

Playability

continued from page 18

to hear Floyd Perry of Grounds Maintenance Services speak on the issue of playability versus liability.

Perry not only recognizes the field safety issues but reminds us all that there are a number of procedures or steps we must take "to avoid loss to your organization and formulate protection against liability." It only takes one accident or injury to remind us of how important it is not only to maintain a safe playing field but to document all procedures and be proactive with safety audits. Within many parks and recreation departments, trained personnel are assigned solely to the inspection, documentation and repair of hazards in the parks.

The influx of soccer at all levels of play in the United States has put even more pressure on sports turf managers and administration executives. Increased play creates increased wear and damage to the fields.

It's important not to underestimate the ability of a valid turfgrass cover on a field to increase the cushioning effect and increase the traction available to the athlete.

Field designs and maintenance standards need to be developed to optimize the growth and health of the grass plant. Excellent divot recovery and lateral soil stabilization are critical to heavily used fields. As organizations and professional associations develop field safety standards for field hardness, drainage and tractions, many existing fields and field system designs will fail to meet the new requirements. Liability suits will increase, and facilities will find themselves paying out large settlements if their fields "fall below" acceptable levels of playability.

Before you decide on who will reconstruct your fields and how it will be done, ask yourself these questions:

- Am I creating a future liability?
- Am I creating a hard surface?
- Am I creating an unstable surface if and when turf cover is lost for any reason?
- Am I creating an environment that could be detrimental to root development and turfgrass health?

• Am I creating a "Band-Aid" solution that could develop into a long-term problem. (For example, sod produced on heavy soils [silt and clay] when laid on a sand field will, over time, contaminate the sand profile and can cause field failure.)

• Am I creating a maintenance nightmare that my staff is not equipped to handle?

If the answer to any of these questions is yes, reconsider your options. Seek out the most up-to-date research. Request a needs assessment by a team of professional consultants.

The million dollar price tag associated with field construction today is only a drop in the bucket of the potential costs associated with future liability.

We can provide safe playing surfaces for our athletes and control liability through proper preparation and a proactive, diligent approach to field design and maintenance. □

Stephen H. Guise operates a national sports turf management company from his office in Fullerton, CA. He is president-elect of STMA, is an elected member of the STMA's technical review committee, and separately contributes to the ASTM Committee on Natural Turf and Artificial Playing Surfaces.

OUTRUNS THE COMPETITION

That's The Beauty Of A National.

Acre for acre, no mower goes the distance like a National. Its 7' swath cuts 3½ acres per hour and its price beats any mower in its class — up to 2/3 less! Judge for yourself... call your dealer today for a price comparison.

You're in for a pleasant surprise!



NATIONAL MOWER COMPANY
700 Raymond Avenue
St. Paul, Minnesota 55114
Phone: (612) 646-4079
FAX: (612) 646-2887

NATIONAL® is a registered trademark of National Mower Company.





Natural Turf Management, Part 3



Frequent fertilization of the grass on the left developed high salt accumulations that killed grass roots and natural life-supporting soil reactions. Favorable, natural soil reactions of the grass on the right stimulated deep roots and soil microorganism activity. Photo courtesy: Don Arenberg.

Balancing Turf on a Budget

By Don Arenberg

The trend toward lowering costs by eliminating workers is nothing new. Businesses have been doing it for several years. Yes, the greatest cost reductions can be experienced by massive layoffs, but downsizing a groundskeeping staff to a few experienced personnel makes maintaining quality turfgrass difficult. Fortunately for sports turf managers there are ways of possibly saving money simply by modifying maintenance practices.

Under chemical care, turfgrass is unnaturally treated and must continue to receive artificial ingredients, unless changes are made to bring the plant back to its natural functions. By providing turfgrass its basic natural requirements, a turf manager can realize the following benefits:

- reduced weed growth and herbicide applications;
- slower rate of turfgrass growth while maintaining deep green color, beauty, density and health;
- reduced watering, mowing, trimming, fuel use and repair costs;
- an improved soil structure that reduces flooding, runoff and puddling;
- deeper, denser root growth;
- more attractive, playable turf, resulting in more income from play.

There are other benefits, but for now, I would like to focus on the ways people create unnecessary expenses. From the

following, one should not conclude that fertilizers are totally bad, only that they can be better used.

