

Species: Lesser panicled sedge (*Carex diandra*)
Global Rank: G5
State Rank: S2
Climate Change Vulnerability Index: Highly Vulnerable
Confidence: Moderate

Habitat:

Lesser panicled sedge is most often found in open peatlands/fens, shores and seeps in Pennsylvania. Soils are generally saturated, shallow organic or mineral and water is acidic to circumneutral and low in nutrients. The species requires at least intermediate amounts of light.

Threats:

Lesser panicled sedge is tied to the persistence and functionality of the wetland habitats where it is found. Therefore, perturbations (such as beaver activity, logging, and road construction) that affect the hydrology and quality of the habitat will most likely also threaten the lesser panicled sedge (Gage and Cooper 2006).

Main Factors Contributing to Vulnerability Rank:

Dispersal Ability: No studies have directly detailed the dispersal biology of lesser panicled sedge but it is likely that several dispersal agents are important including wind, water, and animals (Gage and Cooper 2006). Short distance dispersal within the home habitat (via wind or water) may be more plausible than long distance dispersal (via animals) between peatlands/fens.

Predicted micro sensitivity to changes in temperature: This species is found in high elevation wetlands.

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: Lesser panicled sedge is moderately dependent on wetland habitat that is highly vulnerable to loss or reduction with climate change and the expected direction of precipitation change is likely to reduce the species' distribution, abundance, or habitat quality.

Additional Information:

Species is at the southern end of its range (also in mountains of Maryland), which suggests it is a cold-limited species that may retreat northward.

Literature Cited:

Gage, E. and D.J. Cooper. 2006. *Carex diandra* Schrank (lesser panicled sedge): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain region. Available: <https://www.fs.fed.us/r2/projects/scp/assessments/carexdiandra.pdf>