

# Converting Roughs to Save Water and Money

By Steve Beeman

**Editor's Note:** While this article focuses primarily on the highly relevant topic of water use and conservation, it seems obvious that, at a time when golf participation and revenues have been flat or falling, converting roughs to native areas is a logical way to reduce ongoing maintenance costs.

Water use has always been a concern for golf courses in Florida, and it is becoming an increasingly critical issue. Golf course superintendents will have to allocate irrigation resources to those areas of turf that are in play, and away from turfgrass rough that rarely sees a golf ball. Out-of-play turf acreage diverts water, money, chemical, and human resources from those parts of the golf course where the game is played.

In discussions with golf course superintendents around the state, I learned that there are fairly consistent costs associated with maintaining rough. Besides irrigation costs, the common expenditures include mowing (including equipment maintenance), fertilization, herbicide and pesticide. Depending on the price and availability of water, the annual cost to maintain an area of rough varies between \$2,000 and \$4,500 per acre, with an average in the \$3,000.00 range.

Golf courses with proportionately large acreages of rough must devote almost as much time, money, and people to those areas as to the fairways, tees, and greens.

A good example of the contrasts between golf courses with limited rough and those with excessive rough can be found in one place, at LPGA International in Daytona Beach. The Champions Course has 170 acres of rough, while the Legends Course has only 40 acres. Superintendent John Lammrish CGCS has been steadily converting out-of-play rough on the Champions Course to native grasses and other natural areas for the past several years.



Bridgewater GC in Lakeland. Native grass beds reduce water use and maintenance costs in the roughs. Photo by Joel Jackson.

A golf course in the median range of rough acreage is Venetian Bay in New Smyrna Beach (superintendent, Scott Eberly) with 104 acres. Examples of golf courses with minimal out-of-play rough include Old Memorial in Tampa (superintendent, Trent Inman CGCS) with 18 acres and Old Colliers Golf

Club in Naples (superintendent, Tim Heirs CGCS) with 35 acres.

The easiest and most logical places on a golf course to convert turfgrass rough to native plants or natural areas are the slopes, lake banks, and flats around tee boxes, where no golf ball should ever travel. Lake banks are especially attractive for conversion

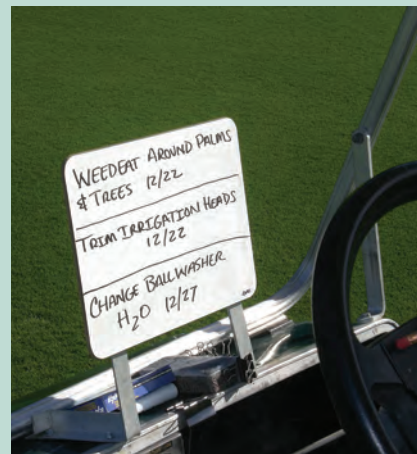
## SUPER TIP

### Portable 'To Do' Board for \$10

By Fred Fulford

The job board in the photo is a small dry-erase board. They cost about \$3 through any national office-supply chain. The markers and the eraser fit in the bracket base below the board. The brackets are scrap aluminum from the mechanic shop. Total cost is about \$10 or less, depending on how much you want to spend on markers.

I put sticky-backed Velcro on the brackets and board to make it removable and keep it in a small trash bag in the glove box in case of inclement weather. This proved to be a easy, inexpensive way to keep up with the constant flow of ideas and "To Do" jobs that come from an enthusiastic superintendent like Kyle Sweet.



A portable job board is a handy visible note pad and "To Do" jobs reminder list. Photo by Fred Fulford.

because they can be difficult to mow, fertilize, and treat chemically and because the establishment of native plants provides a natural filter around water bodies. Areas between greens and the next tee are also prime candidates for conversion, as are mounds and berms that border fairways or separate one hole from another.

Conversion from turfgrass rough may involve planting trees, shrubs, ornamental grasses, or ground covers. Native plants should be used wherever possible since they can survive with little or no irrigation, and the idea is to save water. Another option is to create sand or shell waste bunkers or mulch beds.

I must stress that native areas, whether planted, mulched, or waste bunkers, are not maintenance free. Once established, trees and shrubs require very little maintenance but the initial cost is fairly high. Native grass plantings should be cut back once or

twice a year, and may benefit from limited irrigation during drought periods. The clippings can be left in the plant beds as mulch. Waste bunkers will require some chemical control for weeds and mulch beds will periodically require mulch or pine straw replenishment.

An important factor in the decision to convert turfgrass rough to natural areas, besides water conservation, is balancing the initial cost with long-term savings and determining how much time will be required to recoup the conversion expenditures. Once that payback period has elapsed, the perpetual savings of time, money, and water will increase maintenance efficiency.

Converting an acre of turfgrass to trees or shrubs is the most expensive planting option, in the range of \$15,000.00 to \$25,000 per acre. The long term advantage is that eventually this option will probably not require

any maintenance. Planting native grasses can cost between \$3,000.00 and \$5,000.00 per acre, which represents a payback time of only one to two years, but also requires annual pruning.

This cost is extremely small, however, compared to turfgrass maintenance and supplemental water is rarely required. Establishing mulch or pine straw beds costs around \$20,000 an acre and about \$5,000.00 per year in material replacements. Waste bunkers cost around \$70,000 per acre to construct and \$1,000 to \$3,000 a year to treat for weed control.

Every golf course manager has to weigh the options regarding maintenance budgets, short- and long-term limitations on water, playability, and aesthetics. For many it may make sense to convert out-of-play turfgrass to something else. Others will not be able to justify the initial costs. For everyone, though, water is still the 500-pound gorilla in the closet.

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