

**Open systems** use swales (natural drainage channels covered with vegetation, usually grass) and gutters (paved swales) to divert water away from the field(s). Open systems rely on slope (gravity) alone to move water away. Lawn swales should be sloped to prevent the accumulation of standing water and to avoid erosion. An open system is fairly inexpensive to build if there is room and if the ground is easily workable. Open systems are less practical on sites where space is limited.

**Closed systems**, on the other hand, include pipes so water is collected and transported in a contained system.

**Trench drains:** There are two types of closed trench drains: gravel drains and grated drains. Gravel drains consist of an open trench with a sloping bottom filled with free-draining stone, with or without a pipe. The trench usually is lined with a non-woven geotextile filter fabric allowing water but not solids to pass through. Next, a porous or perforated pipe is laid along the bottom of the trench on a gravel bed. The remainder of the trench then is filled with gravel to the surface and left open to catch storm water while the pipe at the bottom collects it and carries it away.

Similar options include a grated trench drain (commonly called a channel drain), a gutter made of concrete or prefabricated sectional material, or a slot drain consisting of a prefabricated sectional material placed in a narrow trench. Any of these options will include a grate that prevents debris from entering.

The advantage of closed drains is their top surface can be set at a uniform grade, eliminating the need for a sloped swale or gutter. The bottom of the trench slopes instead of the surface. This is particularly useful where there is limited area around the field. In addition, it is quite common to use a gravel trench drain to act as both a surface and subsurface drain.

**Catch basins:** Where the presence of buildings, rocks, trees and/or other fixed obstructions, or significant changes in elevation

on the site preclude moving stormwater to a storm sewer or appropriate drain field, a catch basin located at a safe distance from the field and from normal foot traffic, may be used. A catch basin is a below-grade structure, typically made of pre-cast concrete, masonry (block) or pre-molded PVC, with a plastic or metal grate on top.

Water is directed by swales, gutters or trench drains to the catch basin and from there it is dispersed. If a catch basin is provided with a sump below the invert-out, it promotes water quality improvement by allowing the settlement of silt, soils and other debris. In many cases, it allows water to safely be dispersed into storm sewers, creeks, ponds, wetlands or other environmentally sensitive areas.

In other cases, a catch basin is designed with a perforated sump in order to provide infiltration into the surrounding soils. This is done in areas where soils are highly permeable and the water table is deep enough to allow such infiltration. If constructed in this manner, a catch basin is commonly called an infiltration basin or a leaching basin. Area drains, drain inlets and in-line drains also are used to remove water from the surface and direct it into a closed drainage system.

In reality, most surface drainage systems are made up of a combination of swales, gutters, trench drains and/or catch basins, known as a combination system.

These systems treat only surface water and may be insufficient if the site is low and a large area of land drains onto it, or if there is a large amount of ground water. They are, however, useful to remove water drained off the field or off nearby buildings or pavements.



## SUBSURFACE DRAINAGE

Subsurface drainage addresses the management of water below ground. Water will naturally drain from high areas to low areas both on the surface and underground. Additionally, there may be natural ground water channels within a site.

A French drain places an underground barrier between the facility and approaching subsurface water. The most common type of French drain consists of a trench separating areas of ground water accumulation or flow from the facility. The width, depth, location and number of French drains on a site depends on the soil conditions, the water table and the amount of water needing to be captured and relocated. Generally, a French drain consists of a rectangular trench filled with permeable aggregate extending to the surface, allowing the French drain to serve both surface and subsurface flows. The side walls and

bottom of the trench typically are lined with a suitable drainage filter fabric. Normally a French drain does not include a pipe; however, the inclusion of a pipe makes this type of drainage system more efficient.

A subdrain is similar to a French drain but it does not extend to the surface and always includes a perforated pipe. In the construction of a subdrain, the trench is sometimes wrapped with a suitable drainage filter fabric. In some conditions, however, the use of a pre-wrapped perforated pipe might be preferred by the design professional. Some design professionals prefer to keep the drainage filter fabric as a material separator to keep the natural subgrade soils from the drainage stone only. In this case, the fabric is placed on the subgrade and the drainage pipe is free floating in the clean stone drainage trench.

