

Resilient and Connected Network: Overview

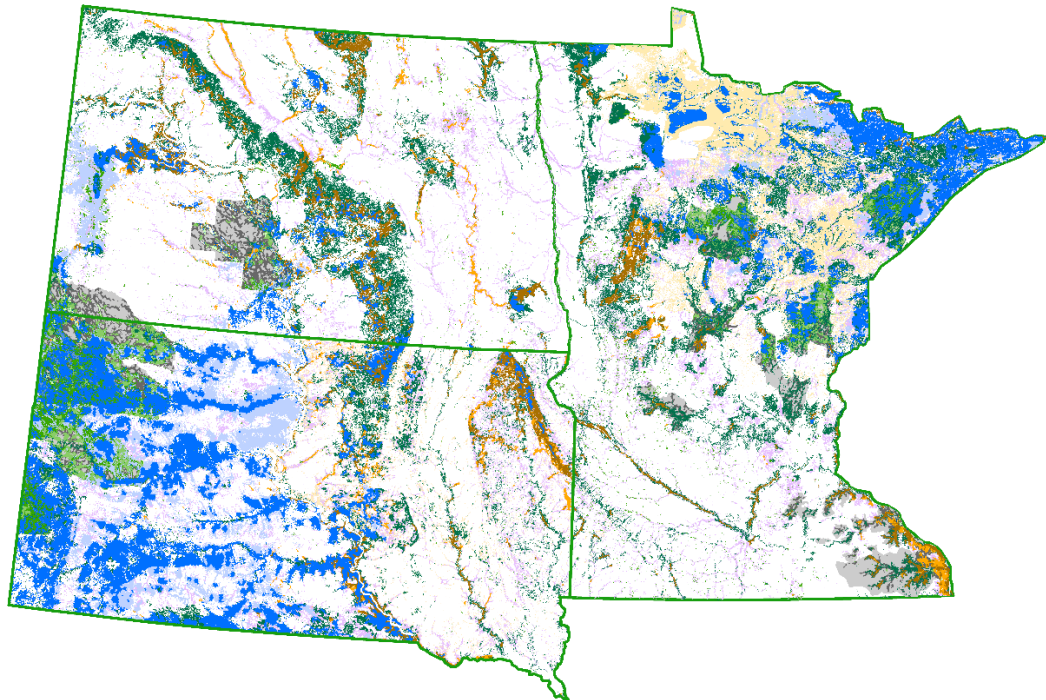
Minnesota, North Dakota and South Dakota



Nature is on the move as warmer temperatures, increased flooding and other climate impacts alter and destroy habitat, forcing species to search for new places to live. As nature faces growing threats, so do people who rely on healthy lands and waters for food, jobs and quality of life. With non-government, government and academic partners, scientists at The Nature Conservancy have identified and mapped a network of lands across the United States with unique topographies, geologies, and other characteristics that can withstand climate impacts, called the **Resilient and Connected Network**. This roadmap of “natural highways and neighborhoods” shows where plant and animal species have the best chance to move away from growing climate threats and find new places to call home.

The Resilient and Connected Network is based on three factors:

- 1) **Resilient Sites:** Sites with connected microclimates representing all physical environments therefore supporting a diversity of plants and animals as they respond climate change
- 2) **Confirmed Biodiversity:** Sites recognized for their current biodiversity values
- 3) **Climate Flow:** Corridors or flow zones that facilitate plant and animal movement for climate adaptation



- Resilient Land with Confirmed Biodiversity** – contains known locations of rare species or unique communities
- Resilient Land: Secured** – contains many connected micro-climates
- Climate Flow Zone** – areas with high level of plant and animal movement that is less concentrated than a corridor
- Climate Flow Zone with Confirmed Diversity** – a climate flow zone with known locations of rare species or unique communities
- Climate Corridor** – narrow conduit in which movement of plants and animals becomes highly concentrated
- Climate Corridor with Confirmed Diversity** – a climate corridor with known locations of rare species or unique communities
- MN-ND-SD Potentially Resilient Lands Additions** – additions of local knowledge about confirmed biodiversity not included in broader analysis
- MN-ND-SD High Resilience Land Additions** – areas of land with high resilience added to fill in gaps based on local knowledge
- MN-ND-SD Climate Flow Additions** – additions of local knowledge to fill in known connectivity and ecosystem functionality not captured in broader analysis

Resilient and Connected Network: What's New? Minnesota, North Dakota and South Dakota

The **Resilient and Connected Network** (RCN) is a tool developed by The Nature Conservancy and many partners to achieve an ambitious vision for land protection: to *conserve a network of resilient sites and connecting corridors that will sustain North America's natural diversity by allowing species to adapt to climate impacts and thrive*. Here's how the work touches down in Minnesota, North Dakota and South Dakota including what's new and what's next in the development of this tool.

Where do I find data for Minnesota, North Dakota and South Dakota?

A team of Conservancy staff from states within the central US reviewed the RCN tool and augmented the results with local data and knowledge from Minnesota, North Dakota and South Dakota. In addition, the team considered how to implement our work collaboratively within TNC and with partners. Partners can view and download these local augmentations to the RCN, see the links below.

Will there be a Resilient and Connect Network created for freshwater resources?

The current RCN focuses on terrestrial systems and species. However, Conservancy scientists have taken the first step to identify freshwater sites that are likely to provide the best opportunities for biological resiliency in the face of climate change. The good news is that the Conservancy has secured funding and is currently developing the first comprehensive assessment of resilient freshwater networks across the US to complement the terrestrial resilience mapping. The results will allow conservationists to coordinate their efforts and strategies to sustain freshwater diversity that provides essential services for people and nature. In the interim, Conservancy staff in the central US have mapped initial freshwater resilience priorities, see the links below.

Forest Restoration and Resilience Plan for Minnesota

The Conservancy's Forest Team in Minnesota is currently developing a suite of tools to engage natural resource professionals in development of a forest restoration and resilience plan for Minnesota to prioritize forest restoration investment. Combining the RCN with several other data sets and LiDAR-based analyses, the team is working to provide a new mapping approach to identifying priority restoration landscapes and corridors that have the greatest opportunity to secure long-term forest resilience and productivity across all ownerships. These tools can inform efforts to achieve increased return on restoration investment while accelerating on-the-ground restoration in the highest priority areas.

Data Links and Resources

[Resilient and Connected Network Online Mapping Tool](#)

[Downloadable Data for Resilient and Connected Network with **Minnesota** Augmentations](#)

[Downloadable Data for Resilient and Connected Network with **North Dakota** Augmentations](#)

[Downloadable Data for Resilient and Connected Network with **South Dakota** Augmentations](#)

[Report: Resilient and Connected Landscapes for the Central US. \(aka Great Plains\) \(RCN Analysis\)](#)

[Report: Resilient Sites for Terrestrial Conservation in the Great Plains \(Analysis underlying RCN\)](#)

[Report: Resilient Sites for Terrestrial Conservation in the Great Lakes and Tallgrass Prairie \(Analysis underlying RCN\)](#)

[Research Article: Estimating Climate Resilience](#)

[Research Article: Conserving Nature's Stage](#)

The Nature Conservancy in Minnesota, North Dakota and South Dakota Last updated September 2020