

# It's All About the Water

## Less Irrigation is Better for Golf, the Turf, and the Environment

By Matt Nelson

**Editors Note:** As the various Florida Water Management Districts implement tighter water restrictions on golf courses and discuss future water conservation measures this article might just as well have been written today as it was four years ago. Clip and post in the clubhouse for your customers because we are now entering our traditional dry season and our courses likely won't be as green as usual.

As an agronomist in the golf industry, it often amazes me how obsessed American golfers are with the color green. Preparing good golf conditions sometimes seems secondary to prepping the course for a beauty pageant. Players commonly react with worry, disdain, and disapproval at the first signs of any off-color turf. Panic develops when the dreaded “brown spot” occurs. What gives within the ranks of our great game?

National drought surveys indicate that nearly half of the U.S. is currently experiencing drought, and water restrictions have been mandated at golf courses across the United States. The fairways may get a little firm and lose some color, but with traffic control and prudent cultural programs, much of the turf can survive without water for extended periods. Every lie might not be perfect, but isn't this part of what makes golf such a great game? When the course gets dry during the summer months, then use those conditions for more roll and to play different types



Panic often develops when the dreaded brown spot occurs. Photo courtesy of the USGA.

of golf shots. More bounce and roll presents risk and reward at some holes, different shots into greens throughout the year, and a greater premium on accuracy.

The golf industry has invested millions of dollars over the past two decades investigating the environmental impacts of golf course management. Our greatest challenge, however, will likely rest with irrigation. Water availability and quality will become the greatest issue facing golf courses throughout much of the country, if it isn't already.

Players may have no choice but to tolerate changing golf course conditions throughout the year, and they may even

learn to appreciate the many wonderful shades of brown.

But will it have to take water-use mandates to change current golfer attitudes? Sadly, this is probably true. In drought-stricken states this season, where both voluntary and mandatory water restrictions were in force, I observed golf shop staff manually turning on sprinkler heads after the maintenance department had left for the day, resort managers demanding that golf course superintendents increase the watering, and an adamant group of golfers complaining directly to the mayor about the lack of watering at their municipal golf course. The golf shop staff killed most of a green, play at

the resort was up even though several greens had been badly vandalized and closed, and late summer rains allowed the turf at the municipal course to resume normal growth and appearance.

Oh ye of little faith. The turf doesn't have to be green and soft to survive or provide a playable surface.

Those doing the most complaining typically are at golf courses with circa-1970 irrigation technology while expecting Y2K conditioning. Forget about it. The margin for error with respect to turfgrass water management has become increasingly thin with ever-faster greens and lower heights of cut. Drought conditions quickly highlight the deficiencies in the watering system, and simply cranking up the run times to make up for poor distribution uniformity invariably results in soft, muddy spots where embedded lies, mud on the ball, and no roll are the norm - all in the midst of a drought. This inefficient use of water results in a blatant waste of our most precious resource.

If course operators and players truly are concerned about uniformity and consistency on the golf course, then the irrigation system is the place to start. Modern irrigation control capability, components, and design have greatly improved the ability of golf course superintendents to accurately meet the variable turf water demands. Improved control and coverage also will result in significantly reduced water use over the year. Oh, can't afford to replace your 29-year-old irrigation system? Buck up and find a way to finance replacement of the golf course's most valuable infrastructure item or quit whining and hit the ball. Golf was invented prior to irrigation and has survived most of its life without it. Many would argue it was a better game without it, too.

The USGA is committed to funding research that investigates turfgrass breeding and selection, and management practices that enable reduced water use. We will continue to seek out every alternative to reduce water use and be better stewards, but it

will be much easier if golfers come to support this endeavor. So, this is a plea to the American golfer. Firm and dry conditions promote better and more exciting golf. Brown is beautiful, too!

Listen closely - it's all about the water.

*Matt Nelson is an agronomist in the USGA Green Section 5 Northwest Region. Reprinted with permission from: USGA Green Section Record, January-February 2003 issue.*

## Turf Management in a Certified Audubon Cooperative Sanctuary

By Bobby Wallace

At the Grand Harbor golf courses, we approach pest management with the concept of protecting the environment while keeping a top-grade playing surface for our golfers. We do not treat with preventive applications, only curative. Our policy is to spot-treat affected areas rather than apply to large portions of the course. We use the lowest curative rate and the least problematic chemicals for any particular pest.

### BUFFER ZONES FOR LAKE EDGES

We have a protective buffer zone around lake edges where no pesticide spraying or fertilizer application is permitted. Primo, a growth retardant with no water soluble properties, is used to help keep a 5 foot no-mow area that not only achieves a transition zone with a natural look to our lake edges, but helps to absorb any chemicals that might possibly leach towards the water. In addition, we are installing littoral-zone plantings that will filter contaminants, and add wildlife cover, feeding and nesting areas for water birds and small animals such as otters.

### FERTILIZATION

Our fertilization program concentrates on slow-release fertilizers and foliar feeding to maximize

Tom Burrows, Consulting  
Agronomist/Turfgrass Specialist  
Independent Consulting using  
"Brookside Laboratory"

### Greens Reconstruction

- ◆ Soil Physical Analysis
- ◆ USGA Approved Testing
- ◆ Analytical Service
- ◆ Recommendations
- ◆ Specifications for Contractor Bidding

### Soil Testing

- ◆ Greens, Tees, Fairways
- ◆ Analytical Report and Soil Fertility Recommendations

### Water Testing

- ◆ Report & Recommendations

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