A relatively new variation of both the French drain and the subdrain uses a geocomposite drainage material. This material facilitates the construction of subsurface drainage with a much smaller trench or profile. Geocomposite drainage material is available in various sizes, depending on the amount of water to be handled and the rate of flow desired. The geocomposite is inserted in the trench

where its unique shape allows for unobstructed water flow in a narrow trench. In some cases the design will incorporate a geocomposite or molded plastic drainage material directly under the synthetic turf or under a thin layer of drainage stone. In these two scenarios, the geocomposite is basically a substitute for a more substantial layer of drainage stone. The geocomposite is typically covered by a non-woven filter fabric to prevent soil and other small particles from clogging the drainage medium.

Another variation of the French drain, called a footing drain, is used behind a retaining wall or other structure where removal of ground water is prudent.

Any of these French drain or subdrain systems will terminate in a storm sewer connection or carry the water to an area of the site where it can be stored for reuse or dispersed in a responsible manner. These will be discussed in a subsequent article. ■

*Mary Helen Sprecher wrote this article on behalf of the American Sports Builders Association. Available at no charge is a listing of all publications offered by the ASBA, as well as their Membership Directory. Call 866-501-2722 or see [www.sportsbuilders.org](http://www.sportsbuilders.org).*

### STMA in action

## STMA Sourcebook relaunching with improved functionality, competitive pricing

**EFFECTIVE LATE AUGUST 2013**, the Sports Turf Managers Association *Sourcebook*, the premier online resource connecting sports turf professionals with the most relevant industry products and services, will feature a new look and enhanced functionality for 2013. Created jointly by STMA and Green Media (publisher of *SportsTurf* magazine), the reengineered *STMA Sourcebook* improves upon past efforts by connecting association members with the most comprehensive, relevant selection of manufacturers and suppliers in the industry. In addition to its already completed work reconstructing the *Sourcebook's* infrastructure and improving search functionalities, Green Media will assume all database maintenance, information integrity, and online advertising responsibilities related to the site moving forward. Benefits of this reorganization include an increased emphasis on participating commercial companies, comprehensive turnkey solutions that will include concurrent *SportsTurf*

magazine print and online advertising packages, and more varied pricing structures.

The *STMA Sourcebook* eliminates the hassle of lengthy search engine efforts by providing in-depth information about products and services specific to the sports turf industry. Users of the *STMA Sourcebook* can find vendors and their products using the search function or relevant category headings, and then refine the search by keyword and/or geographic location. Incorporating detailed lists of relevant companies, the *STMA Sourcebook* ensures the directory is populated with manufacturers and suppliers that cater to the sports turf industry (thereby eliminating the unwanted and unrelated results common with standard search engines). As a new added *Sourcebook* member benefit, all STMA commercial company members will receive priority placement and appear first in search results.



Manufacturers and suppliers benefit from the *STMA Sourcebook* by being part of an online community that allows advertisers to connect directly to their target audience. The *STMA Sourcebook* provides advertisers with a wealth of listing and enhancement choices, including the *Product Showcase*, priority and premium placement options, banner advertising, page peels, video, enhanced keyword search functionality, and much more.

The *STMA Sourcebook* is available via the STMA website ([www.STMA.org](http://www.STMA.org)) or directly at [www.STMAsourcebook.com](http://www.STMAsourcebook.com). ■

# JOHN MASCARO'S PHOTO QUIZ

## Answers from page 17

**THESE PHOTOS** are from the Cincinnati Bengals practice facility. The brown "X" shaped mark is the result of a conditioning drill the rehabilitation guys do. Apparently, this newly conceived method of exercise combines strength training and torture. During this activity, the players swing large heavy ropes that are attached to a heavy center weight around in circles. After enough repetition, the rope abrasion on the grass causes damage. The sports turf manager reports that these areas recover naturally after about 4 days without any additional efforts. I asked if this was the most destructive drill that they perform and he said that they have one drill that he does dread much more than this one. It encompasses some team members lifting large 60-pound rocks over the players head for one minute and then they drop them on the field. This drill produces large divots and is despised by the grounds crew. ■

