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

"I know I am a better sports turf manager because of this association. As sports turf managers, we take the challenge seriously to make our fields the best possible for the next game. The resources I have access to through STMA helps me do it."

—Bob Campbell, CSFM
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Transitioning infield skin from turf to dirt and back

FROM THE TIME the Little League Softball World Series Major Division moved from Kalamazoo, MI to Portland, OR in 1992 the tournament has been played on conventional 60-foot bases with a grass infield. This wouldn't typically be the norm for competitive fast pitch softball where one bad hop or errant throw could mean the outcome of the game.

With Little League International getting more involved with the Portland venue it was requested that the Main and East infields be skinned for the week-long tournament held in mid-August. Since most of the league play during the season for District 4 involves both boys baseball and girls softball the infields are left as grass, the mound circle is measured at 40-feet with an 8-foot radius, and the baseball pitching rubber is at the back at 46 feet. Twice the infield of the Main Stadium Field was stripped, regraded and big roll sodded with play 7 days later.

There are typically 10-14 days before the World Series starts after the last District Tournament for the host team to qualify. Then the preparation begins for the fields for

live television coverage by ESPN 2 for the semifinals and finals. Aeration, slice seeding, topdressing and fertilizing starts the day following the last tournament game, which can pose challenges to achieve great results before the tournament starts. However the field gets better every day and, interestingly, looks its best about 2 weeks after everything is over. The decision to go with a skin infield not only frees up some renovation time, but gets the field ready for traditional softball play.

On the first available day the sprinkler heads are marked and the two in front of the shortstop and second base positions are measured and capped. Then the infield grass is sod-cut at about 1 inch and quickly removed by a

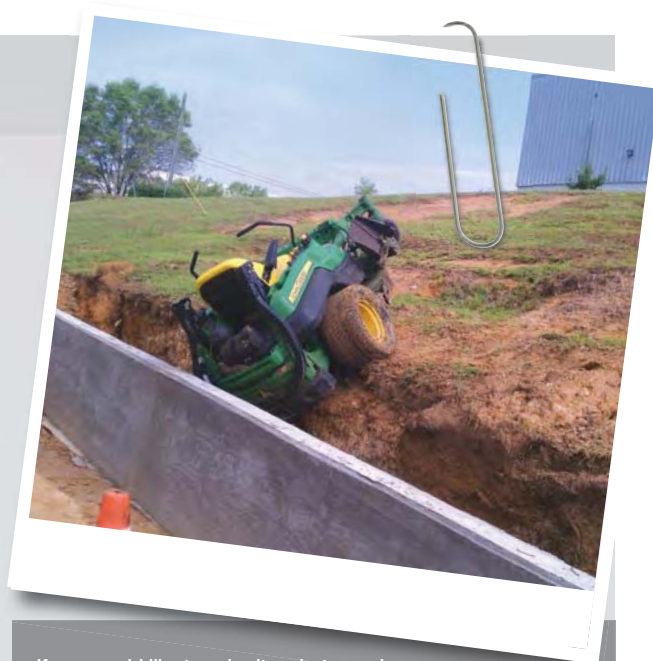
The tartan pattern was originally done for the opening ceremonies and only after the acceptance from the tournament director, Bob Hudlow, and ESPN 2 was it decided to repeat the pattern for the championship game.

JOHN MASCARO'S PHOTO QUIZ

Answers from page 17

The mower operator is missing because he fell off the mower. A new sidewalk as well as a retaining wall was being installed at the bottom of this steep hill. After the forms for the wall were removed, a 3-foot gap was left directly behind the wall. During the night a rainfall occurred, making the clay hillside very slippery and when the mower operator was mowing the area, the mower slid down the slippery clay and into the crevice, ejecting the mower operator onto the newly poured sidewalk. The mower operator's only serious injury was to his pride; however a valuable lesson should have been learned here. If you look closely at the picture, you will notice the mowers rollover prevention system is in the down position. If the mower had gone over the retaining wall, it would have likely landed on top of the mower operator, causing very serious if not fatal injuries. This photo should be a lesson that all ROPS systems should not be attached with pins that can be removed. Instead they should be bolted securely to prevent tampering with in the event of an accident.

Photo submitted by anonymously.



