

Species: Fall Dropseed Muhly (*Muhlenbergia uniflora*)
Global Rank: G5
State Rank: S2
Climate Change Vulnerability Index: Extremely Vulnerable
Confidence: Very High

Habitat:

Fall dropseed muhly is a boreal species found in northeastern North America and British Columbia with its western limit in the United States being Minnesota. The species southern extent is northern Pennsylvania and New Jersey (NatureServe 2011). In Pennsylvania, fall dropseed muhly rarely occurs at higher elevations in marshes, bogs, and sandy roadsides (Rhoads and Klein 1993; Rhoads and Block 2007).

Current Threats:

Habitat loss and hydrological alteration are two major threats to this species.

Main Factors Contributing to Vulnerability Rank:

Distribution relative to natural barriers: Fall dropseed muhly is found in isolated wetlands in Pennsylvania that are surrounded by extensive forests that would likely serve as a barrier against movement to new locations.

Predicted micro sensitivity to changes in temperature: Fall dropseed muhly occurs in microsites/microhabitats towards the cooler end of the spectrum.

Predicted macro sensitivity to changes in precipitation, hydrology, or moisture regime: Within the species range in Pennsylvania, the species has experienced a small precipitation variation in the past 50 years.

Predicted micro sensitivity to changes in precipitation, hydrology, or moisture regime: Fall dropseed muhly is a wetland obligate plant that has moisture requirements that will likely change as a result of climate change effects.

Interspecific interactions: Like many of the plants in the Poaceae family, fall dropseed muhly probably requires mycorrhizal associations for survival (Hossler 2010).

References:

Hossler, K. 2010. Nutrient cycling and the role of arbuscular mycorrhizae in created and natural wetlands of central Ohio. Ph.D. dissertation, The Ohio State University.

NatureServe. 2011. NatureServe Central Databases. Arlington, Virginia. USA.

Rhoads, A. and T. Block. 2007. *The plants of Pennsylvania*. 2nd Edition. Philadelphia. University of Pennsylvania Press.

Rhoads, A. and W.M. Klein. 1993. *The vascular flora of Pennsylvania annotated checklist and atlas*. American Philosophical Society, Philadelphia, PA.