## **On the Waterfront**

#### by Jim Reed

Since this is my first "Waterfront" issue of the year, I want to thank the MAGCS and the **Bull Sheet** for presenting me with the prestigious Editors (Fred Opperman) Award for 1993. I enjoyed presenting the important information on hydraulic surge issues and especially appreciated the feedback from



many of you that you read and used the material in the operation of your irrigation systems. I hope the new topic chosen will also be useful to you in maintaining your golf course at its ultimate level in 1994.

This year's agenda for the column will be on electrical surge protection. Because of the many storms and resulting electrical power issues stemming from 1993's turbulent weather, and the lack of good information regarding surge protection, this topic seemed appropriate for 1994. Two individuals with outstanding credentials have provided most of the material that will be used in the presentation. Hopefully, some of this information will be of great value to you and your club.

Upon reading an outstanding article from Robert Healey on "Regular Maintenance Schedules Prevent Irrigation System Predicaments" in the March/April "Golf Course Irrigation" magazine, a question arose about the following item under the section on "Checking Field Satellites (page 30):

"B. Check grounding and test once or twice yearly." Resulting questions about this statement came to mind:

- 1. Why should grounding of field satellites be checked?
- 2. How does one check a ground?
- 3. When should this test take place?
- 4. What level of protection should be achieved?
- 5. Are there any other components of the irrigation system that also need to be tested?
- 6. What will this cost?
- 7. What additional protective devices can be used to increase the level of surge resistance?

This and future articles will attempt to answer adequately these questions and more not listed above.

The most important immediate step you can take in checking your grounding is to tighten the grounds. "Proper grounding at the field controller ... (and the central controller) ... is very important. Good grounding of remote sites requires periodic checking to insure ground integrity. Merely driving a 8 foot copper rod next to the controller will not necessarily provide a good ground. The type of soil and available moisture will have a direct bearing on ground potential. All grounds should be tested with a proper resistance meter and tightened annually." When you start up your irrigation system this spring, make it a practice to find the ground rod at each satellite location, tighten the ground clamp onto the rod, and insure that the ground wire going into the pedestal is securely fastened to the ground lug provided in that pedestal. If the connections are loose, you will have either a very poor or non-existent ground, and no amount of additional surge devices you could install will protect your investment, regardless of their cost. A few irrigation

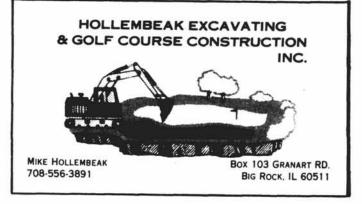
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#### (On the Waterfront continued)

technicians who have been given this advice have already reported finding poor connections, and think there was a correlation between timers sent back for repair last year and the potential of poor grounds at the locations of those timers. This is a no cost (other than the time involved in performing this test) expenditure that could save hundreds of dollars in repairs, reduce immeasurably the aggravation to you and your irrigation staff in operating your system, and improve the playability and appearance of the golf course. Perform the identical procedure at the central controller location to insure its optimum safety. An explanation of how these connections could loosen up is not important now — just tighten the connections.

Next month: Why should grounding be done?



Chick Mayronne, Green Chairman and Pete Janik (right) Superintendent of Chicago Heights C.C.

### **Oak Wilt**

#### DON'T PRUNE OAKS

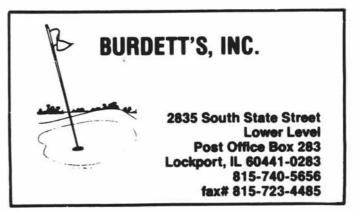
Oaks should not be pruned from now through the summer due to the potential of oak wilt infection. The best time for pruning oaks would be late fall or winter. Fresh wounds on oaks may invite sap feeding beetles, which could carry the oak wilt fungus *Ceratocystis fagacearum* spores from infected trees. There is also the potential that squirrels could carry the oak wilt fungus.

In the event wounds are made on oaks, this is one instance where treating the wounds is suggested. This is to prevent insects from coming in contact with new wounds. Trim any jagged wood to make a good, clean cut. Then treat with orange shellac. Once this is dry, follow with a asphalt-base tree paint.

Oak wilt is a serious disease of oak, very similar to Dutch elm disease. The oak wilt fungus will clog water-conducting vessels in the sapwood. As the supply of water to the canopy of the tree is reduced, the tree will wilt and die. Watch for wilting in the UPPER portion of the tree, progressing downward, over the next several weeks. Leaves typically turn pale bronze, eventually dropping from the tree. Red/black oaks (pointed leaf tips) will die quickly, while white/bur oaks may recover and appear "stagheaded".

Oak wilt may often be confused with other problems. Examine the sapwood of fresh wilting branches for vascular streaking. Laboratory culturing from freshly wilted branch samples can confirm oak wilt; the University of Illinois Plant Clinic is available for a nominal fee, contact the closest Extension Office for details on how to submit a sample.

**Credit: CES Newsletter** 



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