

USGA

Watering wisely, it is now voluntary but someday. .it may be mandatory!

By: Michael Huck, Agronomist, USGA Green Section

An article was recently published in *Southwest Trees and Turf* discussing how Clark County Nevada will soon be implementing water use restrictions on golf courses similar to those used in Arizona. It really is not surprising to me; in fact I feel we can expect more of these and other types of irrigation restrictions throughout the southwestern states as time passes. As more of these regulations come into existence it will become increasingly important that each drop of water applied to turf is done with as much precision as possible.

Tuning an irrigation system to maximum efficiency is important and it goes far beyond just adjusting the control system to a weather station reading, this is just the beginning. Other things to consider are:

Pump Efficiency - When was the last time you had your pump efficiency tested? Although this won't directly affect water use (unless there is serious pressure loss) it can have an impact on the bottom line with energy consumption. This should be checked annually so that wear and efficiency can be historically tracked. If you have not done this lately or don't know who to contact, give your electric company's commercial account representative a call as they often perform this service.

Operating Pressures - Starting at the pump station, are you operating at the pressure specified for the system? Are the VFD (variable frequency drive) or PRV (pressure reducing valves, Clay-Valves, etc.) set and functioning properly. If the pump station

checks out, move on to the sprinklers.

Many new valve-in-head sprinklers have built in adjustable pressure regulation devices. If you have a block system and the sprinklers don't have regulators then the remote control valves are where you set the operating pressure. Does your irrigation technician systematically check and adjust each and every head (or station in the case of a block system) with a pressure gauge and Pitot tube? This should be done annually as some model sprinklers are very sensitive to small variations of pressure. As little as 5 - 10 pounds above or below the specified pressure can significantly alter the sprinkler profile and destroy distribution uniformity.

Audit Nozzle Wear and the Effects of Heads Below Grade - Can you document the efficiency of application (distribution uniformity) or deterioration of it due to nozzle wear? Audit your system regularly and document the results. An annual can test of selected stations throughout the system will allow you to watch the efficiency of the system as it ages. You can also compare "new vs. old" nozzles or "factory vs. after market" nozzles. How much inefficiency is caused by sprinklers below grade? Do you raise your low heads often enough?

Calculating the Potential Savings - The center for Irrigation Technology has recently developed a new software program that not only allows you to audit the current efficiency of your system but to also project the cost savings the improvement in distribution

uniformity based on a scheduling coefficient will offer. The SPACE SIS program allows you to input the cost of water and energy and based on the savings calculated the payback of costs of improving the system.

Maintaining your system at maximum efficiency is strictly voluntary, at least for now. Someday documenting irrigation system efficiency may become mandatory, who knows. But why not be proactive, be part of the solution as opposed to the problem when it comes to saving water. Water wisely by taking good care of your irrigation system. /

GCSA of NC Meeting at Corral de Tierra

6/22/98 - Golf Results

Superintendent - Gross

1. Rich Scholes	77
2. Jeff Higton	79
3. Ken Williams	80*

Superintendent - Net

1. Bill Hagen	67*
2. Rick Key	67
3. Jeff Markow	68

Affiliate/Guest - Gross

1. Cordie Morgan	78
2. Rex Gentry	80*
3. Bruce Kenseth	80

Affiliate/Guest - Net

1. Jack Kincaid	70
2. Gilbert Wong	71
3. Steve Franzen	73*

*Denotes tie-breaker rule used

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