*Photo submitted by Darian Daily, head groundskeeper at Paul Brown Stadium in Cincinnati.*



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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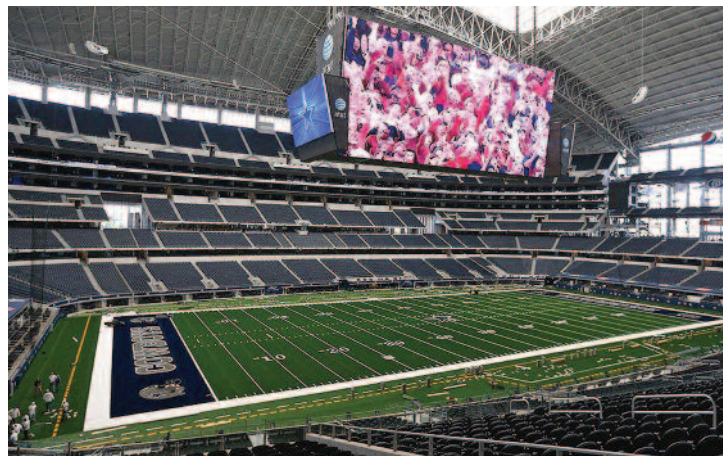
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## DETAILS ON NEW ROLL-UP TURF AT COWBOYS STADIUM

**H**ELLAS SPORTS CONSTRUCTION'S TURF DIVISION recently installed its patented SoftTop turf technology combined with its Matrix Turf system at Cowboys Stadium in Dallas. This system allows the artificial turf panels to be rolled up and stored, and then later unrolled and reconnected, to accommodate a wide variety of sporting and non-sporting events. The system in Dallas features interchangeable panels that make up three separate fields: NFL, NCAA/high school football, and FIFA soccer.

Bruce V. Layman, vice president of Hel-

las' Turf Division, answered these questions for us:

**SportsTurf:** What if anything is unique about the specific system installed at Cowboys Stadium?

**Layman:** What is unique about Cowboys is all of the markings are installed without disturbing the integrity of the manufactured backing system. The end zones are completely computer tufted. There are no inlay markings in the end zones.

**ST:** What ancillary equipment is needed to operate the roll-up system?

**Layman:** The Hellas Hopper, which is an apparatus attached to a forklift. This device is used to carry the rolls to and from storage. It is also used install and remove rolls.

**ST:** Is there a similar product available to facilities that don't have the same resources as the Cowboys?

**Layman:** There are several. The Alamo dome, the University of Idaho, Northern Arizona University, and Idaho State University all have the system.

**ST:** Describe the process for removing the field—how long does it take, how many people, etc.

**Layman:** It takes 650 labor man hours for turf installation, and 350 labor man hours to remove the turf. ■

## OWNING A TOPDRESSER

**M**ANY SCHOOLS, universities, and city parks have never done their own application of topdressing of sand or compost. They have always paid someone else to do the topdressing for them which may mean that it does not get done at the optimum time for their turf. At some point the turf manager might find himself considering the purchase of a topdresser and wondering what he needs to know to make a good decision.

There are four important things to consider when deciding whether the time is right to purchase a topdresser.

The area, in square feet of the average fields to be top dressed

The size and capacity of the topdresser

The size of the loader bucket

The logistics of making the trips from the stock pile to the field

If you are only doing two or three turf fields, perhaps less than 90,000 square feet, the cost of owning and operating a topdresser may not be justified. If you own or manage more than three fields the cost of hiring a custom operator for 3 to 6 years starts to match the cost of buying a topdresser for your own use.

Generally the purchase of a topdresser will be worth considering as you approach the use of about 400 tons of sand a year. That is the equivalent of ¼ inch of sand spread over four football fields.

### Size or capacity of topdresser

There are many sizes of topdressers on the market, from less than 1 cubic yards to more than 6 cubic yards. In general a 4 cubic yard unit will take about 4 to 5 hours to spread 100 tons on a football. A 2 cubic yard unit will take about 8 to 10 hours to spread the same amount of material. Turf

tire pressure must be considered when using one of the larger units. To minimize tire pressure on the turf, a four wheel chassis has some advantages over the 2 wheel chassis. A larger tractor will also be needed for the larger units, so some care must be taken to match the size of the topdresser to other equipment in use on the premises.