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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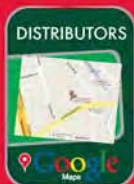
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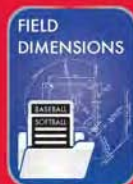
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rubber track ASV skid steer and discarded. The existing soil is lightly tilled with a tow-behind Aerovater, breaking up the hard compacted soil and getting the dirt at a consistent mixture. Then 25 yards of Astoria Sandstone is added to bring the infield level up since almost 1 inch of 3,000 square feet of sod was removed. Then laser grading begins with a slight fall to 2nd and a ½% cone from the mound. Finally, two tons of Turface MVP are added, nail dragged in, and leveled.

This year's tournament featured a new look for the infield skin portion. By measuring every 4 feet down each baseline and the opposite grass edge area of a conventional 60-foot base infield, a string was strung out and, with the use of a Scotts drop spreader, Turface's new infield conditioner (Pro League Heritage Red) was spread in straight lines. Pulling the drop spreaders backwards allows for the product to come out faster and uniform. With practice, the application was done faster and more precisely.

Softball needs to have a white line to indicate the 8-foot radius where the pitcher can receive the ball. After the pitch the runners have to immediately return or advance to the next base. Inside the circle was completely filled in with a couple of passes of the drop spreader. The patterns were laid

out so that they had a continuous appearance all the way around. The tartan pattern was originally done for the opening ceremonies and only after the acceptance from the tournament director, Bob Hudlow, and ESPN 2 was it decided to repeat the pattern for the championship game. The Championship game went on without a hitch and the patterns easily made it through the 6-inning contest.

After the tournament is over the sprinkler heads are located. Then the infield is quickly regraded for a grass infield. Seeding was done in both directions with a Lesco slice seeder. The fixed spinning blades of the slicer act as a power planer and shave any high dirt and gradually smoothes the loose dirt over the seed. Since the seeding or sodding of grass will raise the height of the infield, the grading of the grass portion of the infield is lowered ¾ of an inch to prevent starting with a lip.

Grass lines are established by running a gas edger backwards to create a clean groove in the dirt. Using a landscape rake the inside of the groove is shaved down, allowing the grass to grow even with the infield dirt. This year the baselines were seeded as well to try to limit the maintenance for the unpredictable fall Oregon rain. With tarps for both the mound and homeplate available and the infield graded with a slight slope to

the back edge of the infield, rains can effectively be managed.

A starter fertilizer is applied with a broadcast spreader in both directions to give uniform coverage. A light raking can help spread out heavy or light seeded areas. Then grass straw mulch is applied at 100 lbs per 1000 square feet with a screen roller, much like a peat moss spreader. A light watering before the straw mulch is applied will help with the mulch to stick to the soil and not be so dusty. The grass straw mulch helps to hold moisture in as well as give the newly seeded infield a tint of green.

After a couple of weeks the sun bleaches out the color and the newly planted grass seed starts to emerge from the soil. Since a higher percentage of grass seed falls into the cut grass line edges they are more pronounced. If the ground is firm enough a quick light mowing with a push reel mower cuts the first shoot of grass blades allowing it to tiller more quickly and fill in. After a month another application of fertilizer will boost the top growth of the grass. With frequent watering and mowing the infield is ready in 4-6 weeks for the fall Little League baseball program. ■

Mike Hebrard is the owner of Athletic Field Design, Clackamas, OR, www.athleticfield.com.



How to put mowing patterns on infield skins

I ALWAYS THOUGHT THAT A SKINNED SOFTBALL INFIELD WAS A LITTLE DRAB LOOKING when it can to watching it on TV. After high-lighting the mound circle and batter's box with Pro League Red or Heritage Red, the thought came to me—what about drop spreading the product in a square overlapping pattern much like mowing grass?

First I tried using Emerald Field and Fairway, a green colored topdressing calcined clay that has the same particle size as sand. After a couple of test areas it was deemed to be too light of a contrast to make an impression (is this still red or green?). I originally did this for the opening ceremony and

I had one of my assistants comment that he didn't care for the different surfaces; I quickly responded "Oh, like grass and dirt?!"
—Mike Hebrard

mentioned to the Tournament Director Bob Hudlow that I would like to do this for the Championship game on ESPN 2. He took a picture and sent it to the ESPN crew and they replied they wanted to know what it looked like after the 4th inning. After a couple of games ESPN 2 had no problem with it so the Green Light to do it was on!

