

Water Conservation

Here are Some Helpful Hints for You to Consider

In some areas of the United States, factors such as rapid population growth and long-term drought are putting severe pressure on already depleted water supplies. In order to avoid further depletion, local governments often try to restrict water use. Golf courses, because of their highly visible irrigation practices, are an easy target for such restrictions. Whether restrictions are already in place or not, it is essential to use every drop wisely.

Golf Course Superintendents Are Working To Keep Water Sources Clean

- Superintendents decide which areas, such as the rough, can be replaced with drought-tolerant plant materials and develop long-range landscape plans that cluster plantings according to their water needs.

- Water leaves turf by evaporation from the soil or by transpiration—the process by which vapor containing waste products filters out through the plant tissue. The entire operation is called evapotranspiration (ET). The ultimate management goal is to achieve the lowest ET rate possible, in order to make the best use of the irrigation water. It is vital to consider soil and species when deciding to replace turf.

- Superintendents must decide on proper irrigation amounts and irrigation intervals. This is probably the most difficult task in managing water. Previous recommendations maintained that irrigating deeply and infrequently would encourage plant root development. However, research has shown that in the semi-arid West, turf quality is better when watering is done frequently and lightly. This practice is known as deficit irrigation. Superintendents must consider the type of soil, species and ET rate for the best possible conservation method and use accurate timing methods to control the frequency and duration of water. It is also important to find and fix leaks in the irrigation system quickly and cap sprinkler heads in non-priority watering areas.

- Some superintendents use sophisticated computerized irrigation systems and monitor the weather through on-site weather stations to make sure the course is not watered right before it rains.

- Superintendents can also use water-retaining agents in the rootzone. Polymers are sponge-like granules made of synthetic material or starch that can absorb large amounts of liquid. They then contract and release the stored water into the soil. In this way, polymers can reduce the amount of water lost through percolation and evaporation, thus reducing irrigation requirements. In addition, they dissolve nutrients and absorb herbicides and pesti-

cides. Polymers can be expensive and difficult to inject into the soil. However, as their use becomes more widespread, polymers will probably play an important role in future turf management.

Properly Treated Effluent Water Can Be An Excellent Source of Water for Irrigating Golf Courses

- Effluent water (treated wastewater) has been used for irrigation purposes for about 30 years in some areas of the country. Effluent costs less than potable water and has several positive attributes:

- 1) Effluent water contains nutrients that can be used by the turfgrass plant.

- 2) Turfgrass has the ability to use large quantities of organic waste that many other plants cannot withstand.

- 3) Turf can utilize effluent water that might otherwise be wasted. Food crops may not use effluent water because of the chance of contamination in the human food supply.

Simple Conservation Efforts

- Read water meters monthly to monitor the success of water conservation efforts. Compare usage to the same period last year. Weather variances can greatly affect the

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Minnesota and Wisconsin Courses Featured In Winter Damage Study

*Testing Being Done at St. Croix National,
Indian Hills and River Falls*

If you work in the north central United States, you may wonder if heavy rates of topdressing on golf greens just prior to winter increase winter damage.

Donavon Taylor, Ph.D., professor of soil science at the University of Wisconsin—River Falls, wants to find the answer to that and other topdressing questions. Taylor and his research team have established trials on three golf courses in Wisconsin and Minnesota.

"All three superintendent have been great to work with," Taylor says. "All three trials are on practice greens. They vary considerably in the construction of greens. One is new and has bentgrass. Another one is older and has native soil with a two-inch buildup of sand and soil. The other one has a mix."

Taylor explains that the differences in sands used for topdressing in Minnesota have centered on perceived differences in water relations of some of the most popular types of sands. Silica sand and mortar sands have received the greatest amount of discussion among superintendents.

"The uniform, round, white sand has caused the most controversy. It became popular 10-15 years ago. Speculation is that it holds more water," Taylor says. "The mortar sand has gained popularity in the last five years. There is no documentation to determine the differences between the uniform silica sand and the mortar sand."

