

USGA UPDATE

Dealing with Winter Conditioning, Consequences of Water Restrictions

By John Foy and Todd Lowe

The Florida winter golf season is in full swing, and courses are hosting peak seasonal play, although many courses are reporting fewer rounds relative to the past couple of years. There is intense competition to attract and retain members, and, naturally, without a full membership, operating costs must be reduced. The current economic slowdown is definitely impacting golf operations throughout the state.

The mild winter temperatures have prevailed, and throughout the central and southern part of the state, bermudagrass and seashore paspalum have maintained a green color character and some growth. The mild temperatures have been a positive since overseeding results have been less than satisfactory at many facilities and concerns about pending irrigation restrictions caused others not to overseed at all.

At least along the lower east coast, timely and adequate rainfall has softened the impact of mandated Phase III water use restrictions. During my TAS visits in early March, golf course superintendents are providing appropriate and good quality overall conditioning for daily play.

In contrast, at courses with moderate to heavy daily play, typical wintertime cart-traffic wear and damage is apparent. Golfers complain about tight fairway lies, loss of definition between the fairway and rough cuts, and clumpy and inconsistent rough.

At courses through the middle of the state, and along the west coast where a moderate to severe drought has persisted, cart traffic wear and damage has been greatly exacerbated. Over the

years, the importance of proper preparations during the late summer and early fall, along with aggressive cart traffic management, have been stressed for minimizing damage and surviving early winter season play in the best possible condition. The goal at courses in central to south Florida is to survive until early to mid-March when sustained growth



Water efficient design. Smaller part-circle heads deliver the water only to the turfgrass on this tee surrounded by a naturalized unirrigated area. Photo by Joel Jackson

and recovery begins in response to increasing day length and temperatures.

For the 2008 winter golf season, there also is tremendous concern about what lies ahead. As we move through the spring, increasing day length and temperatures result in a corresponding increase in turfgrass water-use rates and irrigation needs.

For courses in the South Florida Water Management District, the Phase III water-use restrictions require a 45 percent reduction in pumping allocations, which presents a challenging, but manageable, situation.

A big problem arises because the reductions are based on a monthly predictive calculation, and, at many facilities, it has been determined that

allocations are actually 60 to 70 percent less than actual irrigation use, based on the past five-year averages during February, March and April. If timely and adequate rainfall does not occur during this three-month period, many courses will have to limit supplemental irrigation to greens and tees, and significant portions of the fairways and roughs will go into drought stress. While bermudagrass and seashore paspalum have good drought tolerance, a much greater impact beyond off-color turf will be experienced.

Florida Region Web updates have offered drought management tips, such as raising heights of cut and mowing less frequently. At this point, however, while no doubt unpopular with golfers, an extremely proactive and aggressive cart-traffic-management program is needed. Along with strictly enforced cart-usage policies, directional control devices need to be put into place before excessive wear and damage occurs.

Some golf courses are lucky enough to have an unrestricted irrigation water source available such as recycled water. At these facilities it will be possible to maintain an overall uniform green color, which will only create more problems at facilities that must manage with a restricted water source. There is no doubt that abundant summertime rains will recur in Florida, but golfers need to accept that water conservation and use restrictions will be a fact of life in Florida.

DESPERATE TIMES DESPERATE MEASURES

If desperate times call for desperate measures, then these must be desperate times for some water-management districts. It was mentioned recently that the Southwest Florida Water Management District will be implementing Phase III irrigation restrictions beginning in January. The supposed objective for Phase III water restrictions is

a 45 percent reduction; the supposed objective for Phase II restrictions is a 30 percent reduction, when actual irrigation allotments for many courses revealed nearly 70% reductions compared to previous years. Many courses are quite frantic over the outcome of the upcoming Phase III restrictions and how this will affect playing conditions and turf health.

The following are my observations of the restrictions and how golf course maintenance programs in Florida are impacted:

PHASE I (15% reduction) - Most bermudagrass playing surfaces can be irrigated as necessary to provide acceptable turf quality. Roughs become off-color and localized dry spots occur at times, but no change in maintenance is necessary.

PHASE II (30% reduction) - Primary play areas (greens, tees, fairways) are kept alive and generally green in color. Regular wetting-agent treatments are

necessary to reduce the severity of localized dry spots. Increased mowing heights and decreased mowing frequency are necessary to improve rooting and increase the turf's ability to take up water. Plant growth regulators also have shown some benefit in drought tolerance and can be applied on a regular basis. Cart traffic management is vital as the turf begins to lose color.

PHASE III (45% reduction) - Phase III will cause severe loss of turf color. Progression of brown conditions will begin from the outer roughs and work their way into primary playing areas. Since only a small percentage of water is allotted compared to previous years, greens and tees should be kept alive and the remaining water delivered to fairway landing areas when available.

Healthy bermudagrass is quite drought tolerant and courses should do everything possible to maintain healthy turf conditions.

It is important to restrict traffic as

much as possible. Clubs should divert traffic away from areas that appear stressed and off-color, as the additional stress can kill turf. Eventually, it may be necessary to completely restrict cart traffic to cart paths and designated areas. Some areas may die off from drought accompanied by other stresses like shade, nematodes and traffic. These may need to be re-grassed in late spring, if irrigation restrictions are lifted at that time.

Having an efficient irrigation system and design allows golf course superintendents to conserve water and apply it exactly where it is needed. It may be time to have your system audited by a professional irrigation consultant. If restrictions become a normal part of golf course maintenance in the future, it may also be necessary to consider decreasing irrigated bermudagrass turf acreage by installing or enlarging natural areas or utilizing drought-tolerant bahiagrass in outer rough areas.

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