I decided to use Turface's Heritage Red which is actually has more of a brownish tone to it. For a pattern style I chose the conventional checkerboard for the ease, quickness and contrast. I started by inserting a tape measure at the apex of 2nd base and home plate and by laying them out in the same direction. If you are using a 2-foot wide spreader, scribe a mark every 4 feet in the dirt. You will go on opposite side of



the string with each pass. In order to come out evenly with your spacing, use a string down each chalk line and 2 inches in from the outside of the base to complete the square; that way you will know when to stop.

Use a sharp spike or screwdriver with premeasured strings, (I like to have two that way you always have one line ready to go while the next one is being moved) angle them back a bit and even use a hammer and pound them in, that way the string doesn't come out at an inopportune time. Set the spreader wide open and go backward, running the wheel near the string line and stopping (at the premarked edge. You can fill in the mound circle with the same color or another contrasting one for more visual effect.

The mound needs to have a white circle around it to indicate when the ball is back in the pitcher's possession. Do a pass around the circle on your last straight line near the mound. Repeat the process going in the opposite direction. Little League softball for the 11-13-year old girls is 6 innings and the patterns easily last the entire game. I had one of my assistants comment that he didn't care for the different surfaces; I quickly responded "Oh, like

grass and dirt?!"-Mike Hebrard

Insert tapes at the apex of home-plate and 2nd base

If using a 2-foot wide drop spreader scribe mark every 4' in the dirt

Use the drop spreader backwards and complete the square

You might have to make a couple of attempts to come out even

Continue the process stopping at the end and going the opposite direction

Do a finish pass around the mound circle

You can either fill in the mound with the same color or use a contrasting one.

Softball requires an 8-foot white circle be marked around the pitchers rubber so even with same color you will still have a break in the pattern.

We usually used three bags of Heritage Red per application

We had the best results wetting the infield in advance and letting it air dry and after infield warm-ups just wetting the unmarked portion of the infield to get the best results.

We added a little spice to the process and actually had four of the same Scotts spreaders and did a quick remark just before the game ■



COMMONLY ASKED 401(k) plan questions

Because your retirement planning is so important to your future well-being, you should ask questions about the retirement plans available to you and how they work, as well as how to best use your retirement dollars. Below are answers to several commonly asked questions about 401(k) plans.

Q. How do my 401(k) contributions lower my income taxes?

A. Your 401(k) contributions can be made on a pre-tax basis. This means that they aren't reported to the Internal Revenue Service as current income on your W-2 form. For example, if you earn \$50,000 a year and decide to contribute 10 percent of your salary (\$5,000) to your 401(k) account on a pre-tax basis, only \$45,000 will be reported as current income for income tax purposes.

Why does the government give you this excellent tax break? Because it wants to encourage individuals to save as much as possible with their own dollars today so that they are better prepared for their retirement in the future.

Q. What is a Roth 401(k)?

A. Roth 401(k) is not a type of plan, but rather a type of plan contribution. If a 401(k) plan offers this feature, employees can designate some or all of their elective contributions as designated Roth contributions, rather than traditional, pre-tax elective contributions. Roth contributions, how-

Traditional 401(k) contributions and Roth 401(k) contributions are subject to a combined limit of \$17,000 for 2012 (\$22,500 if age 50 or older).

ever, are taxed in the year they are contributed to the plan (i.e., they are made on an after-tax basis). Upon distribution, Roth 401(k) contributions are received tax free. Earnings on Roth 401(k) contributions will not be taxed upon distribution if the Roth account has been open for at least 5 tax years and distribution occurs after 59½, death or disability. Traditional 401(k) contributions and Roth 401(k) contributions are subject to a combined limit of \$17,000 for 2012 (\$22,500 if age 50 or older).

Q. Am I able to contribute to both a 401(k) and an IRA?

A. Yes. Many individuals contribute to their 401(k) plan and to a traditional Individual Retirement Account (IRA) or Roth IRA. It may be best to maximize your traditional 401(k) contributions first, since they can be made with pre-tax dollars. (Your traditional IRA contributions may or may not be tax deductible, depending on your annual salary and other qualifications.) If your employer offers matching contributions and you qualify for a traditional IRA or Roth IRA, it may make sense to contribute enough to the 401(k) plan to obtain the maximum employer match, and then contribute to a traditional IRA or Roth IRA if eligible. If you have not then exhausted the maximum allowable contribution and can afford to do so, consider contributing additional amounts to your 401(k) plan.