The research started in the summer of 1997. In late fall of 1997, a topdressing layer was applied after winter disease fungicides were applied. Treatment combinations consisted of the following:

- A control plot with no topdressing applied.
- Four sands or mixes: uniform, silica sand, mortar sand, 85/15 by volume silica sand/peat and 85/15 by volume mortar sand/peat.
- Two topdressing depths: 2.4 millimeters (0.09 inches) and 4.8 millimeters (0.18 inches)
- Brushed vs. unbrushed treatment.

"As soon as anything starts happening in spring we will start measuring the temperature of the surface and just below the surface. We will measure moisture and we will measure any damage," Taylor says.

Minnesota experienced a mild winter, and Taylor says he welcomes mild conditions and is glad he has two more winters for the project.

"If this were the only winter we were testing I might be concerned. The results of this winter may be different than at the end of three years. I'm perfectly happy to take the mild winter," Taylor says.

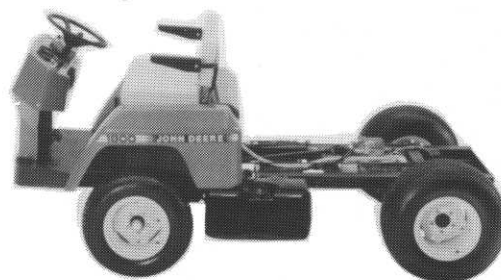
Taylor is assisted by Kevin Clunis, CGCS at St. Croix National Golf Club in Somerset, Wis.; Richard Grundstrom at Indian Hills Golf Club in Stillwater, Minn.; and Daniel Swenson at River Falls Golf Club in River Falls, Wis.

The project was co-funded by the Minnesota GCSA and the GCSAA Foundation. Each organization has committed \$18,925 over a three-year period.

— GCSAA

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Where Are They Today?

OSCAR BERGMAN

By JACK KOLB
MGCSA Life Member

During the MTGF Conference and Trade Show this past December I was privileged to "Man" the "Antiquity Booth." Knowing my propensity as an historian, many Superintendents who stopped by would relate stories about old equipment, personalities of the past and photographs that went back decades.

Keith Scott of Oak Ridge Country Club, St. Louis Park, had brought a portrait of a photograph taken in March of 1953 which was featured in the April issue of *Hole Notes*. I did not join the Association until August of 1953 but with Gordon Miller's help we were able to name all the key people. Since we had attacked that assignment with such relish, Keith sent another dozen pictures from the past.

One of the smiling faces that showed up frequently on the photographs was a gentleman by the name of Oscar Bergman. Oscar is one of those private gentlemen who goes through life in a quiet and unassuming manner.

Sometimes we wait too long to recognize the virtue and character in people. It is somewhat like buying flowers for those who no longer can smell them. It behooves us to toss bouquets and kudos to the living while they can enjoy them. In Oscar's case I found him living in the family home located on Park Avenue north of Lake Street. His hearing was very bad so I had to communicate through his wife and she could not give me needed information such as dates.

Oscar Bergman's career in Golf Course work began at Minneapolis Golf Club under Vic Larson, the gentleman on whose farm the golf course was built. Herbert Cohrs was a part of that crew. A family living on the north edge of Minneapolis Golf Club by the name of McNulty was in the construction business. There were

two McNulty sons, Robert and John. Oscar could not give me dates, but these two young men constructed a full 18-hole golf course to the north of the present day Minneapolis Golf Club called Westwood Hills. Where they got the term Hills I will never know as the land was rather flat, low and boggy.

Oscar Bergman's brother-in-law was Pat Johnson. Pat Johnson was named superintendent at Westwood Hills. Oscar was soon working for Pat Johnson and when Pat left to take over Interlachen Country Club from Erich Pahl, Oscar became top man at Westwood Hills. Westwood Hills was closed in or about 1958.

Oscar then moved to Minnetonka Country Club which was under the ownership of Rusty Smith. Rusty was a member of the Minnesota Golf Course Superintendents' Association during the 1960s. One interesting anecdote — Rusty was pushing over trees with a large tractor on the golf course and when he did not return at the proper time, Oscar found him nearly crushed to death by a tree which had fallen back onto the tractor. I recall many months after the accident Rusty was still wearing a "facial cage" with rubber bands and metal hooks to pull his facial bones back into place. Upon the sale and new ownership of Minnetonka Country Club, Oscar moved to Parkview Country Club under the ownership of Ray Rahn. Oscar retired after many years of service at Parkview.

