The Nature Conservancy
Minnesota Field Office
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Minneapolis, MN 55415

Date: May 19, 2022
To: Mr. Jacob Frie, Environmental Services Supervisor
Melissa Barrick Crow Wing SWCD Manager

Attn: Mississippi River-Brainerd Watershed One Watershed One Plan Work Group
RE: Invitation to submit priority issues and plan expectations for the Mississippi River-Brainerd One Watershed One Plan

Mississippi River-Brainerd Planning Work Group,

Thank you for the work that you and all the other members of the Mississippi River-Brainerd Watershed One Watershed One Plan (1W1P) Planning Work Group have and continue to put into this watershed-based planning in Minnesota. The Nature Conservancy (TNC) appreciates the opportunity to highlight data that we hope the Mississippi River-Brainerd Watershed 1W1P will consider utilizing for prioritization as well as the management issues that we feel the Mississippi River-Brainerd Watershed 1W1P process and resulting plan should address.

The Mississippi River-Brainerd Watershed is the traditional ancestral and current home of the Dakota and Ojibwe peoples, including the modern-day Mille Lacs Band of Ojibwe. The westward migration of the Ojibwe peoples in the mid-1700s from the Atlantic coast led Dakota peoples to leave the area, though many Dakota burial mounds and important cultural sites remain within the watershed.

Expanding European colonization brought decades of treaties and forced land cession. There are three major land cession treaties that overlap with the land of the Mississippi River-Brainerd Watershed (Figure 1). The first treaty between the Ojibwe and the U.S. government in what is now Minnesota occurred in 1837. The treaty ceded land in exchange for cash, goods, and services. Under this treaty, the Ojibwe people retained their right to hunt, fish, and gather on ceded land. The second land cession treaty in this watershed occurred in 1847. In this series of treaties, the Ojibwe ceded land to create a buffer zone to separate them from the Dakota. The U.S. government purchased the land from the Ojibwe and ceded it to the Ho-Chunk and Menominee people. Eventually this land was ceded back to the U.S. government. The third land cession treaty that impacts this watershed occurred in 1855. This treaty was signed between the U.S government and the Ojibwe. It ceded all of north-central Minnesota and in return

promised annuity payments for the Ojibwe after the collapse of the fur trade. It also created reservations with the goal of forcing the Ojibwe away from Indigenous lifeways towards farming on land plots (Figure 2). This treaty essentially removed the Ojibwe people from the Mississippi River - Brainerd Watershed with the establishment of the Mille Lacs Reservation (Figure 3). The 1862 U.S.—Dakota War nullified all treaties between the United States and the Dakota tribes, forcing the removal of Dakota peoples from the state. The 1863 Treaty, following the war permitted the Ojibwe people to remain on their reservation near Lake Mille Lacs, but much of the land granted in previous treaties was taken away from the reservation. Treaty rights to use the ceded land for hunting, fishing, and gathering were contested continually until the 1990s with several court cases, eventually resulting in the 1837 treaty being upheld in 1999. The tribe retains hunting, fishing, and gathering rights in this area. While courts uphold these tribally reserved treaty rights, tribal land use is still very restricted, requiring licenses, permits, and monitoring in all activities.

We hope to approach the management of this watershed in ways that are respectful of Tribal sovereignty, guided by Tribal interests and cultural considerations, and supportive of Native treaty rights.

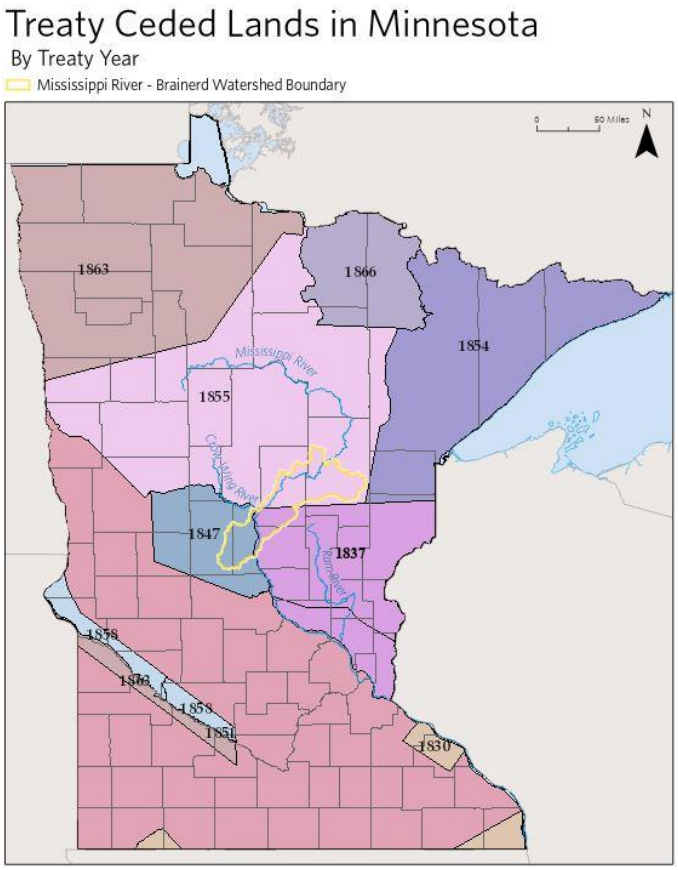

Figure 1: Treaty ceded lands in Minnesota that impact the Mississippi River-Brainerd Watershed.