Many people see how quickly a custom operator can complete a topdressing job. What they may fail to realize is that most custom operators use at least a one cubic yard loader bucket. If a turf manager purchases a

4 cubic yard topdresser but plans to use 1/2 yard bucket, the time needed to complete the job may be nearly doubled.

Maximum efficiency on a topdressing job is accomplished by careful placement of the supply pile, and by optimizing topdresser settings. This simply means setting four variables so that the topdresser is emptied in one round trip down the field and back, while applying the desired amount of material. This allows the operator to use the least amount of time to drive the empty machine back to the pile to refill.

The four variables are: ground speed, conveyor belt speed, spinner speed, and metering gate opening.

Owning a topdresser is ideal for many facilities, giving the manager the ability to treat his fields at the optimum time, and at a frequency that aids the maintenance of healthy turf. With a good understanding of the basic considerations discussed above, he or she can decide whether owning a topdresser is ideal for the budget as well. -By Glenn Musser, TurfTime Equipment. ■

# MAKING THE CASE FOR FERTIGATION

By Michael Chaplinsky

**Editor's note:** This article's author is president of Turf Feeding Systems, which sells fertigation systems.

**NOTHING HAS CHANGED.** Sports turf management and irrigation has not changed in the past 20 years. Albert Einstein defines "insanity" as, "Doing the same thing over and over and expecting a different result." The irrigation industry is marketing "smart controllers" so does that mean they have been selling dumb controllers for years before? Everyone is marketing the same mowers, sprinklers, rakes, and most everything but just painting them green and adding propane tanks doesn't make it different or better.

Sustainable sports field management can change the game. It's an economic value first, reducing usage and costs, and also improving the quality while fitting into any budget. It will reduce irrigation water, fertilizer, chemicals, labor and energy, while improving the quality. This management practice combines the automation of fertigation together with plant and soil health to create a more efficient plant and soil relationship.

## Fertigation

Fertigation is the most accurate way to micro-feed the plant and soil lightly with each irrigation cycle. Cars and trucks all use digital fuel injection to accurately manage the fuel system, and fertigation is digital nutrient injection to accurately feed and manage the nutrient delivery to the plant and soil. Each drop of irrigation water is lightly rich and sweet with plant and soil nutrients.

Fertigation can manage the sports field lightly when it is not being used or be adjusted higher to push the plant growth for recovery from damage from over use or heavy tournament play. It is a tool which can be added to any irrigation system to apply any type of nutrient program.

The efficiency of fertigation is realized by feeding lightly with each irrigation cycle. This close interval feeding can reduce the nutrient rates by at least 50% over the traditional soil stored dry fertil-

izer program. The traditional 1lbs of N per 1000ft<sup>2</sup> rate can be reduced to .5 lbs N per 1000ft<sup>2</sup> and be more manageable and produce better quality.

Fertigation feeds the plant by root uptake as well as 15% to 20% by foliar uptake, not realized by dry applications.

Drought stress is critical and fertigation can support the sports field in drought conditions with 3-day-a-week irrigation limits. It takes a lot of water to water-in a dry fertilizer application, but fertigation doesn't need it.

Rainy periods of days of rain like Florida is getting, will wash out all the dry fertilizer applied, but during a rain period the irrigation is not used and the fertilizer stays safely in the tank, waiting for a dry period to resume irrigation and fertigation. That benefit can save up to 30% of the annual fertilizer budget.

## Controlled application rates

Fertigation is the most accurate nutrient application program, giving the field manager, for the first time, personal growth control of his fields. He can minimize the growth to manage fields between seasons and just maintain the quality, or he can push the growth to get the fields ready for the season or an important tournament. It is all done with the injection rate setting for the fertigation pump.

Soil health is the key to producing a great sports field and healthy turfgrass with deep dense roots. Soil health will also balance the soil



## Tools&Equipment

pH, reduce sodium and release nutrients that are tied up and not available to the plant.

