

Naturalized Areas: Beauty and the Beast

Developing naturalized areas brings many benefits to the golf course, but beware, maintenance-free they are not!

BY JIM SKORULSKI AND JOHN FOY



Mowing, brush removal, and weed management practices used to keep naturalized areas in acceptable appearance and playing condition can be labor intensive and costly.

Naturalized areas have been an integral part of golf courses since the game was played on the Scottish linksland. Rough areas consisting of native grasses and gorse provided soil stabilization and a low-cost natural hazard. It is easy to understand how these areas influenced early golf course design in North America. Donald Ross himself mentions the virtues of natural areas with the following quote taken from the book *Golf Has Never Failed Me*: “In British courses, heather, whims, and bent grass are in many cases left growing in a diagonal formation, producing a remarkably interesting hazard.”

Naturalized grassland/prairie, savannah, scrubland, desert, woodland, and wetland ecosystems continue to be incorporated into new golf course designs and existing golf courses. The GCSAA reported that, on average, 23 percent of total acreage on golf courses is naturalized, while golf courses working with Audubon International have an average of 47 percent of their total acreage in naturalized habitats. These areas provide aesthetically pleasing and challenging design features, along with valuable wildlife habitat. They also offer an opportunity to reduce irrigation, mowing, and pesticide inputs in comparison to more

highly managed turf areas. There is a common misconception, however, that naturalized areas are maintenance free.

THE BEAST

The degree and type of maintenance used to manage naturalized areas vary widely among golf courses and depend on the ecosystems in place and the attitudes of the management and golfers. There are some universal tasks that are required to keep naturalized areas playable and visually acceptable. At the least, grassland/prairie systems require annual mowing in fall or spring, brush removal work, and selective

herbicide applications to keep out unwanted vegetation. More frequent mowing, mechanical thinning, and additional herbicide and insecticide applications may be required in areas that receive more play or are more visually prominent. Controlled burning is another management tool used periodically at some golf courses to maintain the integrity and plant composition in naturalized areas, and to thin excess vegetation. Naturalized scrubland, savannah, wetland, and woodland ecosystems require routine maintenance to remove weeds and exotic plants. The semi-naturalized native grass beds sometimes found over large acreages on golf courses in Florida and other semi-tropical regions also can be very labor intensive.

Superintendents from several New England golf courses estimate that labor costs for mowing naturalized acreage they manage range from \$50 to \$300 per acre. Labor to manually remove brush and weeds from naturalized areas ranges from \$30 to \$150 per acre, and \$20 to \$200 per acre is allocated for labor costs associated with chemical applications. Total labor costs at the golf courses surveyed range from \$260 to \$500 per acre, depending on the site and golfer expectations. Superintendents who manage naturalized scrubland areas in South Florida can spend \$1,200 to \$2,000 per acre to remove exotic plant material and manage dense vegetation in a 12-month season. Annual mulching and other weed management programs used in the upkeep of native grass beds can be as high as \$2,500 per acre.

THE BEAUTY

The challenge facing most golf courses is creating a balanced maintenance plan that satisfies the golfers and neighbors, while remaining affordable and sustainable. The process involves good long-range planning, continual education, and effective communication. Site selection significantly impacts management programs and cost. Difficult-to-



Site selection is a key factor for developing a sustainable management plan. Areas that receive more play or are visually prominent will require more frequent maintenance.



A steep naturalized tee bank is cut annually in fall at Dedham Country and Polo Club in Massachusetts.

maintain sites, non-irrigated acreage, and environmentally sensitive areas are well suited for naturalization. Consider an area's location in regard to play and traffic. Evaluate soil conditions, drainage, and existing plant materials to determine what the appearance and playing conditions will likely be, once the area is naturalized. Ultimately, there will be some areas that will be maintained more effectively with standard maintenance.

Develop an annual management plan for the naturalized acreage, just as you would for turfgrass areas. Categorize and map the naturalized zones in the plan, based on their location, habitat type, and maintenance needs. Prioritize maintenance based on the categories that are defined in the plan, and try to

limit intensive maintenance to smaller areas that receive more play or are located in highly visible locales. Areas further from play are managed in a more sustainable fashion, utilizing selective and rotational maintenance programs whenever possible. This management approach can further reduce management costs and encourage greater plant and habitat diversity.

Acceptance of a sustainable management approach may be difficult at some golf courses. A continuous educational process will be required to convince reluctant golfers that a little plant diversity is beneficial and can help trim management costs. It also will require managers to gain more extensive knowledge of habitat ecology

to manage the various habitats in an efficient and effective manner. Conservation organizations such as Audubon International, agencies like the National Resource Conservation Service, and local university specialists or extension agents can provide support and guidance in regard to specific management options and golfer education. Naturalized areas are not maintenance free, but with proper planning and a realistic management approach, they can be a valuable golf course asset that just may put more money in the bank.

JIM SKORULSKI and JOHN FOY are well-seasoned Green Section agronomists who enjoy promoting the creation of naturalized areas on golf courses in the New England and Florida Regions.



Proper plant material selection is a key consideration in developing naturalized areas and controlling ongoing maintenance costs.