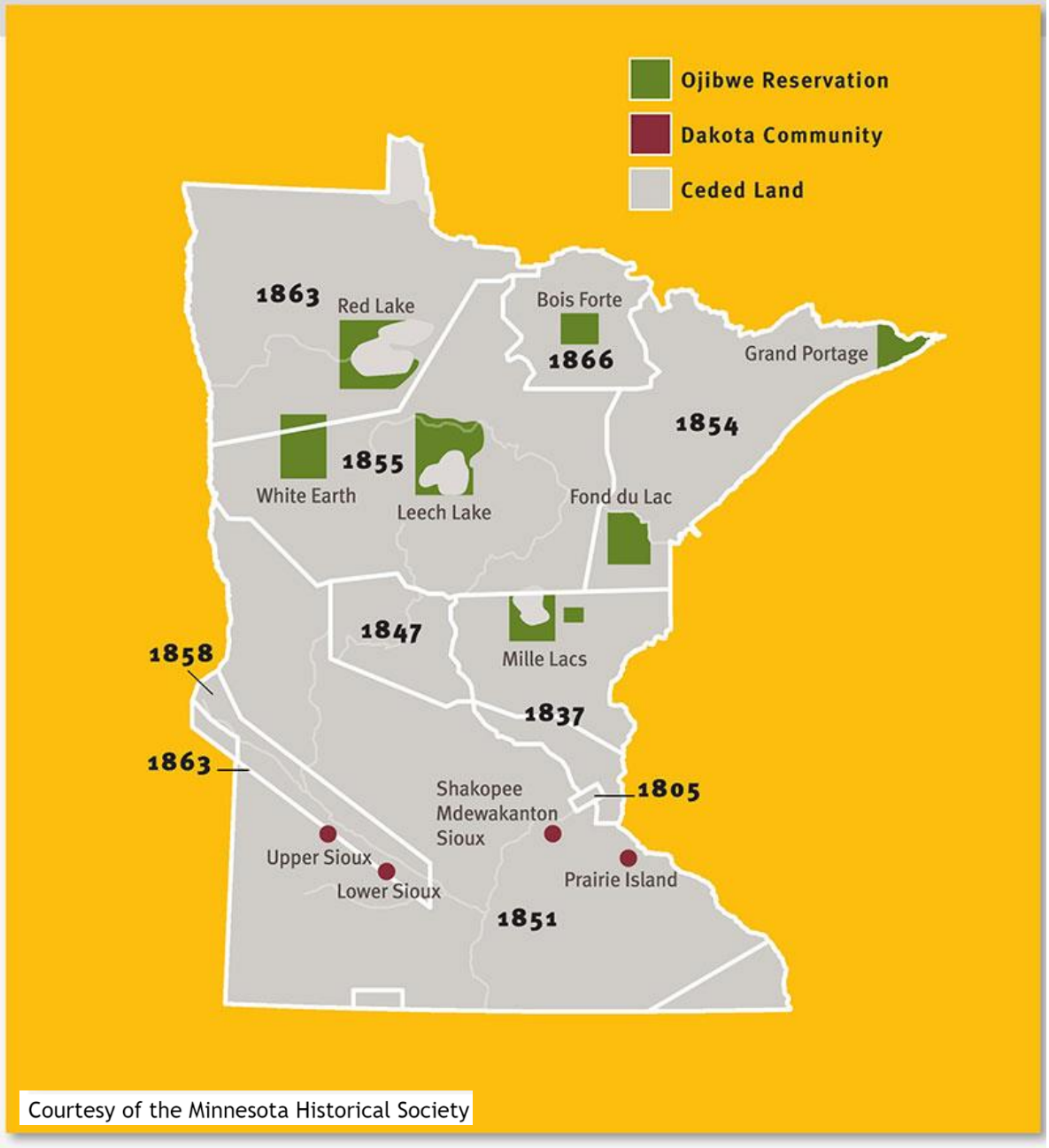

Figure 2: Treaty ceded lands in Minnesota with current Ojibwe Reservations and Dakota Communities.

