

## DRAINAGE: THE SAFETY NET OF SPORTS TURF MANAGEMENT

Compaction, disease, annual bluegrass encroachment, salt buildup, shallow roots—all these turfgrass problems can be attributed largely to one cause, poor drainage. Turf managers spend millions each year treating its symptoms without digging beneath the surface to find and correct the real cause.

If golf course superintendents are expected to keep high-use recreational turf areas in play, they must have adequate control over soil moisture. It is remarkable that they have been able to apply technology to temporarily overcome seasonal drainage problems. They have skillfully concealed the oversight of architects who had failed to incorporate adequate drainage into their designs, as well as overcoming the effects of time on properly designed drainage systems.

They have also learned that drainage is a safety net for irrigation, allowing them leeway in estimating how much water sports turf requires. Drainage not only guards the turf from surface-applied water, it also protects it from high water tables and salt intrusion from subsurface water.

Drainage systems are more than conduits that remove excess water. Taken as a whole, they include the surface, the soil, gravel, numerous types of pipe, filter material, moisture barriers,



soil layers, and even pumps to create suction. Each component can alter the effectiveness of a drainage system. For this reason, the turf manager needs a basic understanding of how each component contributes to the overall effectiveness of a drainage system.

The drainage needs of high-use recreational turf are unique. They are considerably different from those for agricultural production, commercial landscaping and residential turf. Control over water in the root zone is essential to enable turf to recover from traffic abuse and to assure playability.