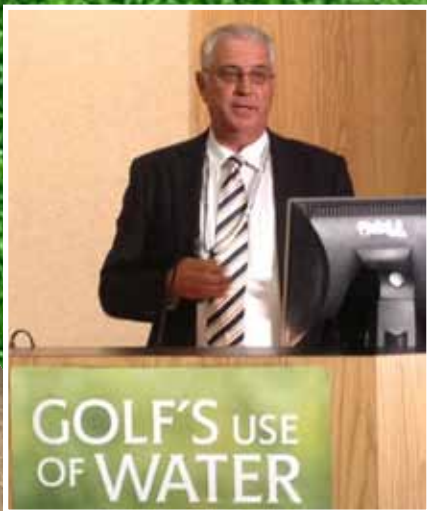
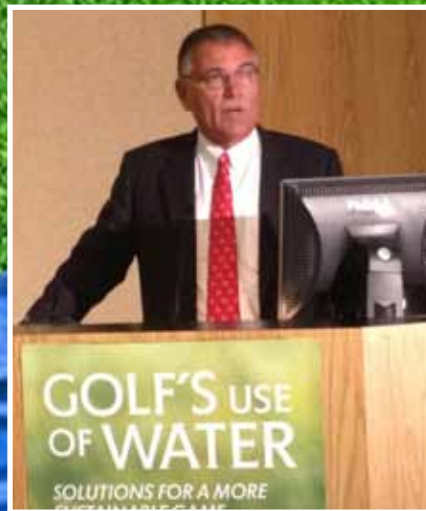


# Golf's Use of Water - Solutions for a More Sustainable Game



*Tim Hiers, CGCS from the Old Collier GC discussed irrigating with brackish water.*



*Bob Farren discussed the restoration of Pinehurst No. 2 to the original single-row irrigation design.*



*Mark Esoda from Georgia talked about the positive results from working with water regulators.*

*By Joel Jackson,  
FGCSA Executive Director*

We have been dealing with water-quality issues in Florida the past few years in the form of fertilizer ordinances, but there is a larger, more sinister, threat looming for our industry in the form of availability of water for our needs. We think of Florida as having an abundant water supply – and we do, compared to some regions. However, the demands on easy, inexpensive water are growing and we need to make sure

we are doing everything possible to minimize our use and maximize our water conservation.

I had the privilege of representing the Florida GCSA at the USGA's Water Summit meeting Nov. 6-7 in Dallas. Water is the most critical resource in managing a golf course. A roster of 18 speakers from across the country addressed more than 100 attendees representing the golf industry and water regulatory agencies. I wanted to share some of their comments to spur you to start thinking very seriously about how to effectively manage your

water resources to keep your course viable and your job secure.

Let's start with the opening statement from Mike Davis, executive director of the USGA.

*... Water is an extraordinarily valuable resource, and the pressures on water supplies are increasing in many areas. The drought conditions experienced by much of the country over the past few years have further heightened the visibility of these conditions.* (Ed. Note – Trends out west have a history of moving east, so as California, Nevada and Arizona go,

so often goes the rest of the country).

*“At the same time, golf course irrigation is a necessity, which means golf courses must use water in the most responsible manner possible. When done so, the game contributes not only to the enjoyment and well being of participants, but also to the economic and environmental health of local communities.*

*“In addition to helping courses adjust to their areas’ specific environmental conditions and challenges through the Turf Advisory Service, the USGA has invested in scientific research to develop grasses that require less water. Moving forward, we are committed to continuing to help courses efficiently utilize every drop of water that is available for irrigation.*

*“Part of that mission is this summit, which has convened experts in water resource management, golf course management and scientific research. Working together, we can identify innovative solutions to preserve the game’s sustainability...”*

Here are some comments from the regulatory and activist side of the issue:

Veronica Blette, chief of the Water Sense Branch, EPA:

*The EPA and other federal agencies and businesses are looking at potential risks associated with water shortages and lack of access to clean and safe supplies of water. It is exciting to see the golf industry take the issue*

*seriously. Golfers expect lush and green conditions and homeowners want their yards to look green too. We all need to shift our focus to be more sustainable as the primary goal.*

Ann Dickinson is president and CEO of the Alliance for Water Efficiency (AEF). She has an impressive resume of work in the water conservation field, so it was a bit of a surprise to me how astonished she was when Greg Lyman from the GCSAA was showing a national Golf Water Use pie chart which indicated that golf’s use of public potable water supply nationally is 19 percent; the figure she had assumed or used was 45 percent. In Florida, only courses on some of the barrier islands used city water. It’s too darn expensive. Most coastal courses are using reclaimed or brackish water for irrigation.