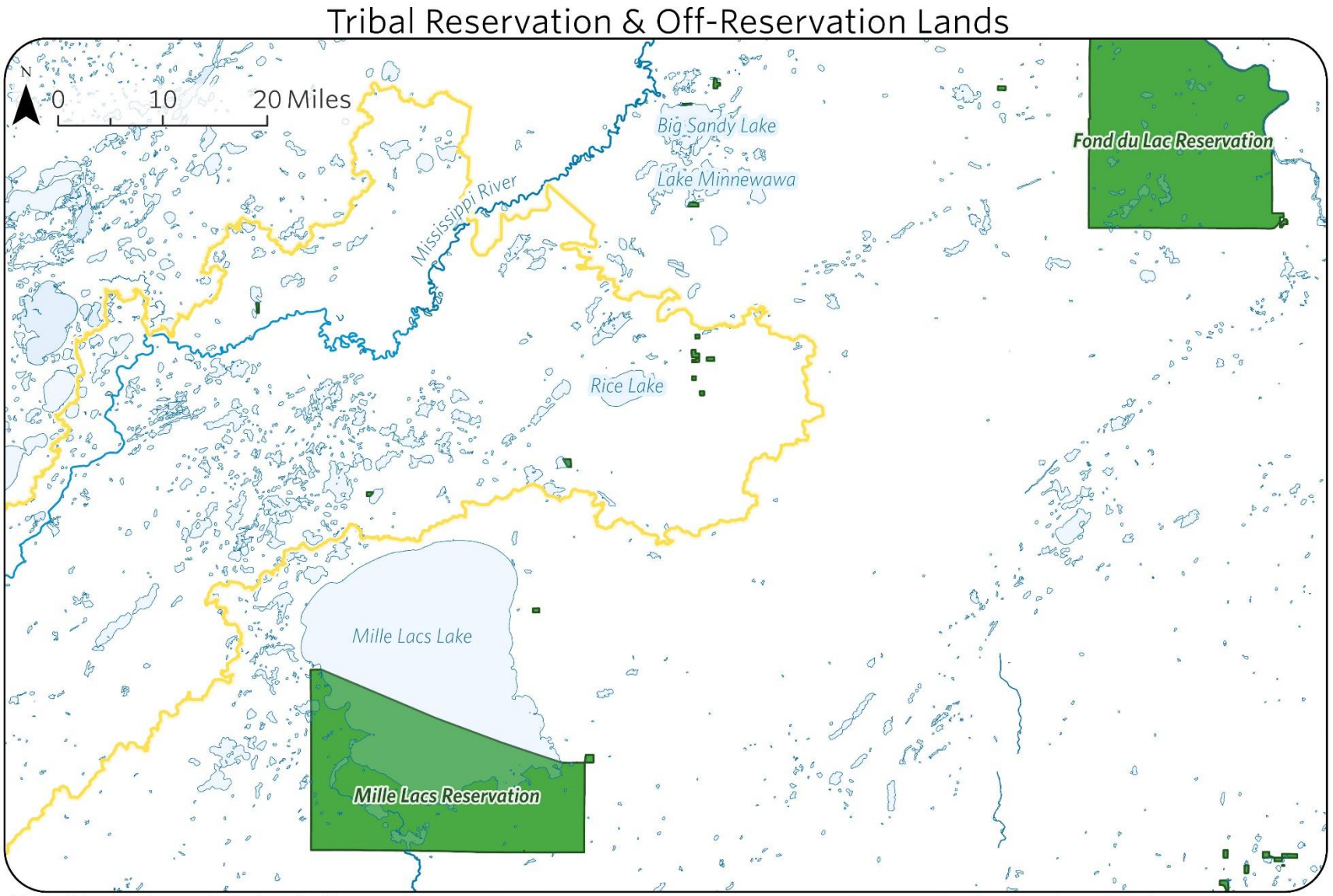

Figure 3: Reservation and off-reservation lands in and near the Mississippi River-Brainerd Watershed.

The Mississippi River-Brainerd Watershed is within the Mississippi River Headwaters Basin, which is one of TNC's highest priority watersheds. We value the Mississippi River Headwaters due to its importance for drinking water, for the critical habitat it provides, for its cultural significance, and for the recreational opportunities it allows. Additionally, because the Mississippi River Headwaters is currently in relatively good health but is at a high risk of becoming impaired, we know that it is critical to act now while it's less expensive and the feasibly of improvement is still likely. We recognize the importance of protecting and restoring the mainstem of the Mississippi River and its watershed, due to the multiple benefits that it provides.

Another reason the Mississippi River-Brainerd Watershed is a high priority of TNC is because it supports wild rice, or Manoomin/Psiŋ (Ojibwe/Dakota names, respectively). Wild rice is a keystone species in the watershed, providing food for many species of fish and waterfowl. The harvest of natural wild rice is protected under the retained treaty rights of Ojibwe people and has immense cultural, nutritional, economic, and ecological importance. Wild rice has experienced significant declines across its historic range. Changes in land use, hydrology, water quality, and climate add to the cumulative stressors facing the watersheds that sustain wild rice. Within the Mississippi River-Brainerd Watershed there are currently 91 DNR-identified wild rice waters (Figure 4). Of these, 12 are listed as part of the state- and tribally-designated 350 most important wild rice waters. TNC has long recognized the importance of native wild rice as a conservation target, significant ecological and cultural resource, critical sustainer of wildlife habitat, and a key indicator of watershed health. We urge the collaboration with local tribes for increased monitoring, the expansion of restoration, protection of water quality, management of environmental flows, and mitigation of threats to preserve and restore native wild rice as part of this planning effort.