A soil test in most areas of the US will show phosphorus in the soil, but it may not be available for the plant. Phosphorus today is a very expensive and important nutrient, and all of the fertilizer salesmen want to sell you phosphorus, but why not just make it available, because it's free.

How do you increase the soil health?

It's simple and there are two simple steps to follow. First, stop killing all indigenous beneficial biology by using less chemicals and pesticides. The only biology in some sports fields are disease pathogens. It's like a hospital that is filled with disease.

When the soil is healthy with bio-diverse biology it will overpower and reduce disease pathogens. It's like putting border collies around your chicken house. They will prevent any coyote from getting close to the chicken. It is that symbiotic relationship that will build a barrier with the plants.

Plants that are strong and not in stress are succulent are disease and insect resistant. Healthy Plants have thick cell walls, which are resistant to fungus, and require less or no fungicides.

### Feed the soil

Many companies offer products and programs that will improve your soil health.

You can add any number of organic products to your fertilizer and inject it through fertigation or you can simply spray apply it. There are humic liquid products which feed the indigenous soil biology or bio-inoculants to inoculate the soil with special beneficial biology, like micro Rizal bacteria. This bacteria is well known for creating a network web around the root system to release nutrients for the plant as well as promote dense root systems for the plant.

Turfgrass will turn over its entire root system every 2 or 3 years, leaving tons of dead roots in the soil waiting to decompose and rot into humates. A healthy soil will quickly convert dead roots into humic substances. A humic particle will attract and release ten times the water and nutrients as a clay particle. This will create tons of little sponges that will hold and release water and nutrients in your soil.

It will also keep the soil open to allow it to hold and pass water freely. Watch this video by Ray Archuleta with the USDA to learn more. [http://www.youtube.com/watch?v=9\\_IteHCrLoQ](http://www.youtube.com/watch?v=9_IteHCrLoQ) . This shows how healthy soil will absorb and hold water better.

### Sodium

Sodium is a problem in many areas of the west and can build up in the soil. This is a big problem when the irrigation water has 100ppm to over 500ppm of sodium. The more the fields are irrigated the sodium keeps building up and the grass keeps dying.

The solution is in the soil and water. A healthy soil will prevent sodium from being tied up in the soil. Humates and other organic products can be injected through irrigation to release and buffer sodium from the soil. Serious sodium problems need serious solutions, and the best product for that is Sodium Blocker a clear liquid that does a great job for water and soil with very high sodium. This is a proven product that can be sprayed or injected. The product uses proven technology and is done every day with great success.

These are real methods and real technologies that work, and will improve your sports field while reducing the maintenance costs by 20% to 60%. But more important, it can reduce your water use up to 50% with your existing control system, by improving the plant and soil health and just turning down your irrigation time. ■



### Aeration equipment from Campey Imants

The Koro Recycling Dresser from Campey Imants, as the name suggests recycles the existing soils/root-zones and re-dresses the surface, helping to level the surface after play, and refresh the rootzone by decompacting and redistribution of material.

The Recycling Dresser is possibly the most effective aeration tool on the market that leaves the

surface in play. Amelioration of new materials into the existing soil structure is also possible.

The Imants Shockwave is the original linear aerator at its best with working depths between 3" to 14", working in compacted sports fields where most vertical aeration tools cannot. Protected by a torque limiting pto a huge aid to drainage and root development.

"The Shockwave is something I plan using many times year after year, its ease of use and small surface disruption is only a small part of the benefits I saw from it. I wasn't expecting the results I saw, it was hard to imagine something so simple could work so well in relieving compacted soil," says Chris Morrow, Field Supervisor for the Dallas Cowboys practice facility.

The Imants Rotoknife could be the fastest linear aerator working between 1" to 6". A series of discs slice the ground, decompacting and promoting a free draining surface and promoting root development or tilling a ground driven unit that works well in conjunction with other aeration methods. The surface is immediately playable after use.

