

Naturalizing Areas Helps Maximize A Limited Water Supply

Cape Cod National Golf Club
Eric Strzepek, superintendent

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Issue

Cape Cod National Golf Club is an 18-hole golf course located in Brewster, Massachusetts. The daily water allocation permit allows the golf course to pump 100,000 gallons of groundwater per day. However, the combination of sandy native soil, 40 acres of fairway turf and large maintained rough areas meant that the irrigation requirements at Cape Cod National often exceeded the daily water allocation during extended periods of summer drought. At times, Cape Cod National was forced to severely reduce, and even suspend, irrigation for some fine turf areas. This caused noticeable turf loss and affected playing conditions.

Action

To address this issue, Cape Cod National had to find a way to reduce water usage and focus irrigation on the primary playing areas. Superintendent Eric Strzepek proposed eliminating irrigation from approximately 15 acres of maintained rough and converting those areas to naturalized fine fescue that would not require irrigation. The areas converted would have a limited impact on play but a significant impact on water use.

The rough areas identified for conversion already had high populations of fine fescue, but there were other grasses mixed in that would not perform well in a naturalized area. The first step in the conversion process was applying a selective herbicide to remove Kentucky bluegrass and perennial ryegrass. Then, in early fall, the areas were aerated and verticut in two directions to prepare the seedbed. A seed mix containing hard fescue and sheep's fescue was broadcast at 2 pounds per 1,000 square feet and dragged into the surface. The irrigation heads in the converted rough areas were used to aid in establishment and then removed once the fine fescue was fully established the following year.

Results

The project has been a huge success on many levels. The rough conversion contributed to a 4-5 million gallon reduction in annual irrigation and has made more water available for primary playing areas, which has helped address

daily limitations on water use. The conversion also reduced nitrogen fertilizer usage in the roughs by 50 percent. Reduced mowing has decreased annual fuel consumption by 10 percent and has allowed the maintenance department to reallocate labor to other areas of the golf course. Wildlife activity on the golf course has also increased, with foxes and various raptor species frequenting the naturalized areas. The rough conversion project has also encouraged golfers to play from tees that are further forward, which helps them negotiate the carries over naturalized areas. Course officials hope that the increased use of the forward tees will make the course more enjoyable for many golfers and faster to play.

In all, converting maintained rough to naturalized areas was an inexpensive way for Cape Cod National to get the most from a limited water supply and to make golf course operations more sustainable.



Converting irrigated roughs into non-irrigated naturalized areas has saved water, improved playing conditions and enhanced wildlife habitat.