

Species: Mud Sedge (*Carex limosa*)

Global Rank: G5

State Rank: S2

Climate Change Vulnerability Index: Extremely Vulnerable

Confidence: Low

Habitat:

Mud sedge is a boreal species found in North America from Labrador and Newfoundland to Alaska and extends south to Delaware, Iowa, Wyoming, and California (Gage and Cooper 2006; NatureServe 2011). In Pennsylvania, mud sedge rarely occurs at higher elevations in open, sphagnum bogs on sphagnum hummocks or as part of the floating mat community (Rhoads and Klein 1993; Gage and Cooper 2006; Rhoads and Block 2007).

Current Threats:

Habitat loss and habitat degradation (e.g., altered hydrological regime) are two major threats to this species.

Main Factors Contributing to Vulnerability Rank:

Distribution relative to natural barriers: Mud sedge is found in isolated wetlands in Pennsylvania that are surrounded by extensive forests that would likely serve as barriers against movement to new locations.

Predicted micro sensitivity to changes in temperature: Mud sedge occurs in mostly high elevation sites 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 slightly smaller than average precipitation variation in the past 50 years.

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

References:

Gage, E. and D.J. Cooper. 2006. *Carex limosa* L. (mud sedge): a technical conservation assessment . [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/carexlimosa.pdf> [Accessed May 2011].

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