for me to reply with one number. Carrying capacity and longevity of an athletic field depends upon its quality, and its quality depends upon the level of investment from the community and the knowledge of the person taking care of it.

This leads me into a story. Several years ago, before I was enslaved by my iPhone, I bought a phone from a big-box store. It was a great deal and didn’t bind me to any one service carrier. After my excitement of the deal wore off I quickly learned that both the quality of the product and the customer service that followed were beyond terrible. The phone was made with cheap plastic and every attempt to talk to someone about it resulted in me banging said phone on my head. Later, complaining about this experience to my friend and colleague Karl Danneberger, he cut me off mid-whine, looked at me wryly, and said, “Pam, you get what you pay for.” Truer words were never spoken. **ST**

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Same specifications as 45-002 Sand-Star II except hydraulic power steering is standard.

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