**Campey Turf Care Systems**



### 3-stage walk-behind snow thrower

Cub Cadet's newest innovation will have you saying "bring it on" to even the most extreme winter forecasts. The new 3X, the flagship of Cub Cadet's X SERIES extreme line of

snow throwers, clears snow up to 50 percent faster than the 2X two-stage snow thrower. The 3X three-stage snow thrower easily cuts through 18 inches of heavy, wet snow. The patent-pending three-stage system works by first gathering snow, ice and slush and moving it toward the center. Then Cub Cadet's new high-volume accelerator cuts and chops through winter's worst, accelerating it into the high-performance discharge impeller, where it's thrown up and out of the high-impact chute. These three stages work together to move more snow faster while putting you in complete control of speed and maneuverability.

**Cub Cadet**

## Tribute Total approved for use on zoysiagrass

Environmental Science, a division of Bayer CropScience LP, announced Tribute Total can be used on zoysiagrass. Tribute Total, a novel post-emergent herbicide, delivers broad spectrum control in one complete solution to turf managers selectively remove the most troublesome grassy and broadleaf weeds, sedges and kyllingas. Tribute Total helps you better manage your labor input by eliminating the need for multiple products. Approved for use on bermudagrass and now zoysiagrass, it is effective against 55 grassy and broadleaf weeds including dallisgrass, crabgrass, and yellow and purple nutsedge.

**Bayer Environmental Science**



## Exmark 30-inch stand-on aerator

The Exmark 30-inch Stand-On Aerator delivers the productivity and durability professionals demand with a split-tine design to allow easier turning with tines engaged. The compact stand-on design heightens maneuverability in tight spaces while the 30-inch aeration width and 7.5-mph top speed deliver maximum productivity. Mass is centralized directly over the tines for maximum core depth consistency, and core depth is adjustable from 2- to 5-inches. The self-cleaning tines are easy-to-replace. Tine down-force is hydraulic-actuated and is easily adjusted by the operator. An electric-start Kawasaki® V-Twin powerplant delivers top-notch power, reliability and durability. The Exmark 30-inch Stand-On Aerator is covered by a one-year limited warranty.

**Exmark Manufacturing**



## TurfEx MS4500 electric-powered topdresser

The TurfEx 1.4 cubic-yard capacity MS4500 topdresser features polyethylene construction, fully electric operation and precision spreading. It has the ability to spread standard topdressing sand for golf courses, crumb rubber for synthetic turf fields and a variety of other bulk materials including compost and soil conditioners. The MS4500's heavy-duty polyethylene construction eliminates the corrosion and maintenance concerns associated with similar steel built models, while also making the unit up to 40-percent lighter. Furthermore, it features large flotation tires and exerts only 18 psi when fully loaded, allowing safe operation on delicate surfaces such as golf greens. The lightweight construction also lessens fuel consumption for the towing vehicle.

**TurfEx**



## Netafim multi-function hydrometers

Netafim USA now features multi-function hydrometers, water-saving devices that monitor irrigation flow rates and usage on commercial and institutional sites. The hydrometers provide visible, real-time data to help landscape managers evaluate water consumption on a daily basis. The versatile device features four functions: built-in master valve, water meter, flow sensor and pressure regulating valve. Hydrometers can be utilized in either dripline or overhead irrigation systems and are compatible with controllers from most major manufacturers. As more municipalities focus on water conservation, hydrometers have become practical tools in monitoring day-to-day water use. The product's globe-shaped master valve has a double chamber that provides positive openings and closings. It can function as a remote master valve for automated operation.

**Netafim**



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## Panther Stadium, Oregon School District (WI)

### CHALLENGES

As the only groundskeeper for the Oregon School District, my biggest challenge has been that I do not have a degree in Turf Management. Despite this, I have a relentless passion, dedication and drive and I believe that has helped me to be the best turf manager I can be. I grew up on a farm and I've had experience working on a golf course but the majority of what I've learned came "on the job." I take notes of everything I do; I take before and after pictures and most importantly, I never settle for "good enough," I am always striving for improvement. At the end of every season, I go over my notes to find out what worked and what didn't work. I am in a

unique situation because all of the improvements to the field and around the stadium have come because of my hard work and dedication.

