USGA Green Section best management practices case study



Installing sand channel drainage in a poorly drained fairway improved playing conditions and turf health and greatly reduced cart restrictions.

SAND CHANNEL DRAINAGE IMPROVES FAIRWAY CONDITIONS

Idle Hour Country Club | Lexington, Ky. 40502 Clay Stewart, superintendent

ISSUE

A lack of fairway slope, soils that drain slowly, and pond levels that are only 6 inches below the playing surface created significant drainage issues on the fourth fairway at Idle Hour Country Club. An average rain event would create saturated conditions that necessitated closing the fairway to cart traffic for an extended period. Poor drainage also meant that playing conditions on that fairway were often soft and turf health was negatively impacted. Improving drainage on the fourth fairway was a priority for Superintendent Clay Stewart.



ACTION

Options were explored to improve the fairway's internal drainage or alter the elevation of the fairway to create positive surface drainage. Ultimately, it was decided that sand channel drainage would be installed to increase internal drainage. Idle Hour had successfully used sand channel drainage to improve internal drainage on their putting greens; the system would be the same in the fourth fairway except that there would be a larger spacing between laterals.

Favorable weather during February of 2017 provided an opportunity to complete the project without disrupting play. Lateral drain lines were installed throughout the fairway using 2-inch perforated pipe on 10-foot centers. Each lateral was connected to a 4-inch trunk line which outflows into the pond adjacent to the fairway. Lateral drain lines were backfilled with a free-draining sand and the sod that was removed to install the drain lines was replaced in its original location.

RESULTS

Installing sand channel drainage on the fourth fairway at Idle Hour has been a tremendous success. For the first time in 10 years, the fairway has not been closed to cart traffic because of wet conditions. During a period with minimal rain, isolated dry areas developed because the drain lines were so effective.

Golfers were pleased to find the firmness on the fourth fairway was now more consistent with the playing conditions found throughout the golf course. Golfers of all skill levels are enjoying the extra roll on their tee shots and a water hazard crossing the fairway at approximately 280 yards from the back tee has become a more important strategic consideration.

The success of the sand channel drainage project at Idle Hour Country Club shows that providing an outlet in soils that drain slowly will have a positive impact on playing conditions and turf health. Based on the success of this project, Idle Hour plans to install sand channel drainage in other problematic areas.