

Mid-Atlantic Association of Golf Course Superintendents NEWSLETTER

Published by this Association to aid the advancement of the Golf Course Superintendent through education and merit.

George Renault, C.G.C.S.
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Belle Haven (Continued from page 1)

Remember to RSVP to the MAAGCS hotline: (301) 381-0030.

Directions: From Richmond & West: Follow I-95 North. Exit at Route #1 South (Fort Belvoir). While exiting stay in right lane (Fort Hunt Road sign) which bears right and at first light make a left onto Fort Hunt Road. Proceed through next light and Belle Haven is on the left. (You will see the tennis bubble.)

Directions: From Baltimore: Follow I-95 South over the Woodrow Wilson Bridge. Exit at Route #1 South (Fort Belvoir). Proceed over the beltway overpass, staying in the right lane for the Fort Hunt Road exit from Route #1. Follow Fort Hunt Road exit. Once on Fort Hunt Road, proceed through first light and you will find Belle Haven on the left.

Permanent Solution to Drainage Problems

by John Strickland

Puddles of standing water are guaranteed indicators there's too much surface water for that type of soil to absorb and get rid of. This water is expensive to purchase, and in excess, live with. So lets get rid of it permanently!

By combining common sense and new technologies, we can rid ourselves of water that has to wait in line to get into our soil or the "good old sun" to dry up. The problem with "waiting" is that turf and ornamental plants get into trouble just about as fast as the man who is trying to maintain them for his employer. The time has arrived for turf professionals everywhere to get as tough with drainage problems as they are with disease, weeds insects and fertility problems.

All you need to know and remember are a few basic rules about soil and you are ready to begin your plan of attack.

Soils — All soil is made up of particles of rock and organic matter in various stages of decomposition. The more particles per cubic foot, the longer it takes for water to move through that soil.

Thatch — Thatch is that layer of mostly dead plant material that accumulates on the surface of soil and that slows water down dramatically before it ever gets to the soil. Make an honest effort to get rid of it!

Equipment — The job of cutting trenches into the soil, and getting rid of the soil dug out of the trench, can be the most expensive part of doing a drainage project. Unless you really need a very deep and very wide trench, fine turf areas are not the place for tractor-loader back-hoes. Chain trenchers "out dig" back-hoes dramatically, pulverize the soil for easy removal, and come in sizes perfect to fit the job. (Lord knows we don't need 4 ton digging monsters on our oversaturated turf.) New technology has recently brought us wheel trenchers that cut very narrow trenches so fast and efficiently that the expense of digging the trench and getting rid of the spoil is cut by huge amounts. Here again the soil dug out is pulverized.

Materials — The other "major expense" of a drainage project to the material you are putting back into the soil to give those lazy water molecules an easier path to follow . . . to get away from our fine turf or ornamental growing area.

Crushed Aggregate . . . The sharp points and corners of crushed stone keeps the stone at "arms length" away from each other. And as I stated earlier the bigger the particle size, the faster water can flow through and around the particles.

Perforated Pipe . . . Provides the "big space" in the trench for water to flow away from our drainage problem, provided we can get the water into it, and keep it from filling up the soil. (For reasons too lengthy to discuss in this article we do not recommend wrapping the perforated pipe with geotextiles. Don't use them!)

Geotextiles . . . Filter fabrics are the "saviors" of drainage systems. Skeptics, and the uninformed, content they will clog up and fill with soil. (In some cases they might, but all geotextiles are not created equal!) You must select one that is soft, pliable, strong and "fluffy". Just picture in your mind what a cross sectional profile of a fiberglass air filter looks like. That's exactly what a proper Geotextile looks like under a magnifying glass! They can't be stiff or "slick" to the touch. The best geotextiles for drainage are engineered to permit tiny soil particles to pass right through themselves. Muddy water must pass through one side and exit the other side still carrying those tiny particles of soil with them. By using a geotextile, we insure that our crushed aggregate, and perforated pipe, will stay clean and flow excess water away fast and permanent!

When selecting a proper geotextile, ask your supplier what the A.O.S. (Apparent Opening Size) or E.O.S. (Equivalent Opening Size) of his fabric is in standard U.S. sieve. Select the geotextile that has a range of 70-100. This assures you that you will be purchasing a proper drainage geotextile. (If your supplier can't supply a fabric with the 70-100 A.O.S. (or E.O.S.), don't buy it! — regardless of how cheap it is!

Some geotextiles are made from polyester, other polypropylene. Polyester "wets" easier than polypropylene, and is more desirable in drainage. It is hydrophylic. That's a fancy word for loving water! Polyester blended into cotton makes clothing easy to launder! Polyester in drainage encourages water entry into our drainage system. Polypropylene repels water!

Space Age Solutions to Ancient Problems — In the past year you have been seeing more and more information on "Pre-Fabricated" or "Self-Contained" composite drainage systems. They are truly state-of-the-art solutions to turf and ornamental drainage problems. All employ the usage of geotextile wrapping a waffle-like core. They are comparatively thin, require trenches only 2" wide, need no connecting fittings, eliminate the displacement of huge amounts of soil and replacement gravel and the expense of perforated pipe and fittings. On a running foot basis they are up to 60% cheaper to install than conventional drainage systems! 60%! They can solve drainage problems anywhere conventional systems do, and you don't have to destroy your turf area (or take it out of play) while you are installing it. They offer drainage solutions to "reconstruction" problems.

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