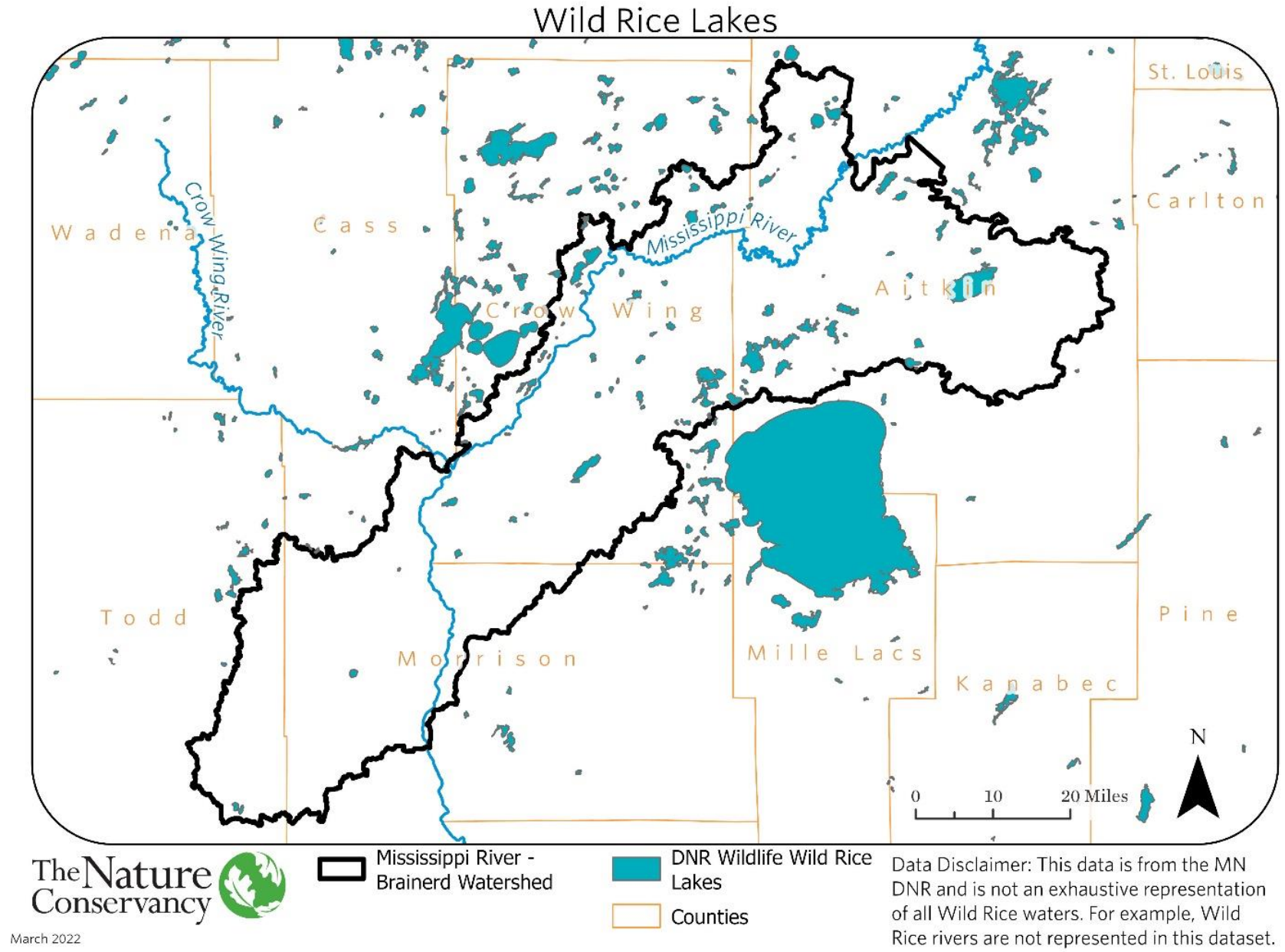

Figure 4: Wild rice waters within and around the Mississippi River-Brainerd Watershed.

TNC is also a landowner within the Mississippi River-Brainerd Watershed, with our Paul Bunyan Savanna Preserve (Figure 5). The 164-acre Paul Bunyan Savanna Preserve is home to one of five remaining jack pine savannas in the state. This rare savanna habitat includes both prairie and forest. It is actively managed and open to the public to enjoy. Nearby, in the Long Prairie Watershed, is the Lake Alexandria Preserve which is also owned by TNC. This preserve, along with the relatively unfragmented forests of nearby Camp Ripley Military Reservation, the Pillsbury State Forest and the Lake Alexander Woods Scientific and Natural Area support the largest population of red-shouldered hawks in the state and provides important habitat for songbirds and other wildlife dependent on the forest's interior.

