

Warm winter with no snow cover could increase desiccation damage
January 17, 2014

The warm and windy weather with rare snow cover so far this winter is increasing the chance for desiccation damage in cool-season turf on lawns, sports turf, and golf courses. Desiccation occurs when the roots cannot supply enough water to the dormant/semi-dormant plant to keep up with the amount of water lost through the leaves and crowns. Any environmental factor that increases water loss will increase desiccation damage. The recent warm temperatures increase evaporation from the plant and soil surface, and water loss is magnified by high winds. Desiccation injury is usually greatest on exposed or elevated sites (Fig. 1), with high sand concentrations (low water holding capacity) in the soil profile, and/or areas where surface runoff is great. Winter desiccation injury to turfgrass is common in Nebraska and the north central US when snow cover is not maintained throughout the winter. Over the long term, windbreaks can help to slow the wind across an area and encourage longer snow cover. In the short term, a wide variety of turf covers, from fabrics to snow fences to late-season topdressing can help prevent desiccation. Rainfall late into the fall helps reduce desiccation damage (not with this year's dry fall in Nebraska and the North Central states). Winter irrigation where feasible can help maintain plant and soil moisture and also minimize damage from desiccation. As we stand now in Jan. 2014, we would recommend irrigation if possible to help reduce potential damage on exposed greens, and perhaps on tees or other high value turf like sports fields.

For more information on the complexities of winterkill, refer to the March 8, 2011 Turf iNfo at <http://turf.unl.edu/pdfctarticles/march%20winterkill.pdf>

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Figure 1. Likely desiccation damage on elevated portions of a green in Mitchell, NE, from Spring 2013 (Courtesy of Jim Schild).