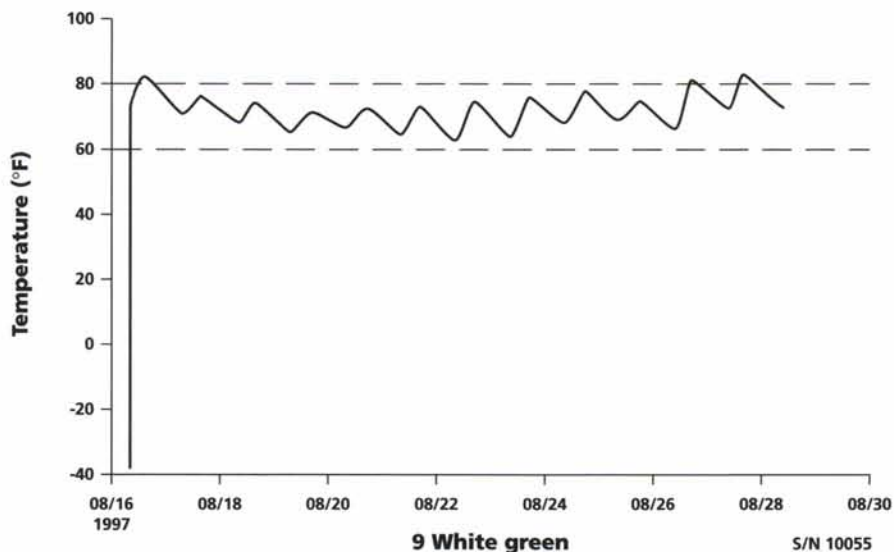


Tracking Soil Temperatures

Nick Hongisto
Schaumburg G.C.

It has come to my attention during the past four or five years that soil temperature is an important tool for us to use. We can determine weed germination times, turf seed germination times, disease prediction models, and a host of other things. If you were lucky to be in Oscar Miles' presentation at the NCTE this past December, then you know what I am talking about.

I know that some professors wanted us to take the soil temperature at 11 a.m. everyday to a depth of 2 inches. Well, I don't know about you, but I will forget to do that at least five out of seven days. So I wanted to find a low-cost method of recording the soil temperature and also make it as easy as possible—you know, the KISS method (Keep It Simple, Stupid). This led me to using, you guessed it, the computer. I have found an easy and inexpensive way to record the soil temperature at any location on the course.



The Onset Computer Corporation makes the product. It is called their HOBO line of temperature loggers. It is a very small box, just a little smaller than your standard-size Post-It note. I use the HOBO XT. You attach a lead to the box, which is now the tip of your thermometer, to wherever you want to read the temperature. The lead is about 2 feet long. The HOBO runs off of their Boxcar software that you load into your PC. You plug a serial cable into the

back of your PC and plug the other end into the HOBO. You then launch your HOBO to read temperature and also, very important, how long you want to keep it out in the field. You can do it for as little as one hour or one month. It will record the temperature at a preset time interval. When that time period is over, you bring it back to your PC and download the data. Then it prints it into a chart that is very easy to read and understand.

(continued on page 18)



www.clesen.com

Specializing in Custom Grown Annuals for the Commercial Landscaping Industry

A sampling of our Spring & Fall collection includes:

Aster	Canna	Evolvus	Ipomoea	Mum	Scaveola
Bacopa	Caladium	Fuschia	Ivy	Nicotiana	Spike
Begonia	Coleus	Geranium	Kale	Pansy	Sprenger
Brachycome	Cuphea	Helichrysum	Lantana	Pentas	Sedum
Cabbage	Daisy	Impatiens	Malo	Petunia	Vinca

Think pre-cooled potted bulbs for instant Spring color

We have two locations to service the Tri-State Area

Evanston: 316 Florence Ave., Evanston, IL 60202

Phone: 847/869-2257

South Elgin: 540 South Drive, South Elgin, IL 60177

Phone: 847/695-1500

Your Irrigation System . . .


(continued from page 16)

“has never been a known failure of an RPZ valve which resulted in contamination of a water supply.” In the end, their arguments did not carry the day.

So, what to do now? Avenues for reversing the law through the court system have been exhausted. The ITIA is now focusing its efforts on introducing legislation to change the definitions and parameters of the Plumbing License Law as it relates to irrigation systems. Specifically, draft legislation has been introduced that will amend the Plumbing License Law as follows: 1) provides that the definition of “plumbing” includes backflow prevention devices (RPZ valves) between a lawn irrigation system and the source of a private water

supply; also, that definitions of the terms “plumbing fixtures” and “plumbing systems” do not include lawn irrigation systems that have been properly connected to RPZ valves; 2) provides that “plumbing” (the verb) does not include the trade of installing or maintaining lawn irrigation systems; 3) defines the term “irrigation contractor,” and requires that irrigation contractors be registered with the state; and 4) stipulates that a licensed plumber or licensed apprentice plumber is required to install an approved backflow prevention device (RPZ valve) between the irrigation system and the water source.

Due to the far-reaching implications of the Illinois Plumbing License Law, prominent green industry organizations within the

state have joined forces with the ITIA to get this law changed. Most notable are the Illinois Nurseryman’s Association and the Illinois Homebuilder’s Association, which will actively lobby in Springfield for passage of the new legislation. Along with the MAGCS and the CIGCSA, other associations in the green industry need to add their support through grass roots lobbying efforts. Individuals in the MAGCS and other concerned citizens can also support passage of the new legislation by contacting legislators via letters, phone, fax or e-mail. United green industry support should lead to successful (and quick) passage of the amending legislation. 

Tracking Soil Temperatures

(continued from page 12)

Here is what we did in the field. I buried an old valve box about one foot into the collar of our 9th green. I took a piece of rebar and poked a hole into the green, from the inside of the one-foot hole, about 18 inches into the green. I did this at about a 2- to 3-inch depth. This hole runs horizontal to the surface of the green and directly into it. Then I forced the temperature probe into this hole and let it stay there for the HOBO to connect to. I had to purchase a weatherproof container for the HOBO (they have a bunch of accessories for this) and put the unit into this container with the probe plugged in.

Now everyday, I lift the valve lid, open the container, and unplug the HOBO from the probe. Then I bring it into the office and plug it into the PC. I download the data from the previ-

ous 24 hours, or however long I had set the unit for. After the download, I launch it again for the upcoming day or days. Then I bring it back to the green and plug everything back in.

I said earlier that this was inexpensive. I think it is. The entire setup was less than \$250. That includes the software. Now I can record soil temperature and keep it easy for myself. I can go back and see what the temperature was at 11 a.m. everyday, or anytime of day for that matter.

This year, I plan on getting two more HOBO units and putting them in other places on the course. The Boxcar software can run an infinite number of HOBOS. All you need to do when you launch them is give each one a unique name. I also want to have a second unit so when I remove the unit from the ground, I can plug in another

empty unit at the same time. That way, I don’t have to come back right away and plug the unit back in after downloading and launching. (Remember, the KISS method).

You can purchase the items from many places. I can let you know where we purchased ours if you give me a call at (847) 490-7077.

I have included a copy of a downloaded graph from our 9th green. This was for eight days in August of 1997. I was testing the duration of the units. In the software, you can zoom in on any part of the graph. You can also transfer the data to Excel or Lotus or almost any other spreadsheet software you can name.

Have a great summer.

