

STEWARDSHIP NOTES

Water Use Replaces Pesticides as Golf's Top Environmental Issue

By Shelly Foy



We sure have been talking a lot about water in Florida lately. First, we don't have enough; now some places have too much. It's a vicious cycle that unfortunately, will more than likely repeat itself every year.

Ten years ago, I would have said that the misconception of pesticide use on golf courses was the

greatest environmental concern we faced. I have since come to realize that the real danger for golf courses lies in water use. The bottom line is that there is only so much to go around.

There is a Scottish proverb that says, "We'll never know the worth of water till the well goes dry." And perhaps Benjamin Franklin was reading Scottish proverbs when he said, "When the well's dry, we know the worth of water."

I recently had an opportunity to read through Audubon International's updated "A Guide to Environmental Stewardship on the Golf Course," and there is some great information in this publication on water conservation. Jean Mackay, director of educational services for AI, has given me the okay to share some of the information from this publication with Florida Green readers.

Consider this:

- Though water use on golf courses varies widely depending on climate and other factors, an average golf course may use 10 to 30 million gallons of water per year. (USGA Green Section)
- Superintendents continually rank securing adequate irrigation water among their top concerns. (GCSAA)
- Given recent droughts and erratic weather patterns, adopting water conservation measures is essential for addressing public concerns, securing irrigation supplies, and saving this essential natural resource.

What can you do? Audubon International has a self-assessment checklist for water conservation. Read through the following information and "assess" yourself and your management practices as they relate to water conservation.

General Knowledge:

- Train employees to conserve water and make water conservation a priority in your management approach.
- Identify the water sources used for irrigation and drinking water.
- Know how to operate and manage the irrigation system properly.

Irrigation Equipment and Plumbing Fixtures:

- Irrigation system should be properly designed, correctly installed, and performance should be tested.
- Check irrigation system for proper water distribution in all irrigated areas at least once per year.
- Eliminate all non-target watering (e.g., sidewalks, ponds, habitat areas).
- Check all irrigation equipment daily, and maintain the system on a regular schedule.
- Fix leaks in a timely manner.
- Regularly maintain the pump station so that it is working efficiently.
- Update irrigation system, or components of the system (e.g., valves, sprinkler heads, nozzles, computer software), to reduce inefficiency and malfunction and reduce water use.
- Install part-circle irrigation heads where possible to save water.

Watering Practices and Turf Care

- Incorporate evapotranspiration rates or weather data into daily irrigation decisions.
- Avoid running the irrigation system at peak evapotranspiration times.
- Water "hot spots" to target needed areas only, rather than running the entire irrigation system during the peak of the day.
- Work to maintain an effective water cycle to maximize water absorption and reduce runoff and evaporation, including: maintaining soil cover, improving soil structure, adding or maintaining natural organic matter in the soil, and improving drainage to minimize runoff and maximize water penetration through soil layers.
- Reduce or eliminate irrigation on all unused or minimally used portions of the property.
- Monitor daily water use, tally monthly usage, and set targets for yearly improvement.
- Select turfgrasses on greens, tees, and fairways

that are appropriate for local climate and growing conditions.

So, how did you do? I have no doubt that most of you are already doing most of these things to conserve water. If you aren't, then you should be.

Additional information from this book that I found pertinent:

Keep Records

Monitoring your use of water and tracking yearly trends can help you gauge the success of water conservation efforts. Track water use via municipal usage records, information from a fully automated irrigation system, or estimates of the number of gallons used per cycle and per week. Tally the number of gallons used monthly and yearly. Use these records to set realistic conservation targets, detect trends, plan for drought, and promote your success.

Preparing For Drought

The most effective drought management plan is to implement water conservation measures in advance of a drought and on a long-term basis. Planning for drought before one strikes will allow you to mitigate its effects and reduce damage. Being prepared, coordinating conservation measures among staff of various departments of the golf course (grounds, clubhouse, resort amenities, etc.), and implementing a variety of conservation measures will go a long way toward mitigating the effects of drought. In addition to the information in this book, you can also refer to these websites for more information:

According to Audubon International's Managed Lands Survey of 2001, here's what has happened on golf courses since joining the Audubon Cooperative Sanctuary System:

- 60% reduced water costs
- 89% improved their irrigation system or the way that water is applied
- 69% decreased water usage
- Golf courses saved an estimated 1.9 million gallons of water per year per course since joining
- 86% increased efforts to monitor water quality
- 55% increased emergent vegetation in golf course ponds
- 45% instituted a contained wash off area, compared with just 23% prior to joining

What better incentive than that to get involved in the ACSP for Golf Courses?