Q. If I change jobs, may I take my 401(k) money with me?

A. Yes. All contributions you have made to your 401(k) account are 100 percent yours. Contributions made by your employer (if any) may be yours depending on a vesting schedule. You will need to check your plan for specific vesting schedules.

In addition, if you do change jobs, it may be a good idea to consider either rolling your 401(k) money over into an IRA or another qualified plan (such as a profit-sharing or 401(k) plan) at your new employer. Otherwise, you may incur taxes and early withdrawal penalties. Be sure to check with your tax adviser before taking any distributions from your 401(k) plan.

This article is published for general informational purposes and is not an offer or solicitation to sell or buy securities or commodities. Any particular investment should be analyzed based on its terms and risks as they relate to your specific circumstances and objectives. ■

Article courtesy of Morgan Stanley Smith Barney Financial Advisors.

Tips for recruiting TOP TALENT

THE COMPANY WITH THE BEST TALENT has the best chance of winning in the competitive marketplace. Employee recruitment forms a major part of a company's overall resourcing strategies, which identify and secure the best talent to help the organization succeed, in both the short and long term. Recruiting activity needs to be responsive to the ever-increasingly competitive market to secure qualified and capable candidates at all levels. That said, recruitment should be constant and conducted by all people in the organization, regardless of backlogs or current staffing levels. Yes, it is true that we all need to be recruiting the best people to join our companies.

If you really believe in your company, you will want good people to join your team. The company needs to be noticed by passive job seekers before the competition catches their eye.

Companies that implement a plan of continuous recruiting experience unexpected positive benefits. Active recruiting means being visible and vocal in your industry, which helps your public relations, as well as your positioning with trade schools and universities.

You have to always think smart. Smart employers who are in touch with the best candidates as a result of "always recruiting" develop a pre-qualified candidate pool before there is a need to fill a job. You can develop relationships with candidates long before there is a need to hire them. This will help create a large pool of candidates that will be useful when you have a new position available. As you know, things can change quickly — a key employee leaves, you suddenly get a large backload of work, there is a desire to expand into a new market, or you need to make a sudden personnel change. These things are all made a bit easier when you have a pipeline of candidates.

Your capability and capacity to deliver targeted results and sustain economic prosperity within your organization is highly dependent on "always recruiting" strong talent. It is a fact, as published by the Harvard Business School Press, that organizations that "always recruit" score in the top 20 percent in talent management, and produce an average of 22-percent-greater total returns than those companies who aren't always recruiting.

You always need to have an edge over your competition, and "always recruiting" will give you that edge.

Once you have mastered the concept of "always recruiting," hiring the right candidate becomes a less challenging process. Hiring the wrong employee is expensive, costly to your company, and time consuming. Hiring the right candidate, on the other hand, pays you back in employee productivity, employee morale, positive forward-thinking planning, and accomplishing challenging goals. It also cements a successful employment relationship and makes a positive impact on your total work environment. You can develop relationships with potential employees long before you need them. This idea will also help you in recruiting a large pool of candidates when you have a position available.

Some key steps when hiring a new employee are as follows:

Define the job before hiring: Hiring the right candidate starts with analysis of the job. The job analysis enables you to collect information about the responsibilities, competencies and work environment of the position. The information from the analysis is necessary in developing the job description. The job description assists you in planning your recruiting strategy.

Review applications and credentials carefully: Reviewing resumes and job applications starts with a well-written job description. Making a bulleted list of your

most desired characteristics, then screening all the applicants against this list, will be a good use of your time and a good way to draw out the most qualified candidate.

Prescreen all candidates: A candidate may look great on paper, but a pre-screening interview will tell you if their qualifications and salary requirements are truly a fit. A phone interview will also obtain evidence whether the candidate will fit within your culture.