Single-Minded Management

Much has been said about fertilizers and their frequent use: "If you don't fertilize, your grass will not grow." But the result is more frequent mowing and trimming. Much has also been said about nitrogen in its various forms – quickly available, slowly available, combined with sulfur, liquid and granular – and that high rates of nitrogen are required to maintain continual uniform grass growth.

When the green color ceases, people then hear promotions for the micronutrients.

Almost every concept, product and ingredient has been promoted on an individual basis, and new products are continually introduced every year to the turfgrass market as individual cure-alls, but no one product or group of products has yet accomplished its original claims. Why? The answer is simple. No one product or ingredient can supply all of the needs of all turfgrass plants on all soil types on a long-term basis. The following illustrates the negative effects one ingredient or one group of ingredients can cause on grass and soil.

A Single Nutrient – Nitrogen

For the past 40-plus years, nitrogen has been promoted as the most important nutrient for growing turfgrass. Many different recommendations have been

made regarding the various available forms, application rates and frequencies. From these recommendations a "chemically acceptable standard" of one pound of nitrogen is often applied to 1,000 square feet of lawn per application. Nothing is said regarding the ratio of nitrogen that should be used with other nutrients.

Yet it is known that excessive rates of nitrogen will produce excessive leaf growth, meaning the grass will grow faster and require more water, more nutrients (other than nitrogen) and more frequent mowing. It all adds up to increased maintenance costs but a decrease in the health of the grass.

A primary technical damage caused by excess nitrogen or the use of nitrogen without regard to other nutrients is the development of "fat cells" with very thin cell walls. Thick-walled cells are one of the plant's main "armor" systems against disease, insects, wear, poor weather and other adversities. When thick cell walls are reduced to frail "tissue paper" thin walls, the plant loses its ability to fight off infections and heal its wounds.

A Group of Nutrients (N:P:K)

The primary nutrient elements of nitrogen, phosphorous and potassium in commercial fertilizers are derived basically from water soluble salts such as ammonium nitrate, ammonium sulfate,

continued on page 26

The most economical way to eliminate *Poa annua*!



No. 4 green, Prairie Dunes Country Club, Hutchinson, Kansas, P. Stan George, C.G.C.S.

There are plenty of products that provide preemergent control of crabgrass, goosegrass, and other unwanted grass weeds. But if your problem is *Poa annua* on putting greens, your choice is limited.

Proven weed control and a high level of turfgrass tolerance have made Bensumec 4LF the most widely trusted pre-emergent herbicide for greens and other highly maintained turf areas. It is also compatible for tankmixing with many other turf products.

And compared to some of the newer *Poa* control programs, Bensumec 4LF is very economical.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS.

Consider these advantages:

- prevents *Poa annua*, crabgrass, goosegrass and other unsightly grasses and broadleaf weeds
- economical compared to other *Poa* control programs
- season long staying power
- high turfgrass tolerance
- most efficacious in soil with low organic content — perfect for sand based greens
- may be applied during the dormant season or growth period
- can be tank mixed with most turf care products including liquid fertilizer

PRE-SAN® Granulars, available in 7% and 12.5% formulations, also provide the consistent performance and margin of turfgrass safety. Both Bensumec™ and Pre-San® contain Betasan®.



Excellent control of *Poa annua* plus crabgrass and other weeds.



Stuart Cage, C.G.C.S. Old Oakland Golf Course Indianapolis, IN

"We've used Bensumec 4LF for four years making split applications in the spring, and sometimes a fall application, too. I am more comfortable with this preemerge than with PGRs for our greens and tees. And we've had excellent control of *Poa* as well as crabgrass and other weeds."

FREE

Circle the readership card or write for our new Bensumec/Pre-San Application Guide. This colorful 24-page booklet contains information on when, where and how to apply. Also contains complete specimen labels and material safety data sheets.



An Employee-Owned Company

1217 West 12th Street • P.O. Box 014090
Kansas City, MO 64101-0090
Phone (816) 421-4070

BENSUMEC™ is a trademark of PBI/Gordon Corporation.
PRE-SAN® is a registered trademark of PBI/Gordon Corporation.
BETASAN® is a registered trademark of Gowan Company.

Bensumec™
PREEMERGENT GRASS & WEED HERBICIDE

Natural Turf

continued from page 24

urea, ammonium phosphate, potassium chloride, muriate of potash and so forth. These fertilizers are high in salts and acid formers. When applied to the soil, the salts immediately kill root tips and essential soil microorganisms while changing the physical, chemical and biological characteristics of the soil. The fertilizers make the surface soil more acidic, creating desirable conditions for the invasion of disease and the gradual thinning of the turf, which encourages the growth of weeds.