From the superintendent ranks, our own Tim Hiers, CGCS from the Old Collier Club in Naples described the mandated use of brackish water for his course. There was no access granted to fresh water sources, so Hiers has become an “expert” in managing seashore paspalum turfgrass on a salt water diet. He’s also had to learn ecosystem management and find salt-tolerant landscape plants (halophytes) to use around the course perimeter. The FGCSA, with Hiers as the host, hosts a stop on the Florida Fruit and Vegetable Association’s

week-long annual Spring Regulator Tour of EPA, DEP, DACS and Water Management regulators every March. This kind of outreach is essential to educate regulators about real world situations.

Bob Farren, director of golf courses and grounds maintenance at Pinehurst gave an interesting account of the Bill Coore/Ben Crenshaw restoration of the historic Pinehurst No. 2 to its original design and irrigation coverage. Farren said, “We reduced the total number of irrigated turf acres from 90 to 50 and the number of heads on the course from 1150 to 450. The ‘old school’ centerline irrigation in the fairways now determines the strategic lines of the course.”

This was an extreme case of “naturalizing” areas of the golf course, but it is a fact that, by removing turf from out-of-play areas and creating naturalized areas, you can conserve water resources, and reduce water and pumping costs and all the other fertilizer, pesticide and labor costs. Those are good things for the shaky bottom line these days.

Next Mark Esoda, CGCS from the Atlanta Athletic Club told the story of the Georgia Golf Course Superintendents campaign to incorporate BMPs into the state’s water regulations. At the time, Georgia had banned all irrigation of fairways and restricted greens and

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**“Golf also has a public perception problem. ‘What can we do to help conserve water that will prove we are good managers/stewards of the resource?’**

tees to just a few days a week.

“Regulators want help doing their jobs,” Esoda said. “Golf also has a public perception problem. In Georgia, we had to ask the hard question: ‘What can we do to help conserve water that will prove we are good managers/stewards of the resource?’ Change is difficult, but the golf industry stepped up to prove the world wrong (by) using a self-policing BMP program, stepping up to work with agencies on various committees and introducing educational pieces. The result is increased positive

awareness and improved water conservation.”

In Florida, we have to work with five water-management districts and we are, to varying degrees of success. Overall we have partnered with the Florida Department of Environmental Protection to create a Golf BMP Manual, which covers all phases of golf course management including a chapter on irrigation. Your challenge is to practice those BMPs and improve your irrigation management program and document it so we can show our proactivity in water conservation. One step would be to take the new

voluntary Golf BMP certification exam to document your commitment to environmental stewardship.

Florida is not immune to the coming real or perceived shortages of water supplies. We do have access to more water than some regions in the country. In southern Nevada, Doug Bennett, conservation manager of the Southern Nevada Water Authority, says the annual rainfall averages one to four inches per year, and the average annual water bill for courses out there is around \$1 million a year! Forced by those kinds of numbers and the



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inception of the recent droughts, courses have converted more than 40 million square feet of non-essential turfgrass to water-efficient landscape designs. Collectively, these conversions are saving more than 2.2 billion gallons of water annually.

I leave you with this challenge: Make 2013 the year you begin to take water conservation very seriously. Make sure your club has a water conservation plan from the clubhouse to maintenance facility. Consider creating a drought plan for the course. Experiment with voluntary cutbacks in run times and map the course to show where you can easily and regularly cut back the amount of water used to keep the course in acceptable playing condition. You'll save money and water, which are both critical these days.



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