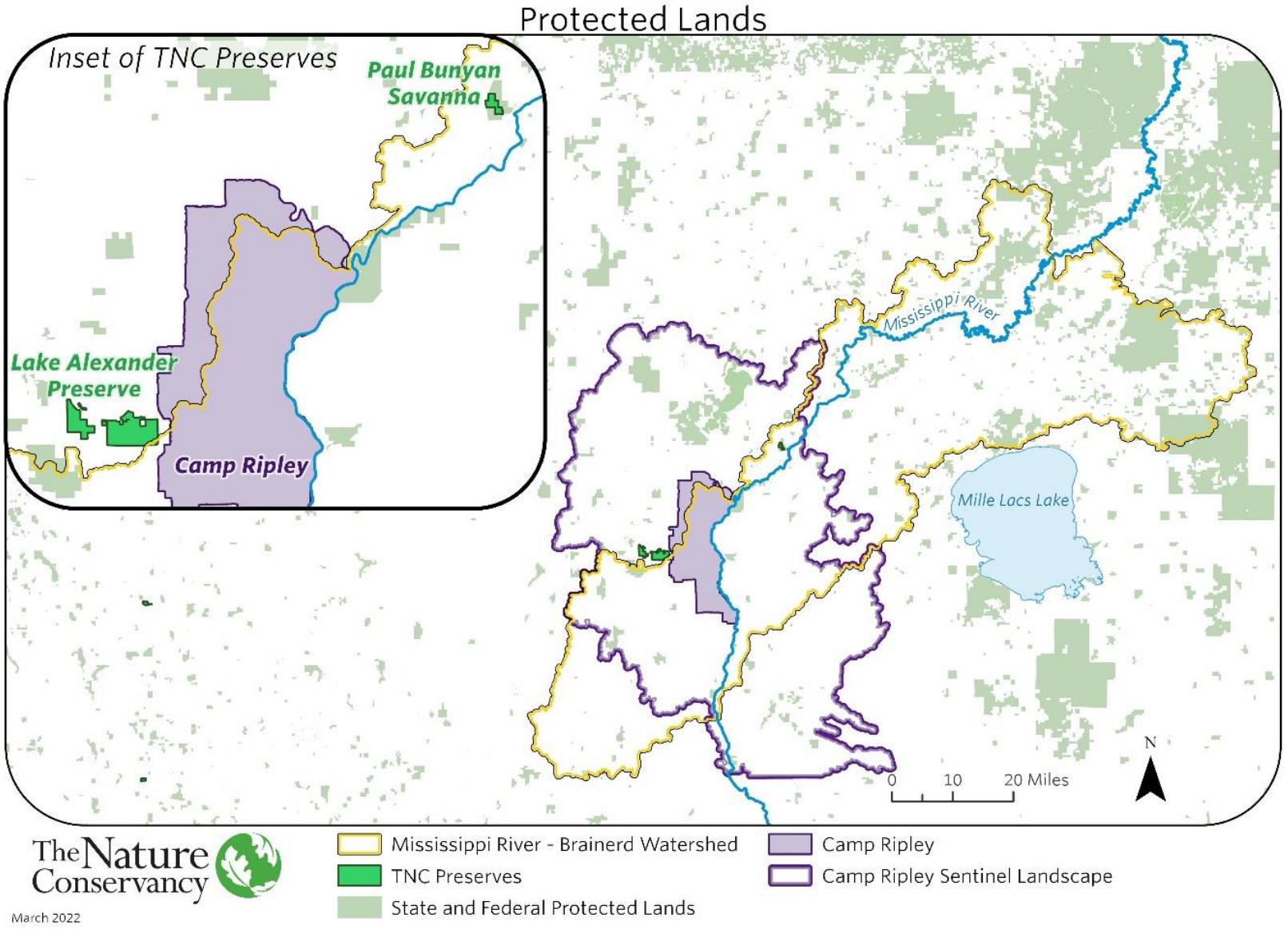

Figure 5: TNC preserve along with other protected land in the Mississippi River-Brainerd Watershed.

The goal of TNC's Resilient Waters Program is to conserve the lands that protect clean water, and to support high-impact conservation projects to protect and improve Minnesota's groundwater and surface water quality for the benefit of nature and people. As threats continue to mount, it is becoming increasingly important to identify and conserve priority areas for habitat and clean water benefits. These threats include climate change. Climate models show that the Mississippi River-Brainerd Watershed has and will continue to experience increased annual precipitation, with increasing average number of days when daily rainfall exceeds 4 inches. Additionally, the watershed is and will continue to experience increased temperatures, especially nighttime and winter temperatures.

Identifying where in the landscape protection and restoration can provide multiple, overlapping benefits can help more effectively target efforts and more efficiently utilize limited resources, while also working to increase watershed resiliency in the face of climate change. Examples of protection and restoration approaches in the Mississippi River-Brainerd Watershed include conservation acquisitions, easements, wetland and floodplain restoration, and other projects that prevent pollutants, such as nitrates and sediment, from entering key rivers, streams, and lakes.

