Best Management Practices for Increasing Water Use Efficiency in Minnesota Lawns

Brian Davis, Ph.D., P.G. P.E., Senior Engineer, Metropolitan Council

Shane Evans, M.S., Lawn Water Conservation Educator, University of Minnesota

Best management practices such as proper turfgrass species selection, adjusted mowing heights, and improved watering schedules can reduce water use without sacrificing lawn quality. Many consumers are unaware of turfgrass species that require fewer maintenance inputs including mowing, fertilizers, and water. Furthermore, new irrigation technologies are designed to apply water more efficiently by using real-time environmental data such as precipitation, evapotranspiration and soil moisture. These technologies can be easily integrated into existing irrigation systems.

We are currently:

a. Evaluating the drought resistance of consumer-available turfgrass seed mixtures under prolonged drought, and
b. Evaluating the water savings of smart irrigation controllers.

Our results show that seed mixtures containing tall fescue or fine fescues remain green for a longer period than other products containing species that have traditionally been used for Minnesota lawns. Using smart irrigation controllers and soil moisture sensors significantly reduces water use without negatively affecting turfgrass quality. These findings support the use, and necessity, of these best management practices in increasing water use efficiency in Minnesota lawns.