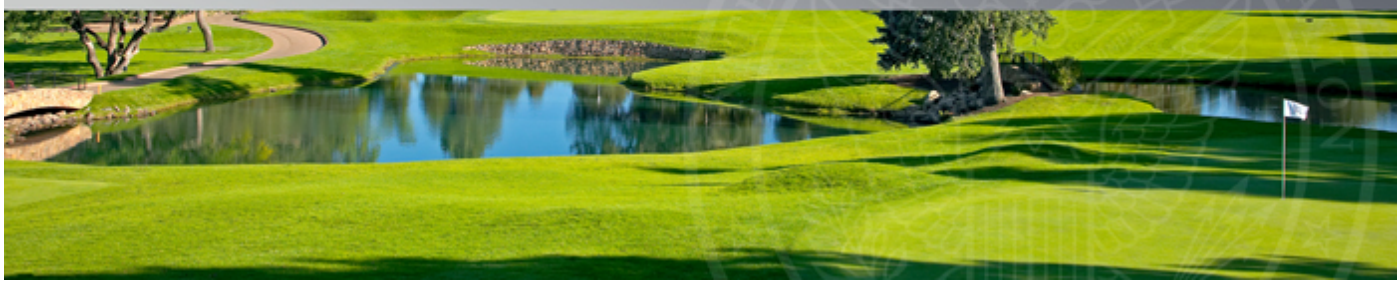
USGA GREEN SECTION RECORD



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Visual Improvement Program

Photos help communicate and evaluate grounds department activities and have proven successful in increasing staff performance and membership satisfaction.

by John Ekstrom, assistant superintendent, Hinsdale Golf Club, Clarendon Hills, IL

Soon after entering the golf business, I realized that the performance of each golf facility is largely a direct result of what occurs (or doesn't occur) in golf course maintenance. Although very few golf facilities use statistical methods to track grounds staff efforts, superintendents perform quality control every day, whether they realize it or not. For instance, when sending mowers to mow putting greens in the morning, the superintendent has a pretty good idea of how long it should take to complete the task. If the mowers come in too early, one might ask, "Are you sure nothing was missed?" Or, if they come in later than expected, the question might be, "Why the delay?" This is a means of quality control, and it is true for every task performed on the golf course.

Bunker maintenance, including proper rake placement, can be effectively communicated when clarified using images and placed in the VIP showcase.

Visual Improvement Program (VIP) At Hinsdale Golf Club

Whereas knowing the time required to complete golf course maintenance tasks is one aspect of quality control in its most basic form, a formal measure of quality control has been in place at Hinsdale Golf Club in Clarendon Hills, Illinois, since 2005. In 2003, there had been discussions about performing a complete bunker renovation. The project morphed into what would become a complete reestablishment of the greens with Penn A-4 creeping bentgrass, combined with newly reconstructed bunkers and teeing grounds. The renovation would close the course

for the better part of nine months and bring with it a price tag of more than $1.5 million. The Club has been in existence since 1898 and it had never seen a project of this magnitude. So, to ensure the perpetuity ofthe members' investment, the Visual Improvement Program (VIP) was born.

Read the rest of this article

For a good example of including photos and slide shows in a superintendent blog - click here.

Researching Golf's Carbon Footprint

Studies at UC Riverside investigate different turfgrasses used on golf courses and their ability to sequester carbon.

by Dr. James G. Baird, turfgrass specialist, University of California, Riverside

Carbon comprises nearly 58% of soil organic matter, thus most C is sequestered in this region. Organic matter and soil C can affect turf in several other positive ways, including resiliency and wear tolerance, soil structure and porosity, nutrient and water holding capacities, and binding and degradation of chemicals. However, as your USGA agronomist would be quick to point out, too much thatch can create a spongy, impervious surface that is prone to scalping and poor playability.

