USGA CASE STUDY

Best Management Practices Resource Management

Irrigation: Better Precision with More Irrigation Heads

Chevy Chase Club Dean Graves, CGCS, superintendent Chevy Chase, Md.

The Problem

Chevy Chase Club has perennial ryegrass and tall fescue roughs adjacent to creeping bentgrass fairways. The water requirement of the rough is significantly different from the water requirement of the low-cut fairways. Additionally, disease pressure during summer is greater on the perennial ryegrass than on the creeping bentgrass. Unless the different grasses are managed based on their specific needs, the possibility for turf decline increases.

The inability to irrigate the rough independently of the fairways led to overly saturated fairway playing conditions. Dean Graves, CGCS, superintendent at Chevy Chase Club, tried to find a balance of irrigation that would maintain firm, healthy fairways and uniform rough, but the result was drought-stressed rough. Site-specific hand watering worked during stressful times of the summer, but ultimately it was determined that continually hand watering rough was not economically feasible.

The Solution

Grave's solution was to upgrade the irrigation system by installing part-circle sprinkler heads, allowing for the independent watering of rough and fairway areas. Chevy Chase Club hired an irrigation contractor to design the upgrades to the irrigation system, install the additional sprinkler heads and wire each sprinkler head to the central control computer. The upgrades to the irrigation system provided individual sprinkler head control, which allowed the staff to more precisely irrigate and syringe rough areas.

The Results

Although reduction in water use was minimal, Graves reports an increase in rough quality because of the improved precision of the irrigation system. The improved turf conditions also have reduced the amount of seed and/or sod required to repair damaged areas of rough each fall. The improved irrigation design also reduces disruption to play, as it is no longer necessary to use full-circle sprinkler heads in fairways to water the rough. The ability to apply water only where needed keeps the roughs dense and uniform. Most importantly, the turf is healthier and more tolerant of stresses like traffic, diseases and insects. Ultimately, the result is healthier turf that is more sustainable in the future.

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Chevy Chase Club installed 40 sprinkler heads to water trouble areas in the rough independently of fairways; allowing the staff to reallocate resources that were previously spent hand watering drought-stressed areas.

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