

Hand watering is very labor intensive and disruptive to the normal work schedule, but it is the most efficient way to deliver the scarce water supply to fairway dry areas to keep from losing turfgrass. Photo by Joel Jackson.



Naples National Golf Club Deals with 2007-2008 Water-Use Restrictions

By Terry Wood

In April 2007 when SFWMD imposed Phase 2 water restrictions, we were concerned because we pump the most water in May. Summer rains begin in June.

Our irrigation source is 16 acres of lakes with five 40-foot recharge wells cased to 20 feet. We may recharge our lakes only by an amount equal to our withdrawals. The water is improved with acid-injection products. Reclaimed water is not available to us at this time.

We survived by increasing the use of wetting agents through the irrigation system and applying extra surfactants to mounds and other hot spots. Hot-spot irrigation was limited to the driest areas. We were able to perform our basic summer maintenance without any major problems.

The summer rains did not show up until July and our previous nine months showed a deficit of 15 inches of rainfall as compared to an average for that time of year.

We are essentially a drainage easement for Naples Heritage, the adjacent golf course, and we typically take on a lot of water in summer. Because of the rainfall deficit, the normal flooding of the non-turf areas did not happen and the upcoming season looked bleak, especially if we went to Phase 3 restrictions, which did take effect Jan. 15.

Concern increased when we realized, through the Blainey-Criddle model, how little water was going to be

available December through February. During a meeting with my green committee chairman, we recommended that the membership be notified of the water restrictions by e-mail

We have a weekly e-mail update from all departments to inform the membership what is scheduled for the upcoming week. We started by reviewing the summer projects and briefly introducing the water restrictions. Then, every three to four weeks we reviewed the previous month's report and offered insights on the effects of the drought, Blainey-Criddle, Lake Okechobee water levels, and our daily water allotment compared to daily average over the last five years.

The e-mails are informative and not

overly technical. We included a list of courses with reclaimed water and information on alternative water sources and approximate costs for those projects.

We have only 50 acres of turf and no residential development. Everything is mowed at fairway height or less, so our 70 million gallons per year seems a little paltry compared to the typical course of 100 or more acres that has a combined permit for the common areas, residential and golf course.

We have two quick-coupling valves at each green and tee complex as well as three or four along each fairway. We typically had six or seven workers hand-watering tees, greens and surrounds and, for a time, that was all the water we had. Hand-watering could amount to



The Naples National course is designed with minimal irrigated turf acreage, but Superintendent Terry Woods still doesn't have enough water allocated for use during the dry winter season. The pasapalum tee tops seen here are holding up, but the bermuda fairways are in drought stress. Photo by Joel Jackson

150-200 man hours per week.

During the last two weeks of January, we were allocated only 40,000 gallons per day based on the Blainey-Criddle allocation model. With weekly reporting being required by SFWMD, we had to evaluate our daily water use closely because a full cycle through the sprinkler system on our 2.5 acres of Champion greens is about 21,000 gallons and our 4.5 acres of Seashore paspalum tees requires 70,000. When we run fairways also, the total cycle uses 330,000 gallons.

Fortunately, we have individual head control with our computerized irrigation system. This allows us to adjust each sprinkler's time to suit the area it covers. We have written programs for individual fairways as well as two hot-spot programs: one includes about 75 percent of the fairway heads and the second about 50. With the computer we have the ability to estimate the gallons required for the scheduled program, which helps us determine what we can water for the week.

The monthly allotment is broken down into weekly amounts, then daily, to make the best use of each gallon. Each Monday we plan our irrigation schedule based on projected temperature, wind, and rainfall. Applications of fertilizer, surfactants, and other plant protectants also are considered.

Most days we hand-water greens, tees, collars, approaches, green surrounds and, depending on the water availability, fairway hot spots.

Our staff knows how to look for slight variations in turf color, and how to use moisture meters as well as soil probes to determine where to water. Periodically, we include wetting agent tablets in the hand watering regimen to supplement some of the moisture-retaining or -penetrating products. Most of the hand watering is concentrated on the perimeters and high mounds of greens, tees, and fairways.

Overall the membership has been very understanding and supportive. I am amazed that the vast majority is very pleased with conditions. I never thought I would hear the words "brown is good". Hallelujah!



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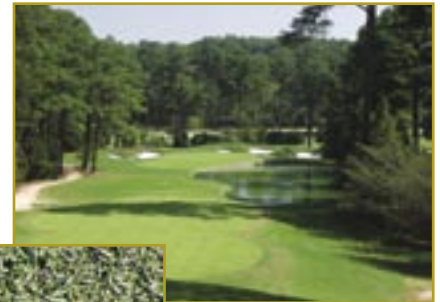
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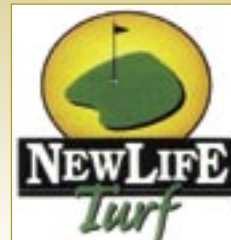
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