Concentrate on developing quality solutions to common problems, starting with the "big picture" of departmental philosophies and working through the practicalities of staffing and budgets. Set up plans before the facilities are built, if possible. Establish standards that are within the policies of the community, the facility and your supervisors, but be sure to "cover all your bases." Once procedures are in place and work is underway, continue to educate your staff and yourself about new and innovative techniques.

Positive Maintenance Systems
Establish overall maintenance systems for field care that cover the basic criteria -- playability, durability, safety, appearance and economy -- and that address the concerns and responsibilities of common law.

Evaluate all aspects of your facility to decide where priorities should be placed and how to make field maintenance more equitable. Remember the three big issues: prudent, reasonable and consistent. If your department is in charge of a Minor League field and multiple public use fields, is it prudent and reasonable to allocate major resources to the high-profile field used only by one team and visiting players and minimal resources to public fields used by 8,000 tax-paying people? If public fields are used daily, is it consistent to perform field preparation procedures once a week?

Documentation is a vital part of the process.

Develop maintenance checklists both to instruct and remind crew members of the steps that must be taken and to provide a record of procedures for legal review if necessary. Monitor the checklists regularly to ensure proper procedures are being performed -- and documented. Keep written or computerized records of all maintenance procedures, including such key data as aeration and irrigation schedules and what products were applied in what quantities to which fields on what dates. Include weather conditions in your daily reports. Track equipment use and record equipment maintenance. Note the use of rented or borrowed equipment and any costs involved.

Establish practical field-use guidelines, based upon your conditions and resources that allow you to protect the integrity of the field. Develop methods to control the schedule to avoid overuse or use in unacceptable conditions. If field maintenance and use procedures consistently cause conflicts between the sports field manager and the scheduling coordinator or user groups, request a quality control audit by a qualified third party. If the results of this audit don't help you convince the powers-that-be to implement necessary changes, keep copies of the audit and your written requests to comply with it in your files. This should help shield you personally from liability lawsuits and community criticism. If the conflict becomes a serious professional concern, changing jobs may not be out of the question.

Photo Documentation
Back-up your computer and written documentation with a photo record. Photos help you to evaluate management and maintenance practices and to document problems and potential problems. Photos provide a visual record of conditions, good or bad, at any given time. Photos taken at regular intervals, such as weekly or bi-monthly, help you compare current field conditions to those of previous periods.

Photos can augment your explanation to superiors about a problem and help establish the need for supplies or equipment to solve it. Pre- and post-game photos can assist you in showing field users the damage caused by play in wet conditions and why cancellations are necessary. Photos taken before and after a specific maintenance practice can both show the results of the action and document that the practice took place.

Defense Mechanisms
Anyone can be sued at any time, by anyone, over anything, but winning a suit is a different scenario. Strong pro-active defense mechanisms created and diligently followed can protect you and your organization against petty and frivolous lawsuits.
Create an annual physical exam policy for staff health that screens both for health risks and for alcohol or drug-related problems. This also demonstrates that your department is professional and is interested in the well-being of its personnel.

Instruct your staff always to use good common sense. Err on the side of safety. For grounds managers and grounds personnel, this includes practical measures for their own health and safety, such as wearing proper protective clothing and equipment, following safety guidelines and not working on difficult tasks or tackling any heavy unloading alone.

An Accident Action Plan
Develop a step-by-step action plan to follow in case of a serious or catastrophic accident. The plan must consider the needs of participants, spectators and facility personnel. Instruct your staff on how to implement this plan. Keep copies of the plan easily accessible in a checklist format, so it can be followed even during a crisis.

In dugouts and locker rooms, post copies of an emergency action plan that concerns players, and be sure visiting coaches are aware of them.

Provide the proper tools to implement the accident action plan and to ensure all on-site steps involving the injured person or persons follow the best medical procedures. This includes training (and hopefully certification) in First Aid and CPR, and such other lifesaving tactics as the Heimlich Maneuver. Supply a cellular phone or quick and ready access to another phone on-site, specify that the call to 911 be made immediately, and designate which person should make the call. Emergency entrance will be unlocked and void of pathway obstructions.

Designate the proper alignment of staff members or volunteers to aid and direct a rescue vehicle immediately to the site of the injured victim. Ensure that your to provide clear access to the victim.

Develop a spectator witness form as part of your emergency kit. Have accident witnesses use the form on-site to report their observations so there’s an unbiased record of what occurred. This key point is one of the more important defense steps that your facility has. Also in the emergency kit, keep a Polaroid camera and a throw-away camera filled with film. Take pictures of the accident scene. Whether the photos are favorable or unfavorable, this can be prudent and valuable in proving your case.

Plan beyond on-site care. To speed emergency room access, make sure all medical and insurance forms are up-to-date and carried with the ambulance. For an underage victim, the parents or legal guardians must be contacted and instructed of the action taken for their child.