Initially, fertilizers appear to encourage the growth of green grass. But over a period of years, the grass does not become stronger or more aggressive, nor do the roots grow deeper or the rhizomes and stolons more massive to produce a dense turf. Instead, the older a lawn becomes and the longer salty fertilizers are used, the thinner the roots become. The roots tend to grow more on the soil's surface while rhizomes and stolons fail to function properly. The grass becomes thin and weak while the soil becomes tight, compact and unable effectively to sup-

port the growth of the grass. Older lawns require frequent reseeding, resodding, pesticide applications, water, care and expense. The more fertilizers are applied, the faster and more complete the decline.

Balancing Act

No one nutrient or group of nutrients, no matter how well suited to the requirements of a specific grass, will provide all the elements for optimum growth. Many other ingredients and conditions must likewise be met. Among the more important are soil microorganisms, enzymes, hormones and organic compounds, plus acceptable physical, chemical and biological soil and environmental conditions. All of these must be correctly balanced to meet the requirements of the desired grass species. If they are not, the grass will not provide all the characteristic reactions necessary to meet the demands of people and their use of turfgrass.

For years, people have realized that a nutrient balance is necessary. Soil analysis emerged to test for the availability of fertilizer nutrients. Other tests were added for exchange capacity, organic

matter content, exchangeable hydrogen and so forth. But no matter how many nutrient tests were made, sufficient information was never accumulated to produce acceptable results. Too often neglected was the importance of how microbes live in the soil and what each does.

It is critical to know which microorganisms are necessary for each turfgrass species. If the wrong types are present, then changes must be made to support the ones necessary for the specific grass. It is not sufficient simply to add the missing microbes, as the soil will not support their growth. Rather, the soil must first be modified and balanced with nutrients, enzymes, hormones and other essentials to support the soil microbes - which in turn will provide the essentials for hardy grass growth.

This all may sound complex, but on a long-term basis, it is the most economical way to grow quality grass. □

Donald J. Arenberg is a turfgrass agronomist and naturalist with Consulting Agronomists, Inc., Northbrook, IL 60065-2113; phone (708) 272-8090, fax (708) 455-6902.

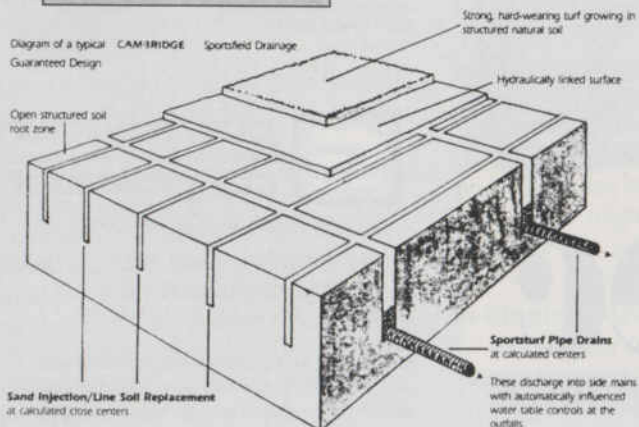
TURF SPECIALISTS CORP.

444 St. James Street P.O. Box 357
Holbrook, New York 11741
(516) 981-1118

Jerome W. Hutchinson,
Board Certified Agronomist by ARCPACS
Integrated Pest Management Consultant
B.S. in Agricultural Science 1961
Michigan State University

Authorized - Certified - National - U.S.A.
Cambridge™ Installer
"Guaranteed Drainage"

CAMBRIDGE



Circle 114 on Postage Free Card

RainBuster



- *Black/White reversibles for the **ULTIMATE A-L-L SEASON** turf protection!
- *Lightweight AND Economical!
- *Sizes from Golf Greens to Soccer Fields.

Compliments our complete line of vinyl covers, patented zipper systems, geotextiles, grids and more! Call for your **FREE BUYER'S GUIDE** now.

1-800-621-0146 TOLL FREE

M. PUTTERMAN & COMPANY, INC.
4834 South Oakley • Chicago, Illinois 60609
312-927-4120 (In Illinois)

Call 1(800) 817-1889 use **Fast Fax #1150396** and/or
Circle 115 on Postage Free Card



IN ACTION

Mark Your Calendars

The 1997 STMA Conference and Exhibition will be held January 15-19, 1997, in Colorado Springs, CO. Great plans are in the works.