Although his memory is failing now, Oscar amazed me back in 1967 when I was at Minneapolis Golf Club. We still had the manual system of watering (the golf course) and I needed "bib covers" for some of the hose connections. Oscar volunteered to help salvage some of the old covers on what used to be Westwood Hills. We

were wading in a five-foot growth of swamp grass, phragmites and cattails. Oscar would say "this used to be number four green" and he would walk right up to the location of the old bib (which was completely covered with growth). Those of you who are not familiar with "manual night watering" should appreciate night time orientation (depending on how dark the night). Working on a golf course at night is akin to working in space. There is little to orient yourself, yet a good "night water man," like a blind man, without exception found his way from one water valve to the next.



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Heard It Through The Grapevine

By FRED TAYLOR
Mankato Golf Club

In the history of the world, there has been more information shared by word of mouth than any other method. There has also been a good deal of *misinformation* shared the same way. Go back about 30 years or so to the era of Andy Griffith and Aunt Bea — an era of sewing bees and barbershop gossip. The town of Mayberry was an open book for anyone who as much as walked down the street. Everyone knew all the business of everyone else. Whether it be the brand of hair creme Goober used to slick his hair, or Floyd's personal financial picture, all information was common knowledge. So it was in small town America. So, too can it be in a small circle of professionals.

When we were kids, there was a game that we played called telephone. The rules were simple. A child at one end of the line would whisper a short statement to the next person in line. That person would in turn whisper the same message to the next person, and so on. At the end of the line the last person would announce out loud what message he or she heard. For example, Tommy begins the game, "The big, red fox is dumb to go into Uncle Bob's cornfield." This typically childish statement slowly makes its way down the line, whispered with a giggle and a gasp, finally making its way to a proud Billy who excitedly renders the words he's just heard. "The red fox took a big dump in Uncle Bob's cornflakes!" he exclaims.

It's easy to see in this small example that stories get turned around and meanings get changed as information goes through the grapevine. In the last six months I have heard at least three tid-bits of "news" that turned out to be categorically false. Unfortunately, there is no way of knowing where the news started, or where it got turned around. There are probably many examples of information that you have heard through the grapevine that turned out to be less than factual and true. Most of the time this misinformation is harmless; however, there are a few cases where a person's or organization's reputation is at stake. These are the cases where, as professionals, we must be very careful to screen what we hear, and not to repeat untruths.

I must admit that I like to be on top of the news. I read the daily paper, watch the national and local television news, listen to radio news, (KQ92 is preferable, I'm not old enough to enjoy 'CCO yet) and yes, wait with ears perked for grapevine rumblings about happenings in our industry. The grapevine is the place where you typically hear who got what job, what courses lost some turf, where the new course is being built and which suppliers are changing corporate philosophies. In other words the grapevine is the conduit for news — and gossip — therein lies the challenge for news hungry superintendents... separate

fact from rumor, news from gossip and never repeat things you don't know for sure.

In an effort to reduce the amount of misinformation that goes around the industry, I invite you to join me in following a few guidelines with regard to grapevine news:

1) **Never pass information about a person that could be considered detrimental** or slanderous to him or her or their career. For example, if you hear Jim-Bob has been drinking like a sailor on shore leave lately, and his job is in jeopardy, don't repeat it. What if it isn't true? Even asking a leading question like "Have you heard anything about Jim-Bob being a slobbering lush?" is enough to give him the reputation even if he has been sober for months. Rumors that are untrue travel just as fast as those that are true.

2) **If you hear something that is unbelievable, it probably is.** In other words, check out rumors that common sense tells you are false. In these cases, either forget you ever heard it, or go to the source and ask him or her.

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Gore Issues Directive—

(Continued from Page 5)

Consultation

EPA and USDA are dedicated to establish a mechanism for getting advice and information from affected user groups, lawmakers, government agencies and the public.

We're not out of the woods yet. Tell lawmakers that the situation warrants their continued attention. GCSAA will also continue to work with RISE (Responsible Industry for a Sound Environment) and our industry allies to ensure representation of the golf course superintendents as specialty pesticide users in the implementation of FQPA.

