The Nature Conservancy

Ordway-Glacial Lakes & Lac qui Parle

Climate Adaptation Plan

Contributors:
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Overview

770 mi² | Minnesota

The Ordway-Glacial Lakes and Lac qui Parle landscapes lie in western Minnesota, where prairie meets forest.

The Ordway-Glacial Lakes (OGL) landscape is a **diverse mosaic of forests, savannas, and grasslands**. Shaped by the retreat of Illinoian and Wisconsinan glaciers, the area features moraines and depressions formed by melting ice blocks, creating the rolling terrain seen today. These ecosystems evolved with fire set by Native Americans, primarily the Očhéthi Šakówiŋ, whose ancestral homelands include this region.

Lac qui Parle (LQP) lies within the northern tallgrass prairie ecoregion along the border of western Minnesota and eastern South Dakota, where the **Minnesota River** bisects the land. The majority of the area has high biodiversity and high connectivity in TNC's Resilient and Connected Network.

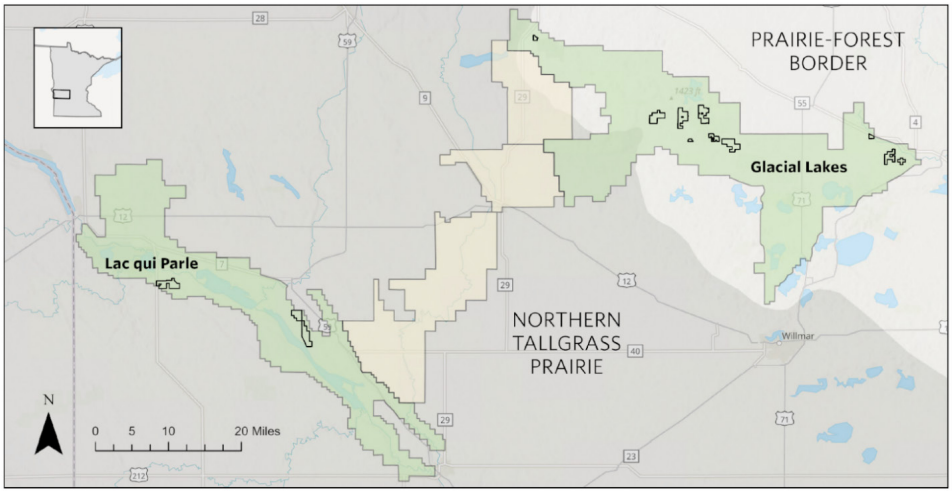

Fig. 1. Glacial Lakes and Lac Qui Parle geographic areas outlined (in green) and the corridor (in beige) from the Minnesota Prairie Conservation Plan. Colors do not represent landcover type.

Both areas face **threats from land conversion** to agriculture and energy development, invasive species and climate change. However, climate change can present opportunities to **adapt management in innovative ways** that boosts biodiversity—for example, shifting controlled burn timing to promote different species.


Bobolink


Downy gentian


Pasque flower


Henslow's sparrow

Climate Impacts & Projections

Already observed trends:

Minnesota's annual average temperature has warmed by 2.5°F since the beginning of the century, driven largely by rising winter and minimum nighttime temperatures. Annual precipitation has also increased, with wetter winters and springs and more frequent heavy rainfall events (6+ inches), which have been 2-3 times higher since 2000.

Future climate projections:

By century's end, winter minimum temperatures could rise from 11°F to 15°F, and the growing season may lengthen by nearly two weeks. Increased winter and spring precipitation, along with large rainfall events, are expected. Summer droughts may become more common and the number of high-risk fire days are expected to increase.

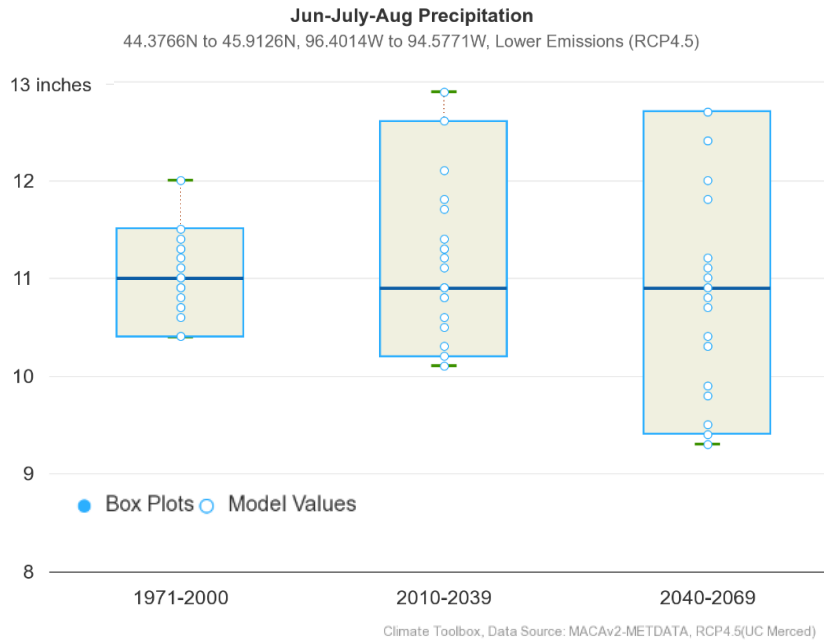

Fig. 2. Average summer (Jun, Jul, Aug) precipitation for the Glacial Lakes and Lac Qui Parle area under a lower emissions scenario (RCP 4.5) for recent historic, current and mid century time periods (Hegewisch and Abatzoglou 2023).

Climate Adaptation & Conservation Strategy

Our vision is a socio-ecological system where diverse partners collaborate to restore and protect functioning **landscapes that support biodiversity and nature-based livelihoods**. By 2030, we aim to improve the size, diversity, and ecological function of grasslands, wetlands, woodlands and aquatic habitats by working with partners and community members.

Key conservation and climate adaptation strategies are summarized below. For the full plan with detailed objectives and metrics, contact mahlering@tnc.org.

1 Maintain and increase plant diversity and ecosystem connectivity

Example tactics:

- Shift prescribed burn seasons to align with changing precipitation patterns.
- Educate staff and landowners on identification and eradication of invasive species.
- Promote economic opportunities for seed harvest, birding, or recreational tours.

2 Enhance habitat for native wildlife biodiversity on public and private lands

Example tactics:

- In OGL, create wetland habitat by breaking tile drainage, plugging ditches and scraping. Open wetlands by conducting cattail control and burning.
- Promote species that support disturbance benefits and a heterogeneous vegetation structure.

3 Support nature-based livelihoods and cultural values

Example tactics:

- Replant wild rice in culturally and ecologically appropriate locations.
- Encourage foraging on conservation lands.
- Develop new or use existing grassbank programs for grazing lands.

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Photos: Ordway Prairie Preserve © Richard Hamilton Smith; Bobolink © Chris Helzer; Downy gentian © Peter Gorman; Pasque flower © Chris Helzer; Henslow's sparrow © Mike Ross

Find climate adaptation plans for all of our priority landscapes at **nature.org/mnclimate**.