Stay involved after the accident. Make every attempt to visit and console the injured person. This is the time when a good bedside manner plays an important role in family’s feelings concerning the accident.

Review your procedures after an accident. Determine what worked as planned and what was inefficient or ineffective. Correct any weaknesses.

DID YOU KNOW? Most spring insect applications should be made shortly after forsythia is in full bloom and shortly before flowering dogwood is in full bloom. Most summer applications should be made within a week of July 4th. Timing varies depending on spring temperatures. (IPM Handbook by Patrica Cobb)

Moyer & Son, Plant Nutrients offers a complete line of professional sport turf care products to deliver your quality expectations. Custom blend liquid sport turf fertilizers, M.O.S.T. organic fertilizers, Moyer Green Gro granular sport turf fertilizer, exclusive grass seed and erosion control products. Contact our New Jersey Turf Consultant.

Doug Gray
CONTINUED FROM PAGE 12 "AVOIDING LIABILITY LAWSUITS"

No Guarantees
Having a First Aid certificate, a cellular phone on site, an emergency procedure in place and follow-up actions documented doesn't necessarily mean you're out of the lawsuit woods. But you can show to the court and the injured individual that serious problems have been discussed and thought out, and that your policies and procedures were in place.

You, your department or school may still get sued and even lose when you have done everything correctly. But there is some consolation. The most important feature of your precautions is that you might have saved a life or saved a life-threatening situation because you were ahead of the liability wave. So, although you lost in court, you won on the field. ▲

As owner of Grounds Maintenance Services, Orlando, Fla., Floyd Perry provides consulting services and gives safety and field care seminars. He’s the author of a set of books titled Pictorial Guide to Quality Groundskeeping and two videos, The ABCs of Grounds Maintenance for baseball and for softball, and is a member of the STMA Certification Committee. He was named the 1996 sportsTURF Manager of the Year for his contributions to the industry.

DID YOU KNOW? Soil content in the soil is a particular concern in drier regions where irrigation water or rainfall is restricted. (IPM Handbook)

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WOULD YOU LIKE TO SERVE ON YOUR DISTRICT COMMITTEE? CALL YOUR COMMITTEE CHAIR
"Athletic Field Reconstruction"

by Dr. Henry W. Indyk

All too often, the blast of an official’s whistle signaling the start of an outdoor sporting event brings two opposing teams together on a barren field speckled with ragged tufts of green. Many of these tufts are the sad remnants of a once-proud turfgrass cover, intermingled with a variety of coarse, aggressive weeds – commonly knotweed, crabgrass and Goosegrass.

In dry weather, the playing surface is hard from compaction, rough from previous activities, dusty from a lack of turf cover and resistant to the penetration of an athlete’s spikes or cleats. If it rains a week before the event – or worse, during the event – the surface is slippery, muddy and soft, with virtually no traction. Such conditions give natural turf playing surfaces a bad reputation and stimulate visions of miracle grasses, super products and other surfaces as alternatives. However, criticism of natural turf fields should be aimed at weaknesses in construction or maintenance, but not the limitations of natural turf.

Natural grass has been and will continue to be the best playing surface for a wide variety of outdoor sports and playground activities. Its characteristic resiliency and cushion not only contribute to the enjoyment of a specific sport, but also provides superior footing and reduction in sports-surface-related injuries. These advantages, combined with aesthetic and economic considerations, make natural turf and its management high priorities for sports in the coming years.

Using appearance as the primary criterion for a successfully managed field can be misleading and generate false impressions of natural playing surfaces. Appearance is undoubtedly important, but durability to intensive use under a wide range of conditions is more critical.

Athletic fields proven to be most successful are based upon similar principles in design, planning, construction and maintenance. Failure of these surfaces also is based upon a set of similar mistakes. Failure of natural turf to provide the aesthetics for the spectator and a safe, firm surface for the players can be linked to the following causes:

**Improper Specifications**

Too often in the original construction of an athletic field, standard specifications are used with little or no regard for the varying conditions peculiar to a specific site. Each proposed site should be evaluated critically before formulating accurate specifications. If this approach is not utilized, there exists a high potential for a field with “built-in” problems that are very difficult or impossible to correct with the best of maintenance procedures.

**Enforcement of Specifications**

The best of specifications are of little or not value unless construction procedures adhere to the stipulated requirements developed for the site. Too often, construction is allowed to proceed without the “watchful eye” of a knowledgeable individual. Under such conditions, the temptation to bypass or eliminate critical procedures becomes too great for proper construction particularly where contract responsibilities are awarded to the low bidder.

**Improper or Inadequate Maintenance after Successful Establishment**

Once a satisfactory turf of properly selected grasses has been established, its future performance depends upon the type and amount of attention devoted to a maintenance program. The investment in establishing a turf cover is wasted unless proper provision is also made for maintenance. A well-planned program should include equipment, materials, personnel, and an adequate budget. In addition, supervisory responsibilities should be entrusted to a conscientious individual knowledgeable in turfgrass management principles and techniques.

