

High-Tech Keeps It Green at Madden's

BY LEW HUDSON
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It's more than human.

Madden's new golf course watering computer is in a class by itself.

You doubt that? Consider the facts. There are three courses at Madden's—Pine Beach West, Pine Beach East and the Social 9—45 holes in all.

Watering the greens, tees and fairways requires 600 outlets.

The computer, using information gathered from a weather monitoring station near the office of Golf Course Superintendent Scott Hoffman, programs each outlet to deliver precisely the amount of water lost that day by evaporation.

To do so it takes into consideration natural rainfall, wind direction, velocity, relative humidity and the amount of sunshine and cloudiness.

Plus it makes allowance for the type of vegetation at each watering outlet, the soil type, compaction, degree of slope and proximity to the lake or trees.

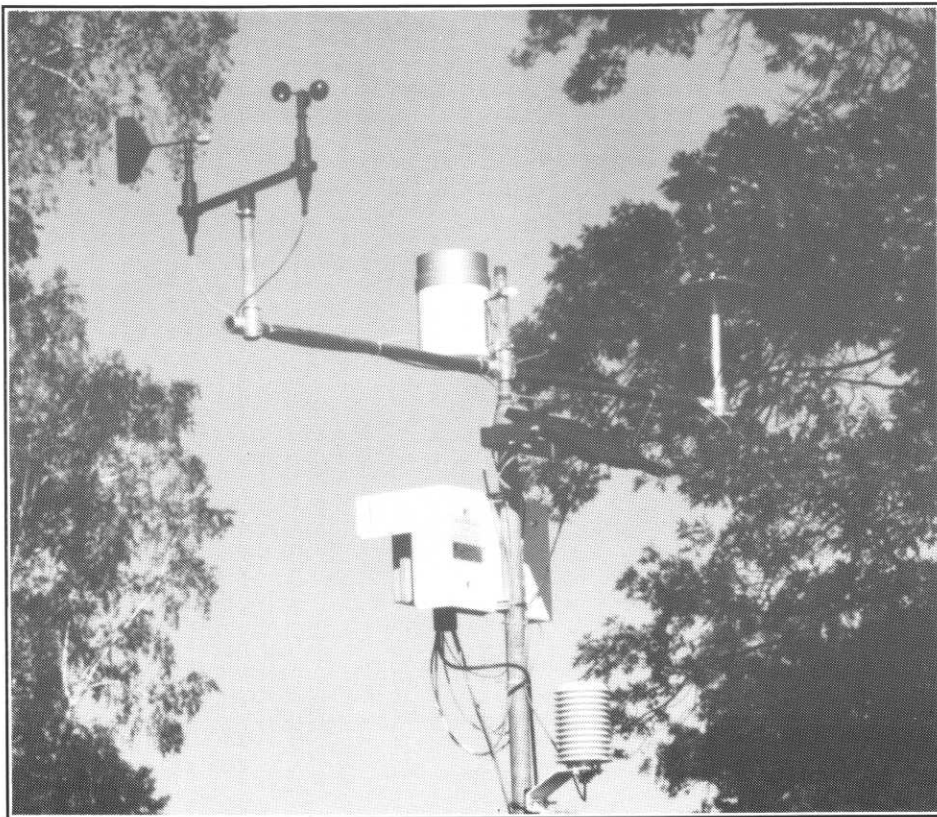
It even factors in effects of longitude, latitude, water pressure and chemical content of the water before deciding on the hydro dosage to be delivered by each individual sprinkler outlet.

Golf course watering used to involve a tremendous amount of tedious work with hydrants and hoses. No more. Now, more than 11 miles of underground, plastic pipe connects the 240 automatic pop-up outlets.

Madden's is the second course in Minnesota to install the computerized system. Oak Ridge in the Twin Cities was first.

Sold by the Toro Co., Bloomington, Minn., the system has been on the market only two years.

Hoffman has been directing work on the Madden installation for the last two seasons and expects to be finished by 1991.



Photos Courtesy of the Brainerd Dispatch

In addition to being labor-efficient, the system makes maximum use of every gallon. When you are pumping 120,000,000 gallons a year from deep wells, efficiency is important.

"We are trying to replace the exact amount of water that is lost on a daily basis," Hoffman said.

The computer is programmed to start the watering rotation in the evening after golfers complete their final rounds. Outlets are turned on and off on a rotating basis.

Normally the daily replacement is delivered in two cycles to allow the water to soak in rather than run off. Not only does the computerized system make maximum use of water, it also produces better grass by delivering exactly what water is needed—no more and no less.

It also monitors all 600 stations constantly and sounds an alert in case of malfunction.

Do you know any humans who can do that?

(Ed. note: This story was reprinted through the courtesy of the Brainerd Daily Dispatch.)