TNC completed the Multiple Benefits Analysis in 2016, which developed and scored priorities according to specific but multiple cross-cutting needs, looking for the "sweet spot" where multiple benefits overlap (e.g., habitat, water quality, water user benefit, flood benefit). TNC developed a version of this approach for the entire Mississippi Headwaters. The "Multiple Benefits" tool is composed of 4 primary modules: 1. Fish and Wildlife Habitat 2. Drinking Water and Groundwater Quality 3. Flooding and Erosion Control 4. Groundwater Quantity. The Multiple Benefits Map (Figure 6) is an overlay of the top quartile scoring areas for each of the Fish and Wildlife, Drinking Water, Flooding and Erosion Control, and Groundwater Quantity modules. The value is the total number of modules for which the area scores in the top quartile.

Mapped scores are intended to reflect priority areas for protection and/or restoration based on multiple benefits. The model is intended as a tool to help the Conservancy and our partners set programmatic direction goals as well as identify opportunities and focus areas. It is designed to be used in conjunction with information on opportunities, threats, and costs – none of which the model is designed to account for – to evaluate benefits and tradeoffs among potential conservation projects.

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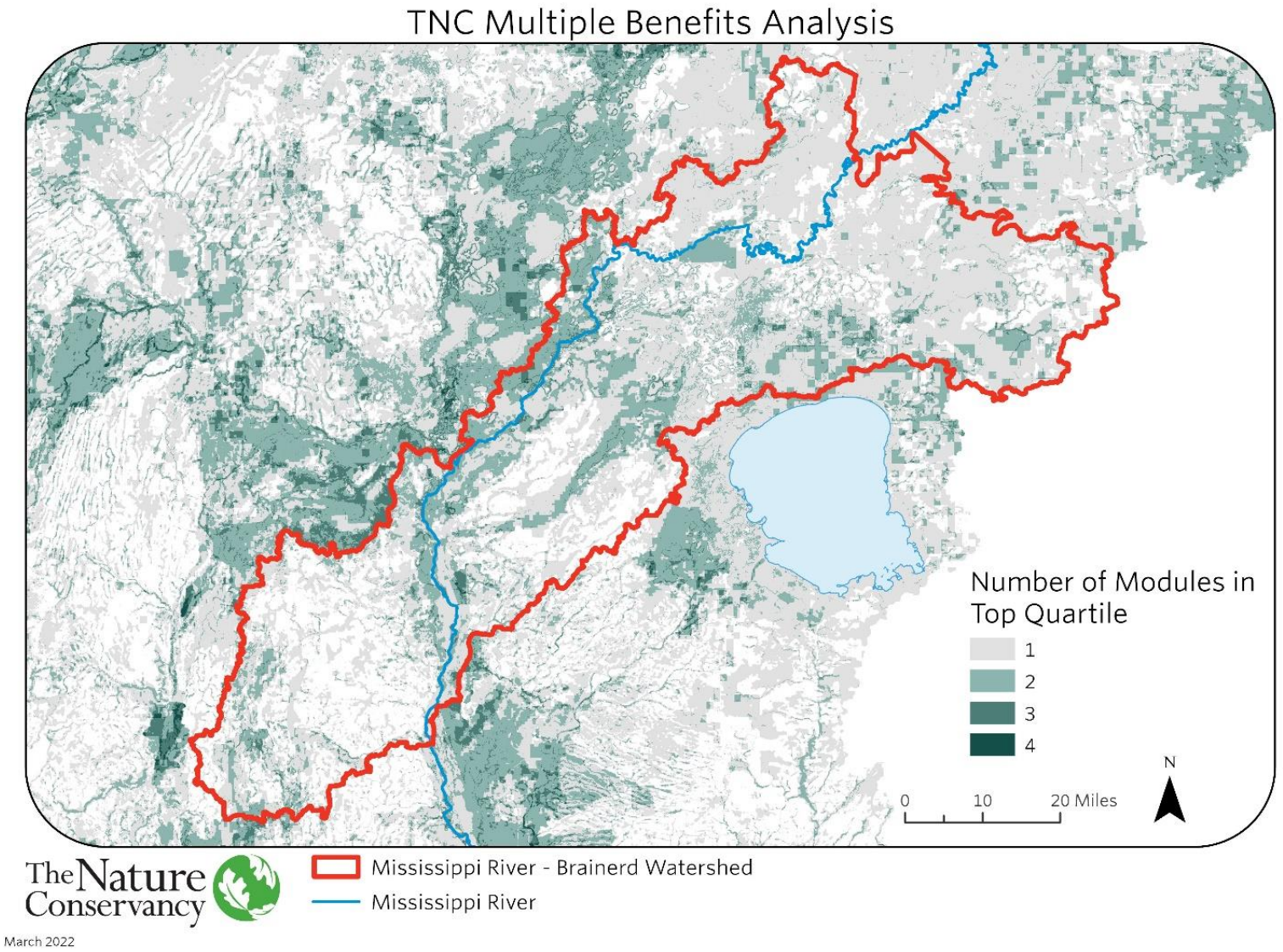

Figure 6: TNC's Multiple Benefits Analysis, which prioritizes locations for protection and/or restoration within the Mississippi River Headwaters Basin.

As a companion to the Multiple Benefits Analysis, TNC completed a restoration prioritization process in 2019. TNC's restoration strategy maps are designed to communicate general restoration priorities basin-wide, as well as priority areas for specific restoration strategies. Restoration mapping was based on a combination of needs assessments and feasibility of attaining or maintaining "healthy" waters criteria (i.e., where targeted restoration is most likely to "move the needle").