STATEMENT OF RISE

We welcome the directive by the Clinton Administration on implementation of the Food Quality Protection Act (FQPA). Announcement of the directive is an encouraging sign. It is extremely important to have an open, fair process to assure that sound science underpins the nation's pesticide policy. Science-based decisions are essential to protecting children; these decisions must be made using reliable information.

We also are encouraged about the Administration's call for broad stakeholder participation. We believe that broad and balanced participation is key to full and fair implementation of FQPA.

A number of the food protection pesticides affected by the Act also are ones on which the nation's specialty pesticide industry consumers depend for safe and effective pest control. We will continue to work to ensure that Americans have the products they need for home, garden and institutional pest control, as well as the crop protection tools necessary to maintain our healthy bountiful food and fiber supply.

Participation by USDA will help ensure that reliable information on pesticide use and exposure are made available to EPA in a timely manner. We will work with USDA and EPA to assure that needed data on our industry products are considered to help fulfill the mandate of FQPA, in the best interests of the specialty industry and consumers.

Problem

The new law substantially changes the way pesticides are evaluated scientifically for their health effects. With no transition time, EPA has the task of re-evaluating more than 9,000 pesticide uses for safety within 10 years, with the first 3,000, including most organophosphate and carbamate insecticides, subject to an August 1999 deadline. EPA is deciding which pesticides and pesticide uses (or tolerances) will remain available and which won't.

Arguing that it must meet the short deadlines imposed by FQPA to set pesticide tolerances, it appears EPA is using unrealistic, theoretical assumptions, rather than real-world data from farmers, businesses, public health officials and others about how they actually use pesticides to protect their crops and us.

If FQPA implementation continues in this manner, sooner or later, virtually all pesticides and pesticide uses will be jeopardized. From wormy apples in agriculture, to cockroaches in the kitchen and crabgrass choking the lawn. Americans in every walk of life will miss the benefits of effective pest control.

Economic and Environmental Impacts

Because EPA is not implementing FQPA fully and fairly, valuable pesticides will be unnecessarily lost, threatening farm production, business operations and public services. For example, able to choose from a wider array of pesticides, foreign growers will enjoy a competitive edge over U.S. farmers. Fewer pest control products will mean less conservation tillage, less Integrated Pest Management and more pest resistance.

Pest control products that keep our golf courses weed- and fungus-free and our rights-of-way safe will be lost.

Solution

FQPA's requirements are strict but achievable, provided EPA: allows development of the best scientific data to meet the new safety standards; bases pesticide decisions on actual pesticide use, and uses uniform policies to implement FQPA. By implementing what Congress intended in FQPA, consumer and environmental protection is maintained and enhanced.



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Baker National Recertified As Audubon Sanctuary

Hennepin Parks' Baker National Golf Course recently was notified that it has been recertified as an Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System, a program of the Audubon Society of New York State. In 1995, Baker National was the first public golf course in Minnesota and only the third in the state to receive its initial Cooperative Sanctuary designation.

This certification recognizes Baker National's ongoing commitment to achieving a high degree of environmental quality in specific areas of course maintenance and management including environmental planning, wildlife and habitat management, outreach and education, integrated pest management, water conservation and water quality management.

To ensure that these environmental activities are continued, the Audubon Cooperative Sanctuary requires that certified golf courses resubmit an application representing current activities every three years. Baker National has wholeheartedly been recertified and is recognized as a model Audubon Cooperative Sanctuary.

For further information contact Keith Greeninger, Baker National Golf Course Superintendent, 2935 Parkview Drive, Medina, MN 55340 or call (612) 473-3369.

Media Relations Tips

The following is a list of activities that superintendents can undertake in working with the media.

- 1) **Write or telephone media** expressing yourself as a willing and able source of information on environmental, golf course maintenance issues. Provide work, home and pager telephone numbers.
- 2) **Invite the local media to play golf** or go to lunch with you regularly.
- 3) **Join Audubon Sanctuary Programs** for Schools and Golf Courses, and promote to the media.
- 4) **Offer your services** to the local media to serve as a columnist or radio guest.
- 5) **Inform media of activities** at your course and encourage them to participate.
- 6) **Host a media golf outing.**
- 7) **Photos tell the story.** Be cognizant of good photography opportunities that will help explain activities at your course. Take photos of your course to document your work and conditions.

— GCSAA

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