Thank-You Notes from National

Special thanks to the members of the Southern California Chapter for all their work on – and hospitality at – the national Sports Turf Managers Association Conference, held in Anaheim, CA, on January 24-28, 1996. A round of applause goes to Chris Bunnell, Steve Guise, Dave Ashman, Bob Sparnicht, Ron Bond and Mike Uraime for all their extra efforts before and during the conference.

Special thanks go to the Florida Chapter for staffing the national Sports Turf Managers Association booth at the Golf Course Superintendents Association of America (GCSAA) International Golf Course Conference and Show in Orlando, FL, February 9-11. Kudos to chapter president Tom Curran and past-president Ed Birch, who anchored the booth outreach and whose friendly smiles and helpful attitudes attracted a great crowd. Thank you!

Chapter News

Florida Chapter #1: Date change: March 27 is now the date for the South Florida Research Station Field Day and Exposition, which will be held at the Institute of Food and Agricultural Science in Davie, FL. (This is a change from March 29, the original meeting date.) Continuing education units will be issued.

The Florida Chapter will meet on May 21 at Joe Robbie Stadium. Meeting topics will include the field's prescription athletic turf (P.A.T.) system. The field will be set up for baseball, and a tour of the facility will be provided. Meeting host is Alan Sigwardt, sports turf manager of Joe Robbie Stadium.

For more information on these events, the Florida Chapter, and other pending activities, contact: John Mascaro (305) 938-7477.

Colorado Chapter: The chapter election results announcement following the December meeting was missing two names. Belated congratulations go to Joe Adams, Greeley Parks and Recreation Department, who was elected vice president; and By Hanson, Jefferson County Schools, who was elected as a director.

CCSTMA will be holding their Spring Seminar on April 4 at Clement Park, Littleton, CO. Seminar host is Kim Rice with Foothills Park and Recreation District. The seminar focus will be on multi use facilities and their care. A combination of tours and educational sessions will be included on the program. More details will be announced soon.

For information on the Colorado Chapter or upcoming events call the 24-Hour CCSTMA Hotline/FAX: (303) 438-9645 and leave a message; or contact: Troy Smith, Denver Broncos, at (303) 649-9000.

Midwest Chapter: The Midwest Chapter's next meeting is scheduled for May 22 at South Park of the Park Ridge Park District in Park Ridge, IL. The central theme is turf irrigation systems. Industry experts will discuss the pros and cons of different irrigation systems and methods. More details will be announced soon.

For more information on this meeting, the Midwest Chapter or other upcoming events, call: The Chapter Hotline (708) 439-4727.

Southern California Chapter: For information on the Southern California Chapter and upcoming activities, contact: Chris Bunnell at (619) 432-2421.

Iowa Chapter: For more information on the Iowa Chapter or upcoming activities, contact: Lori Westrum at The Turf Office at (515) 232-8222 (phone) or (515) 232-8228 (fax).

Kansas Chapter: Chapter formation is underway in Kansas. A steering committee has been formed, and monthly meetings are on the docket. For more information – and especially to get involved – contact: Mark Schimming of Wichita Baseball, Inc. at (316) 267-3372.

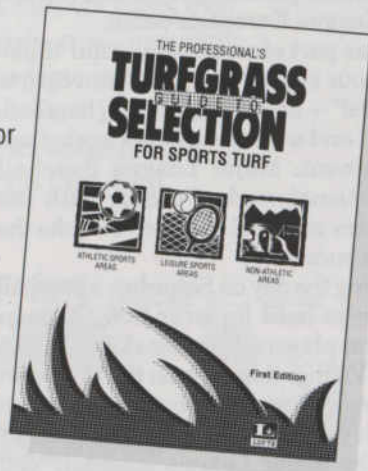
Minnesota Chapter: For information on the forming Minnesota Chapter or for details on becoming a member, contact: Brian Deyak at (612) 255-7223.

FREE GUIDE TO SPORTS TURF

This free guide to the selection and use of turfgrass is a handy reference for anyone involved in sports turf.

The booklet addresses every area of sports turf... from the fine, dense turf required for precision sports like tennis and croquet to the tough turf needed for rugged sports like football or racetracks.

Geographically arranged, it suggests the appropriate turfgrass species, where to use them and even proposes proper cutting heights and seeding rates. A separate section covers Southern Winter Overseeding. And this new guide is yours for the asking.



Lofts Seed Inc.