The restoration strategy maps depict:

1. Soil Health and Agricultural Nutrient Reduction with Drinking Water/Source Water Protection Priority Overlay (Figure 7): This map represents priority areas for applying TNC's "4R" (right source, right rate, right time, right place) agricultural nutrient reduction strategies within the Mississippi Headwaters Basin. The drinking water overlay map displays priority minor watersheds in the Mississippi Headwaters Basin for implementing drinking water/source water restoration strategies.

2. Restoration of Altered Hydrology/Water Management Priorities with Stormwater Priority Needs Overlay (Figure 8): This map represents priority areas for implementing strategies designed to restore altered hydrology, water quality, and/or aquatic habitat such as wetland restoration, physical restoration/enhancement of stream channels or ditches, or "edge-of-field" practices such as bioreactors, riparian buffers, and natural channel retrofits, designed to intercept nutrients and flows from croplands as well as provide ancillary benefits. Minor watersheds are displayed both on the overall potential for maintaining healthy, resilient conditions at larger watershed scales as well as restoration need based on total amount of altered watercourses and drained wetlands. Priority watersheds for stormwater management, depicted as an overlay, were determined based on whether the minor watershed basins intersect with the center point of a designated MS4 boundary or have a low mean index score (<30) for impervious surface based on 2011 land cover (where a lower index score indicates greater impervious cover) on Minnesota DNR's Watershed Health Assessment Framework (WHAF).

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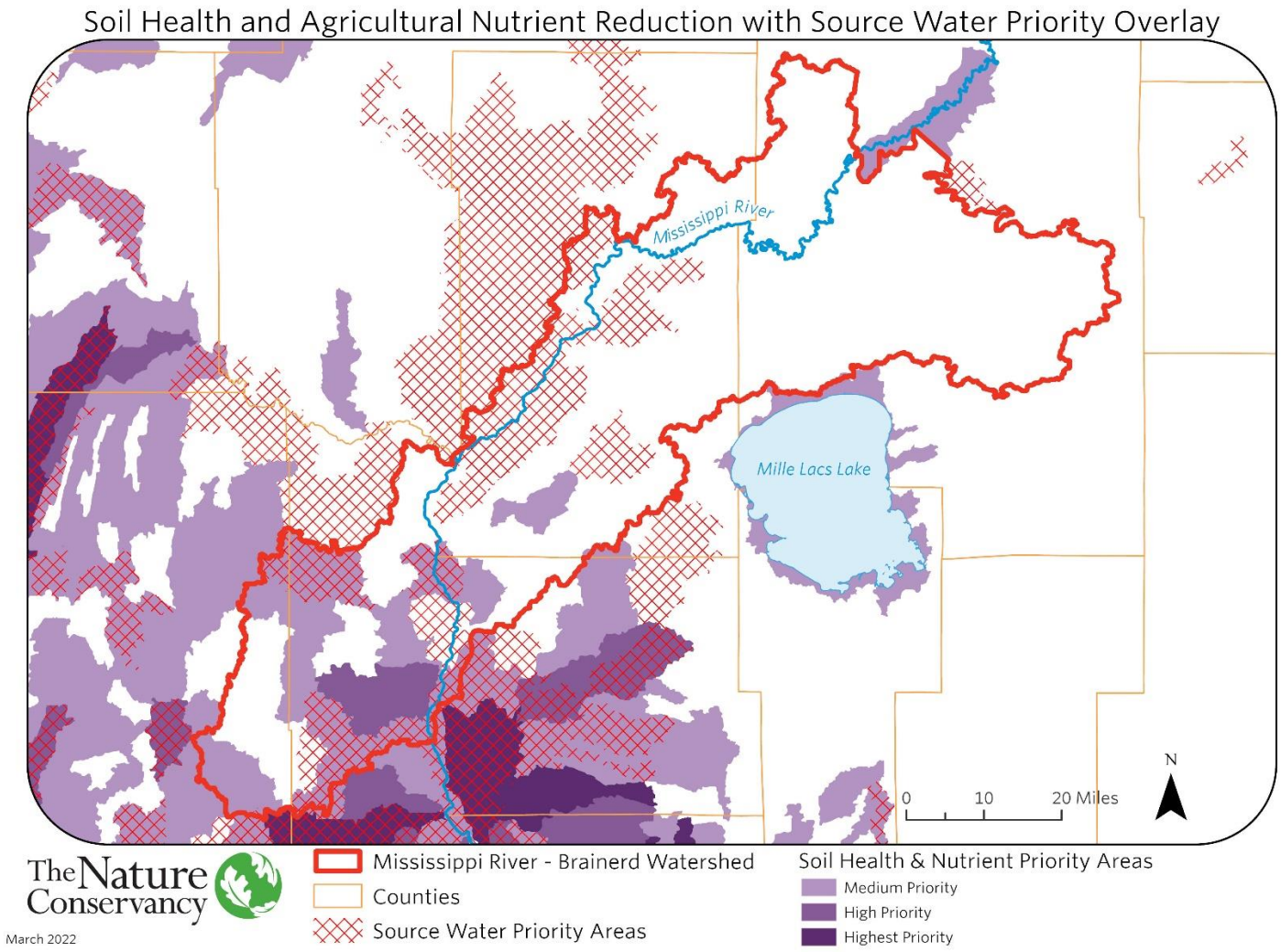