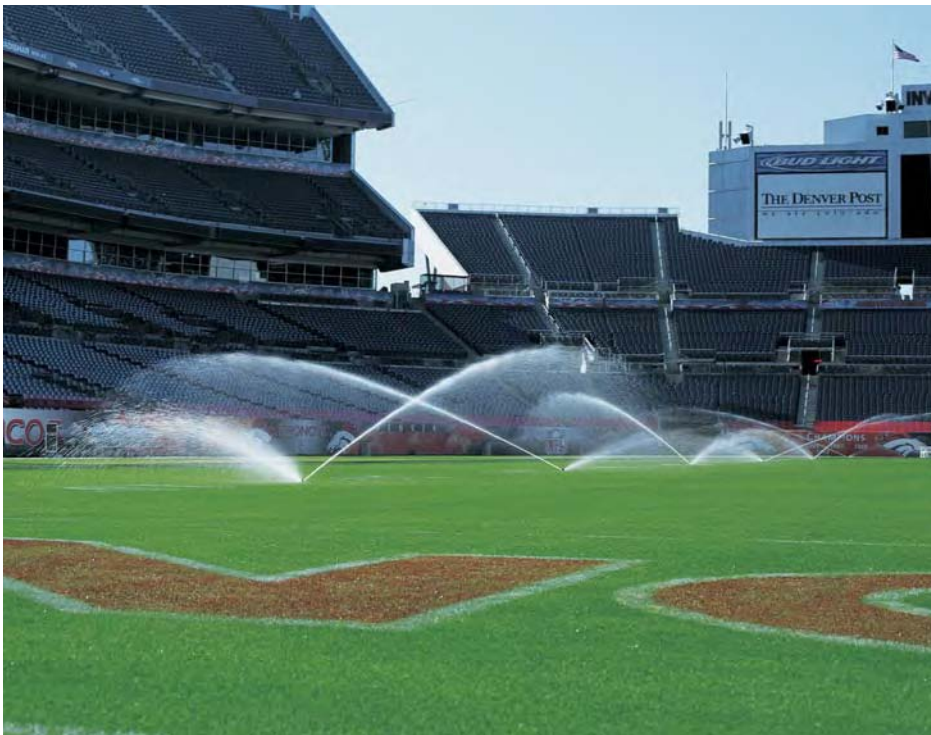
Ask the right interview questions: The job interview questions asked are critical in magnifying the power of the job interview in assisting you in hiring the right person for the job. Interview questions should always be open ended, such as, "What is your most memorable accomplishment and why?" The idea is that the interviewer should talk less and listen more. You want to get to know the candidate, and, let's face it, most people like talking about themselves and their accomplishments.

References and background checks: References and background checks should always include past supervisors, educational credentials and actual jobs held.

The bottom line is that managers must always be recruiting. That does not necessarily mean an official posting of a job, but a good manager should always be networking and looking for great talent. A manager should always have a half dozen people they would like to hire, if the occasion were to present itself. That doesn't mean offering them a job — it means getting to know them well, understanding their strengths and weaknesses, and exploring their aspirations and how they may fit into your organization.

Good managers have succession plans in place for every role in their organization. Good managers are always recruiting. If you lost one of your key people today, could you pick up the phone and call a half dozen replacements tomorrow? If you couldn't, you need to start recruiting. ■

Noël M. Dubak is manager of global recruitment/development at Bartlett Tree Experts. She can be reached via e-mail at ndubak@bartlett.com.



Effective irrigation scheduling

Editor's note: The author is the marketing manager for Hunter Industries.

HAVING AN EFFECTIVE IRRIGATION SCHEDULE established for the upcoming season is not only useful to help manage water and pumping costs, but also to help reduce disease, fertilizer use, runoff, and

erosion. An effective schedule contributes to healthier turf, greater playability, and more importantly, increased safety. The creation of irrigation schedules have matured in many ways from the old methods of arbitrary runtimes for spray and

rotor zones, to using full water audits, soil analysis, and daily, automatic sprinkler run time adjustment for evapotranspiration rates (evapotranspiration is the measured combined loss of water from soils by evaporation and plant transpiration) calculated by on-site weather stations. While these newer scheduling methods are more efficient, many turf managers may lack the resources and experience to develop highly efficient irrigation schedules.

Among the variety of solutions for irrigation scheduling are “smart controllers” offered by many manufacturers that can help assist with daily irrigation scheduling adjustments. Smart controllers are irrigation controllers that have the ability to adjust the daily irrigation run times based on the weather conditions. These smart product offerings vary greatly in cost and complexity. Some manufactures offer simple add-on weather sensors that provide true onsite weather data that may be compatible with existing field controllers. Other more complex solutions may require existing field controllers to be replaced and add monthly subscription costs to supply the daily weather information from distant weather stations to the site. While smart controllers can be useful tools to achieve greater efficiency in irrigation scheduling, they first require an accurate assessment of the site. Another consideration is that weather-based controllers often times need significant initial observation and adjustment before optimal performance is achieved.