Dept. ST95
347 Elizabeth Ave.
Somerset, NJ 08873
(800) 526-3890 ext. 250



Before conversion, Offenbach Stadium was a typical European soccer stadium.

Offenbach Stadium is a typical European soccer stadium that showed off not only its age but its charm as well.

Cook's Tour of Germany

By Murray Cook

The need for competitive sports fields has increased dramatically over the past ten years, with sporting events now taking place around the world on a daily basis. Europe, the hub of the soccer empire, is now developing an interest in other types of sports. American football has grown in popularity over the years, and during the weekend of June 3 last year in Frankfurt, Germany, the national pastime of baseball made a major league European debut.

It was part of a very successful diplomatic tour called "The American Sports Weekend" – an event featuring baseball, football and a three-on-three basketball tournament. Major League Baseball International worked closely with the promoters and local sponsors to make the event a success.

During the day on Saturday, a baseball clinic was held for over 300 German amateur players from local clubs. The Nordic Vikings then took on the Frankfurt Knights in a football game on Saturday night, and on Sunday afternoon the Major League Baseball Veterans played the German National team in a baseball game. The baseball and football games drew over 5,000 each at Offenbach Stadium.

Offenbach Stadium is a typical European soccer stadium that showed off not only its age but its charm as well. The facility was constructed in 1923 and has been used for international sports play over the years. The stadium will hold 15,000, but many seating sections were in need of repair, and the surrounding common areas were overgrown with vegetation. The existing turf was a "cocktail" of various weeds and bluegrasses with occasional areas of *Poa annua*.

The maintenance of the turf is contracted out to a local landscape company that is also responsible for the clean up of the stadium. There was no doubt that the playing surface met the standards for the local soccer teams, but it fell far below the standards that the American professionals were used to. The local groundskeeper who tended the field was very proud of the turf and left when the field transition began on Friday.

The transition for the soccer field involved painting the lines for the football game and installing the first, third and home plate turf cutouts, which were not in play for the football game. The sod on the cutouts had to be taken out at a two-inch depth, and a sandy loam was used to bring the level of the cutouts back up to the grade of the existing turf. A sod cutter

was requested for this work, but the country did not seem to have one, so the areas were removed using hand tools. After the football game, the field was rolled with a two-ton roller, and the mound, second base and bullpen areas were constructed during the night before the baseball game.

Also, the additional fencing that circled the entire soccer field was installed. The backstop netting and the right field "Green Monster" were over 30 feet high. (Since the right-field line of the baseball diamond was only 230 feet, we needed something to help keep the line drives from leaving the park on every pitch.)

It was very difficult to find a heavy clay material for the construction of the mound. We searched the Frankfurt area until we found a molding clay or gray gumbo that had the possibility of being used. The existing soil under the turf was a rich black topsoil. It was very high in organic material and provided no compaction whatsoever. To construct a mound material, we took the clay and sliced the silty material into the sandy loam that was used for the base cutouts. This actually worked and provided a stable mound for the teams to use (for one day). As we constructed the mound, a group of 45



Conversion of Offenbach Stadium called for construction of dugouts, all netting and fencing, a warning track, batting practice equipment, mounds and goal posts for football.

local players and coaches took notes and asked questions.

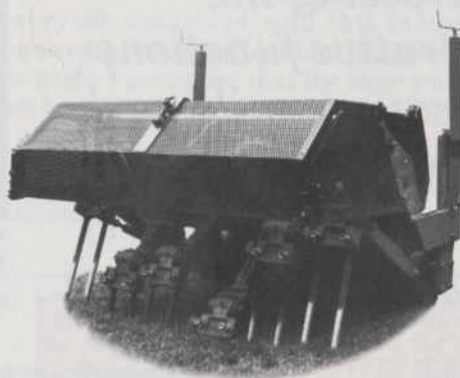
The grounds crew was comprised of volunteers from the baseball teams who were attending the camp and clinics. Many of the players were glad to be of help in constructing the field. It was definitely a team effort, and like the "spirit of diplomacy," the beer flowed freely throughout the evening and weekend. It was fortunate that there were a few players who did not partake in the beverages, or our task before the games would have been even more difficult to complete.

Our planning for the event was in-depth and often focused on the equipment that had to be on hand for the conversion. We assumed our needs were clear to the Germans. This was probably our biggest mistake while planning the event. The first rule is never assume anything. The Germans had no concept of how or what is needed in creating a playing field for baseball. Though they were eager to please us with affirmative answers to questions, the communication breakdown was sure to happen.

