"Common sense is the most important characteristic of a good golf course superintendent and if you're not sure you have that, then put in more drainage (a.k.a. the 'Hawtree Law')," stated British golf architect Fred W. Hawtree. "Drainage, drainage and more drainage is the key to better turf in Britain."

Though these statements obviously underestimate our jobs, they point out how important a dry playing surface is to playing the game of golf and growing healthy turf. Old Tom Morris, Donald Ross and Dr. Alister McKenzie all emphasized the importance of locating golf courses on well drained sites. I remember reading of Old Tom designing a golf course in the morning and playing the course's first tournament that afternoon — what marvelous pieces of land he must have had to work with. More often than not our golf courses are located on marginal pieces of property with soils and/or soil structure that would be considered unacceptable by our predecessors. Even though we might not have the naturally well drained sites of our forbears, the tools we have to 'de-water' a site would have made them envious.

As my crew is working on a rather large drainage project, I look back over the years at a number of mistakes and learning experiences I have had in the installation of drainage. If a mistake could be made in putting a piece of drainpipe in the ground, then a member of my crew or myself has probably made it. From using the wrong grade, wrong pipe, wrong rock or wrong fabric (any fabric is the wrong fabric) we probably tried to make it work. I have also read most of the turfgrass books with regard to drainage and understand the principles but few authors really get into the mechanics of installing drainage in established turf. What follows are some of the lessons my crew and I have learned over the years while installing subsurface drainage.

French Drains
I never use the term 'French Drain' to describe any subsurface drains. My understanding of French Drains is using large flat stones to create underground voids for water to move through. I have heard the term used to describe any hole filled with rock to sophisticated subsurface systems as used in putting greens and sand-based athletic fields. It has been my experience when people refer to 'French Drains' they do not know what they are talking about but like to sound like they do.

Locates
The area to be drained needs to be laid out and marked in white paint (and/or flags) with concern being given to locating all existing public and private pipes and wires. A single call to the Oregon Utility Notification Center will notify electric, gas, communications, water and sewer. Check if such a centre exists for your area. Ignoring this step exposes your crew and yourself to unnecessary risks. Generally all locates are completed in three working days. ... con't on page 4