**Abuse in Field Use**

A well-established and maintained turf can withstand a considerable amount of use without serious damage. However, there are limits to the tolerance of turf to continued intensive use. Damage will be most serious where proper construction procedures

Sports Field Managers Association of New Jersey

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have been bypassed, particularly in situations of excessive soil moisture. Under such conditions, use should be curtailed or minimized to reduce the damaging impact on the turf. Decisions of this nature, including the responsibility of determining the intensity of use of the field, should be delegated to the grounds superintendent. Continued on the next page.

**Provision for Inadequate Facilities**

Closely allied to field use is the surging interest in outdoor athletic activities and the resulting increased pressure on existing facilities. Because of economic reasons and/or unavailability of open space for the construction of additional fields, the use of existing facilities is intensified. Most of the existing fields are improperly constructed. As a result, these fields are unable to accommodate more intensive use without exhibiting serious deterioration of the turf cover. As the intensity of use increases, it becomes imperative for the survival and wear tolerance of the turf that the fields be properly constructed.

**Inadequate Drainage**

The single most influential factor in failure of natural turf fields is inadequate drainage. Poor drainage not only affects the playability of the field, but also has a strong negative influence on the growth of turfgrass and increases maintenance costs.

Various reasons can be cited for overlooking drainage as a critical factor in athletic field construction. Perhaps the most important is a lack of understanding or appreciation of the importance of drainage while formulating the specifications for the field or in the finalizing process before submitting for bids. Unfortunately, in many instances, adequate drainage is eliminated or reduced to inadequate by cost-cutters who do not realize the future cost of improper drainage.

In some cases, poor drainage conditions prevail in spite of efforts to improve these conditions. Such failures most likely can be attributed to improper specifications and/or other deficiencies in construction. Some of the common faults of ineffective performance of drainage systems include:

- Provision for Surface Drainage Only. A crowned or turtle-backed field with a few catch basins on the sidelines can facilitate removal of surface runoff, but will do little for improving internal drainage.
- Improper design of the drainage system involving pipe spacing, depth, grade and outlet.
- Installation of drainage pipe on improper grade.
- Backfilling of drainage trenches with heavy textured material restricting percolation of water to the drainage pipes.
- Improper physical properties of topsoil above the drainage system. The physical condition of the topsoil is a major factor limiting proper functioning of a drainage system. Soils containing excessive amounts of silt, clay and very fine sand are often used above the drainage system as the growing medium for the turf. Soils of this nature tend to restrict proper drainage due to slow percolation of water. Consequently, during rainy conditions such soils tend to be soft and soggy in spite of a properly installed drainage system. Soils of this nature compact very readily when subjected to traffic. Compaction makes the drainage problem more pronounced. Air porosity tends to be reduced by both moisture saturation and compaction. The situation becomes increasingly complex, resulting in a less favorable environment for proper root growth as reflected in a shallow root system, weakened top growth, reduced wear tolerance and turf deterioration.

Results approaching miracles can be achieved in temporary restoration of improperly constructed or maintained fields. Recent advances in turfgrass breeding have made available superior varieties of turfgrasses, particularly among the Kentucky bluegrasses, turf-type tall fescues and turf-type ryegrasses adapted for athletic fields. These can be effectively established in existing fields by renovation techniques. They include core aerification to relieve compaction and verti-grooving to prepare a seedbed without destruction of grade or established turfgrasses.

The new seedlings introduced during renovation can be nurtured to a mature, dense turf with adequate provision for lime, fertilizer, supplemental irrigation, mowing and restrictions on use. To fully restore a field in this way, a restricted use period of at least six months is needed. If this amount of time cannot be sacrificed, restoration with a high quality sod can provide instant results.

As impressive and effective as a successful renovation effort may seem, and improperly constructed field will rapidly decline again. Repeated renovation efforts will follow the same pattern until inherent construction problems are corrected. Reliance on such procedures to overcome initial construction weaknesses will be discouraging and costly.

Natural turf is becoming increasingly recognized as a superior surface for sports fields. However, avoidable failures are a major deterrent to its increased popularity. Failure in recognizing and providing for the factors essential to establish and maintain a satisfactory natural turf playing surface is a sure path to failure. Success, on the other hand, characterized by and aesthetically pleasing surface supportive of intensive use, is a realistic objective. It can be successfully achieved and ensured through adherence to essential basic principles involving planning, design, construction, maintenance and use.

Dr. Henry Indyk is a turfgrass consultant for Turfcon GSI Consultants, Inc., Somerset, NJ. Extension Specialist Emeritus in Turfgrass Management, Rutgers University, New Brunswick, New Jersey. And advisor of SFMANJ.

**DID YOU KNOW?** The effects of over watering your turf are soil compaction, root deterioration, increased disease activity, increased weed establishment, leaching of chemicals, non-point pollution, decreased playability, less aesthetically pleasing landscape, erosion, wasted dollars and wasted water.