My first goal for improvement was to relieve compaction and limit unnecessary activity on the field. To relieve compaction, a drill-n-fill using Turface was performed in 2004 and again in 2009. I also aerate the field 8-10 times a year on average, recently switching the plugs from 3/4 inch to 1/2 inch which helps the holes repair faster and makes them less noticeable during the athletic season. If rain is expected before a football game, I spread Turface across the field. This helps to absorb moisture and stabilize the field for a safer playing surface. I also



- Level of Submission: Schools/Parks
- Category of Submission: Football
- Head Sports Turf Manager: Ron Novinska
- Title: Groundskeeper
- Education: High school plus turf continuing education
- Experience: I have learned everything on the job. I completed two UW Madison Turf Management Short courses. I also completed the University of Georgia's Turf Management online course. I belong to the STMA and WSTMA. I'm currently the Vice-President for the Wisconsin STMA chapter and was previously the treasurer.
- Full-time staff: Ron Novinska
- Other crew to recognize: Dan Prah, Josh Graber, and Mike Piper
- Original construction: 1966
- Turfgrass variety: Kentucky bluegrass and perennial ryegrass
- Overseed: I overseed from May to October. I broadcast seed before an event so the players "cleat" in the seed. I pre-germinate the seed as much as I can. I slit seed in June after aerating, then drag plugs to break them up and cover the seed. I create a divot mix that consists of pre-germinated seed, topsoil and Turface. I then walk the field, loosen any bare spots, add divot mix and cover with Pam 12.

**What I find most enjoyable about my job is EVERYTHING! There is a great deal of satisfaction that comes from working all year to get the stadium field in the best shape possible.**



# Membership Application

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\*Not been an STMA national member since 2000. New student and affiliate memberships do not qualify for the free conference registration. However, all members are eligible to receive the \$100 voucher for referring a new qualifying member.

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Chapter name) \_\_\_\_\_ \$ \_\_\_\_\_  
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\*There must already be a national sports turf member from your facility or commercial member from your company before you may sign up in the Associate category.

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slice, especially if rain is expected before an event to help drain the field faster.

*Poa annua* has been an issue for me for quite a few years. A few years ago, I tried something new. I cut out the larger spots and put in new sod. I did this to help lessen the amount of seed that would get spread around, avoid injury to players from the turf giving way and avoid divots. Irrigation was another challenge that I didn't realize until last year. In June of 2010, in-ground irrigation was installed. Prior to the in-ground system, I watered with Kifco water wheels. I'm able to do light watering when I'm overseeding and water in extreme heat to "cool" down the turf.

My future challenges include trying to fix the field's crown. Since I don't see this being done in the near future, I will try to fix it myself. To do this I will need to sod cut areas, roll back the sod and either raise or lower the dirt. The crown is not terrible, but there are some spots that need fixing.

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

**Novinska:** First, I would like to say that I have tremendous support from the administrators and coaches and that is due, mostly in part, to our open lines of communication. I've had the opportunity to get feedback and suggestions from them and they've grown to trust my ideas and opinions. It's a win/win situation.

Whether it is an email, text, phone call or face to face meeting, there is always daily contact. My tip would be to build a good rapport with the people you are working for by being visible, available and responsive. These three things will help you earn their trust, respect and a better understanding of what it takes to do your job

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

**Novinska:** What I find most enjoyable about my job is EVERYTHING! There is a great deal of satisfaction that comes from working all year to get the stadium field in the best shape possible. I take a lot of pride in what I do and as the only groundskeeper for the district I also feel a great deal of responsibility to make our fields the safest they can be.

I'm responsible for all aspects of turf maintenance for the high school athletic fields, but I am also a resource for landscaping and grounds care at all of the other district facilities. This includes mowing, fertilizing, painting, weed control and equipment maintenance. I also set up the fields for games, maintain turf and athletic equipment, and keep records of daily work, tree trimming and snow removal.

My least favorite task is not having enough time. Trying to get all the work done in a 40-hour work week is difficult and can be a little stressful, but I've learned to allow myself not to get completely caught up in it; it's true that it is a never-ending job, but if I look at it that way it becomes a burden.