Scientific research and public debate have brought heightened awareness about global climate change. At the forefront of discussions is carbon dioxide (CO2), a greenhouse gas with atmospheric concentration on a dramatic rise since the Industrial Revolution. While more than 85% of all energy used in the United States comes from fossil fuels (coal, oil, natural gas, of which CO2 is a byproduct), it's likely that political and environmental influences will shift movement toward energy savings and green energy options. Until that time comes, how can the golf industry better manage CO2 emissions? One popular strategy being proposed is to increase carbon (C) storage in plant systems, otherwise known as "terrestrial C sequestration." If large amounts of CO2 are captured from the atmosphere by photosynthesis and then held in stable plant material or soil organic matter, it could help offset CO2 generated by fossil fuel use.

What is the carbon footprint of golf courses? It is a question that will require dilgent research to answer.

Given that turfgrasses comprise more than 40 million acres in the U.S. and represent the largest irrigated agricultural crop, it's no wonder they are the subject of mounting investigations about net import or export of carbon. On one side of the equation we need to consider and predict with greater accuracy C outputs from management of turf facilities, including plant respiration, fuel expenses in maintaining turfgrass, fertilizer and pesticide use, energy for pumping water to irrigate, and the fluxes of other greenhouse gases (mainly N2O and CH4) in addition to soil C sequestration.

Read the rest of this article

Regional Updates

Northeast Region

by Jim Skorulski, agronomist

It is hard to believe that just a day or so ago hurricane Irene was driving up the Atlantic seaboard and bringing with it hurricane and tropical storm force winds and flooding rains. Add Irene to the list of maladies that includes winter damage, tornadoes, giant hail, and an earthquake tremor.

Enough is enough already. I guess most of us should be thankful that Irene lost some of her strength before making landfall and spared us from even worse wind and storm surge damage. However, the large and powerful storm will be remembered most for the catastrophic flooding and damage it has caused throughout the region.

A trail of debris is not all that is left as saltwater begins to recede from a coastal Connecticut golf course. The likelihood of damage from the saltwater makes it necessary to plan a leaching and renovation strategy for the flooded areas.

Maintenance staffs have been busy cleaning up downed trees, branches and debris left from the wind and massive flooding. Some may not even be able to access the properties yet and can only guess what awaits them with washed out bunkers and cart paths, severe erosion and flooded turf areas. Saltwater flooding and to a lesser extent, salt spray are the major concern for lower lying coastal golf courses. Saltwater flooding is never good but poses an even greater risk in summer when the turf is actively growing. The extent of damage is hard to predict and will depend on the weather, turf species and cultivar, duration of the flooding and ability to remove the accumulated salts. Toxic levels of sodium and chloride ions will damage most cool season grasses and especially annual bluegrass. Consider the following points as you plan a clean-up and recovery strategy following the storm's aftermath.

Read the rest of this update

Mid-Atlantic Region

by Stanley J. Zontek, director

The transition zone, the climatic region where the northern extreme in the adaptation of warm-season grasses (e.g. bermudagrass and zoysiagrass) meets the southern extreme in the adaptation of cool-season grasses (e.g. perennial ryegrass, Kentucky bluegrass, creeping bentgrass and *Poa annua)* is recognized as one of the most challenging areas to grow grass in the United States. That reputation is intact this summer.

1. *Record heat*. The month of July was the hottest July on record and May was record tying.
2. *Record rainfall*. As of August 26th, the month of August is the wettest in history with more than 13 inches of rain measured at the Philadelphia airport and that doesn't count the contributions from Hurricane Irene. If this were snow, we could have more than 13 feet.
3. *Hurricane Irene*. Hurricanes that hit the Mid-Atlantic Region are a rarity, but here we go with all the consequences that go with it.
4. *An earthquake.* Who have guessed it?

Read the rest of this update

And in Texas - The Drought Continues

by Jim More, director

The drought continues in Texas. The difference between irrigated areas and those that are not is striking. In this

photo the target greens are dyed with turf colorant while the bermudagrass on the range has long since entered complete drought-induced dormancy. Unfortunately, for many Texas courses irrigation is now restricted to greens. Major losses of turf in fairways and roughs are now commonplace. But the biggest loss of all has been at the cash register. The combination of extreme heat and poor playing conditions has resulted in such severe revenue losses that many courses are struggling to survive.

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by the USGA Green Section Staff

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