» **Below: ROTARY SPRINKLERS** can be high efficiency sprinklers, designed for safety and reliability for sports fields of all types.

Educational resources and networking opportunities:

There are many knowledge bases in the irrigation industry that can assist with the education and consulting of an irrigation system. The following websites offer different educational resources and networking opportunities:

- ⊗ <http://www.water.ca.gov/wateruseefficiency/landscape/>
- ⊗ www.irrigation.org (**Irrigation Association**)
- ⊗ <http://www.atinet.org/cati/cit/> (**Center for Irrigation Technology, Fresno**)
- ⊗ <http://www.asic.org> (**American Society of Irrigation Consultants**)
- ⊗ <http://www.stma.org/> (**Sports Turf Managers Association**)



MOISTURE SENSOR OPTIONS

Another option to assist with irrigation scheduling is the use of moisture sensors. Typical systems using moisture sensors have one or more sensors placed in the rootzone of the irrigated area. These sensors will either inhibit or shut down an irrigation cycle once optimal soil moisture levels are present. A simple tool to use as a reference of the level of soil moisture is the tensiometer. These devices are installed in the rootzone similar to moisture sensors, but provide a gauge that can be visually referenced for the status of soil moisture.

Regardless of any technologies being employed, it is important to note that having an efficient system is paramount to effectively using your limited water resources. It is a good idea especially on older systems to perform a tune-up before addressing scheduling concerns. During this site inspection the system should be checked for damaged and leaking heads and to ensure heads are level and unobstructed. At this time the pressure should also be checked at the nozzle to verify the optimum manufacturer pressure recommendations are met. If the pressure is too high, pressure regulation at the valve should be considered since high pressure can hamper efficiency just as badly as low pressure. If low pressure is observed refer to manufacturers nozzle data. Often smaller nozzles can be used to help reduce flow and restore pressure and nozzle efficiency to the system.

GOING MONTHLY

An irrigation schedule should be created for each month of the growing season. This will serve as a base schedule that will typically require only minor adjustments with the exception of extreme weather events like prolonged rain or above average heat. The first step in this process is to collect historic or average evapotranspiration rates for the local area. This data can often be accessed through a water purveyor website or by an internet search for the best available local source. Once this data is gathered, you can derive how many inches of irrigation water is needed by plant type. The irrigation schedule would then be built to replace this lost moisture.

An additional consideration of the efficiency of the irrigation system components also plays a role. Since no irrigation system is 100% efficient, additional irrigation will need to be applied to compensate for the difference between the plants needs and the ability of the irrigation equipment to apply the water. As a general rule, rotary sprinklers range in efficiencies from excellent at 80% or higher, to a general average in the 70% range. Spray sprinklers tend to be less efficient than rotary with the high range being 60% and an average around 50%. Many systems with pressure, flow, and maintenance issues can fall well below these averages. Irrigation system audits are highly recommended to understand true system efficiency. Often times, the cost of a full water audit will provide a reasonable return on investment through potential irrigation scheduling water savings.

Soils can be thought of as your water reservoir and soil type plays a significant role in determining how often and to what duration irrigation needs to be applied. For example, sandy soils do not offer as

much water holding capacity as a clay soil. However, sandy soils are able to absorb water being applied over a longer period of time before irrigation run off begins to occur. Clay soils are the opposite, and generally require several short sprinkler run times before the desired amount of water is applied to the rootzone. Simply running the irrigation system and observing the amount of run time until runoff occurs is a useful way to help determine the length of irrigation run time your soil can handle.

An important note to consider when determining sprinkler run times is that soils generally have a high initial intake rate

that will drastically decrease, especially as you approach the soils water holding capacity. It is important to keep in mind plant roots do not seek water; rather only grow where water is present and your irrigation schedules should be designed to provide more infrequent, deeper watering cycles. Frequent, short irrigation cycles typically only provide moisture in the

first few inches of the soil. This will create a shallow moisture reservoir and lead to shorter rootzones and less drought tolerant turf.

As you prepare for your upcoming growing season, assess and repair the irrigation system at spring start up and generate an expected monthly irrigation schedule based on your local evapotranspiration rates. If your

budget allows, strong consideration should be made for employing irrigation system audits and new technologies like smart controllers or to help achieve optimum water savings for greater safety and playability.