After we arrived in Frankfurt, it was obvious that we had a long way to go to make the project a successful one, and patience was needed more than anything else. Things do work out for the best if people work towards the same goals. The event was deemed a success by all.

As in the American turf industry, sports turf managers worldwide can achieve professional unity if their goals are the same, enhancing their industry's success. After taking part in several of these friendship tours in various countries and planning others in the future, I find it deeply rewarding to be in this profession and hope by sharing these thoughts you too may be inspired to work towards the common goal of making our industry successful worldwide. □

Murray Cook serves as stadium manager for the Atlanta Braves/Montreal Expos spring training facility and as a turf consultant for other athletic fields.



Introducing the new thinner, sleeker Verti-Drain.®

The new model 205.150 trimmed down version is a beauty to behold. At only 60 inches working width it easily fits through gates, over bridges and in all sorts of tight areas, including your budget. Built with the same integrity you've come to expect from Verti-Drain. All this and it still goes 16 inches deep, proving once and for all that beauty is thin-deep.

405 Model-
24 inches deep



Verti-Seed
Oversetter



200 H Model-
16 inches deep



145 Model-
12 inches deep



250 Model-
16 inches deep



120 Model-
10 inches deep



205 Model-
16 inches deep



Pedestrian Model-
6 inches deep

VERTI-DRAIN®
Works like a pitchfork, only better.

Emrex, Inc., Box 1349, Kingston, PA 18704 (717) 288-9360

Greg Petry Thrives on a Challenge

Overseeing the administrative functions of the 21-square-mile park district, covering 535 acres of land and serving nearly 71,000 people, is a challenge.

By Steve and Suz Trusty

A day at the park isn't all picnic for Greg Petry, executive director of the Waukegan, IL, Park District and past president of the Sports Turf Managers Association. Overseeing the administrative functions of the 21-square-mile park district, covering 535 acres of land and serving nearly 71,000 people, is a challenge. But then Petry thrives on challenge.

Managing the "front office" is a challenge much like walking a circus tightrope. The spotlight is on. The crowd has preconceived expectations of how the job should be done. There is limited time, space and funds. Each step influences the success or failure of the performance.

In the rush of a busy season, many within the industry forget there are sports turf managers working as long and hard at a desk as others are on the field. A sports field has to exist before it can be maintained. Funds must be generated. The commitment to better and safer sports turf areas must be kept strong.

Waukegan's 37 park properties include an 18-hole and 9-hole golf course, a bird sanctuary, nature preserve, greenhouse,

two recreation centers, a center for the arts, two outdoor swimming pools, a "farmhouse" and museum, a rental hall, 14 picnic areas, 16 basketball courts, 19 tennis courts, 15 ball diamonds and six soccer fields. There's a flurry of activity year-round, with 53 full-time and 200 part-time employees to direct.

Waukegan's Park District isn't a division under the city's banner, but a separate entity, with its own elected Board of Commissioners, its own land acquisition, improvement initiatives and taxation authority.

The board appoints the park district's executive director, who is responsible for "implementing and executing" the policies and direction they set forth. The focus is on planning and finances. Petry was appointed to this position in January of 1995.

He says, "I started with the Waukegan Park District in August of 1987 as superintendent of parks, and served in that capacity until I became executive director. As superintendent, I was responsible for the park maintenance and planning divisions. I managed day-to-day programs. As executive director, I'm less involved with



The success of baseball programs at Al Grosche Field prompted Waukegan's decision makers to make a commitment to athletic field maintenance.



Managing the "front office" is a challenge that Greg Petry finds exciting.

day-to-day activities. Now I concentrate more on making it possible for the department heads to do their job."

Waukegan, like many older Midwestern cities, has multiple challenges. Its population is a mix of long-time residents and newcomers – senior citizens, young families, people from different ethnic backgrounds – all with their own ideas about the recreation facilities.

Petry says, "It's very important to be open-minded and non-discriminatory. Everyone must make an effort to understand other points of view. The exciting thing is that it can be done – and everyone benefits from it."

Like many other "mature" cities, most of Waukegan's park land was allocated years ago. Petry says, "We have a need for more space, but the costs are a tremendous investment. It's vital that we analyze the use of existing facilities and prioritize them.

"For example, interest in soccer is growing rapidly. Though our population is 23 percent Hispanic, over 50 percent of our school children are Hispanic. Many of their parents consider soccer the number-one sport. It's not unusual for