So if you want to do your part in helping the environmental image of golf courses, make

water conservation your top priority. There is a great American Indian proverb that says, "The frog does not drink up the pond in which he lives."

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ACSP UPDATE

New ACSP Members

Airco Golf Club, Clearwater
Burnt Store Country Club, Punta Gorda
Country Club of Orlando, Orlando
Countryside Country Club, Clearwater
IGM - Tiger Point, Gulf Breeze
Links at Boynton Beach, Boynton Beach
WCI/Pelican Sound Golf Course, Estero
Sunnybreeze Palms, Arcadia

New ACSP Fully Certified Courses

Pelican's Nest Golf Club, Bonita Springs
IGM - Maple Leaf Golf and Country Club, Port Charlotte

FOR MORE INFORMATION

Quotes are from A Dictionary of Environmental Quotations, compiled by Barbara K. Rhodes and Rice Odell and published by the John Hopkins University Press of Baltimore and London.



Sun shining through a summer shower: two good reasons not to be running the irrigation system.

The water conservation information is from Audubon International's updated version of A Guide to Environmental Stewardship on the Golf Course, and can be purchased from Audubon International

Audubon International: 46 Rarick Rd., Selkirk, NY 12158; 518-767-9051; fax 518-767-9076;

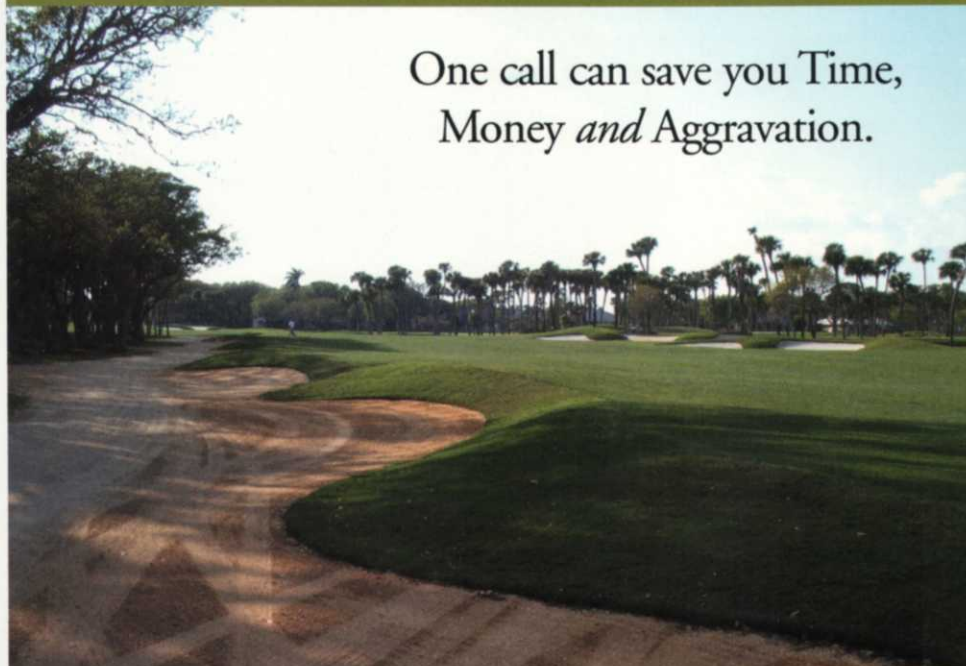
www.audubonintl.org.

EPA Office of Water: Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460; 202-260-2090; www.epa.gov/owm/drouhome.htm

GCSAA: Golf Course Superintendents Association of America, 1421 Research Park Drive, Lawrence, KS 66049-3859; 800-472-7878; fax: 785-841-2240; infobox@gcsaa.org
www.gcsaa.org/resource/drought.html
National Drought Mitigation Center: P.O. Box 830749, Lincoln, NE 68583-0749; 402-472-6707; fax 402-472-6614; www.enso.unl.edu/ndmc/
USGA Green Section: PO Box 708, Far Hills, NJ 07931; 908-234-2300; fax 908-234-9687; www.usga.org/green/index.htm

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