There are many knowledge bases in the irrigation industry that can assist with the education and consulting of an irrigation system. The following websites offer different educational resources and net-

working opportunities:

- <http://www.water.ca.gov/wateruseefficiency/landscape/>
- www.irrigation.org (Irrigation Association)
- <http://www.atinet.org/cati/cit/> (Center for Irrigation Technology, Fresno)
- <http://www.asic.org> (American Society of Irrigation Consultants)
- <http://www.stma.org/> (Sports Turf Managers Association) ■

Troy Leezy CID, CLIA, CWCM and Marketing Manager at Hunter Industries



» **PRESSURE REGULATION** at the valve can immediately solve high pressure issues that can lower sprinkler performance. Hunter's Accu-Sync pressure regulator shown here.

Re-using synthetic turf infill

Editor's note: Paul Hollis is executive vice president of Redexim North America.

THE SPORTS TURF INDUSTRY has seen huge growth in the number of synthetic turf sports field both in our nation and the rest of the world over the last decade. The newer infilled playing surfaces now number in the thousands, if not tens of thousands. The quality of play on these fields compared to the first generations of artificial playing surfaces is impressive. A large number of college and professional teams now own synthetic sports fields, either at their stadium or practice facilities. What was once a luxury now seems to be a necessity for many.

The basic construction of a synthetic playing surface consists of synthetic fibers or carpet, the infill (sand or rubber), backing material, a choker stone layer, open grade and soil. In essence the fields are not all that complicated and installations in most cases can be done in a just a few days or weeks at most. While the investment of a synthetic field now seems commonplace and enjoyed by owners for years and years.

A new question is looming on the horizon. What to do with the fields once they have met its life expectancy. There are an alarming number of fields that will be removed over the next decade and some thought should be given on how to dispose of them properly.

The average synthetic field will includes between 300,000-750,000 pounds of infill material varying due to the mix of sand and rubber and over 80,000 square feet of plastic fibers. So what is the answer that would be the most environmentally friendly? Waste Management and many other disposal companies are now signaling that they do not want the materials or they will charge outrageous fees to put them in a landfill.

Many companies now promoting recycling all materials well in advance of their industry peers and are using machines to remove the synthetic fields at the end of their life and separate the components of each to be recycled or reused. Let's take a look at how the materials could possibly be used in a constructive and environmentally sound manner.

Several years ago Dr. Trey Rogers and Tim Vanini from Michigan State University identified that crumb rubber had potential as a possible topdressing material. The approach makes sound agroeconomic sense, but the use of rubber infill only on a limited basis. Can the application of using crumb rubber as a soil amendment be popularized?

The majority of playing fields are made of plastic fibers produced from polyethylene and polypropylene. The clean surface



fibers of these older fields can be cut, recycled and made into lower density fibers. However, most backing materials cannot be recycled in this manner and are used as a low grade fuel at some smelting plants and cement kilns that harness this energy for producing other goods. A number of synthetic turf manufacturers are now advertising turf made from fully recycled materials ahead of their competition.

There are a relative few turf installers that have discovered that removing, cleaning and reusing materials on site is not only a good method, but also reduces the cost of a replacement field. A mechanical infill remover can take out the old infill separate it and then it can be cleaned for reuse or disposed if necessary. A large portion of rubber infill can be used again in most applications, while sand is disposed of by selling or donating to other sources.

If the playing field is worn, but still has some life left it can be sold or donated to high school or other facilities with lower budgets. There are also stories surfacing of used turf being used as golf tee mats, to line sand traps on golf courses, or other uses. There seems to be a growing number of outlets for used synthetic turf and the world wide net can surprisingly help find an old field a new home.

The Synthetic Turf Council (STC) is the first group to take a pro-active look at these concerns with its End of Life Disposal Task Force. The STC encourages options that avoid landfills once a synthetic turf field has met its life expectancy. Owners can seek advice from them and request copies of publications such as the organization's "Suggested Performance Guidelines" that will help identify when a playing field is nearing its end of life. Check out their website at www.syntheticurfCouncil.org.

The number of equipment manufacturers that produce machines to assist end users in the recycling of synthetic turf and its components is growing. The companies that provide this service will grow exponentially as the thousands of fields start to mature. Look for the increasingly numerous sources to recycle or repurpose the byproducts of your old field before its end of life and you will not only save yourself costs of replacement, but you will also keep your operation environmentally friendly. ■