Figure 7: This map shows priority areas for applying TNC's soil health and nutrient management strategies. Minor watershed basins are displayed based on the total acres of cropland, weighted by their relative importance to drinking water, groundwater, aquatic habitat, and flooding and erosion reduction benefits based on the Multiple Benefits analysis. Priority areas for source water conservation are displayed as an overlay based on community and domestic drinking water supply vulnerability and importance.

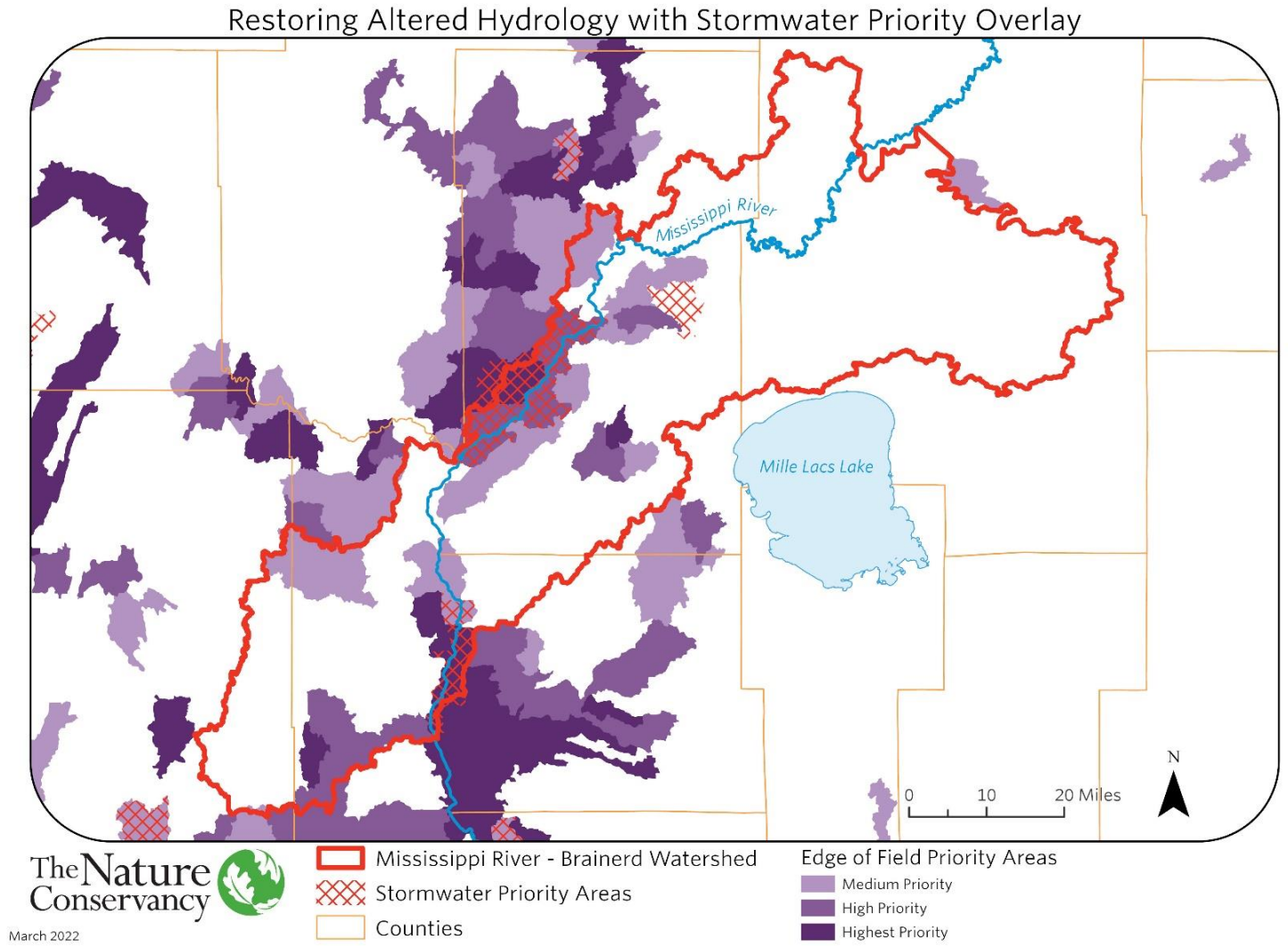

Figure 8: This map shows priority areas for implementing strategies designed to restore altered hydrology, water quality, and/or aquatic habitat. Priority basins are weighted by number of altered watercourses and drained wetlands as well as Multiple Benefits Analysis. Priority areas for stormwater management are displayed as an overlay based on MS4 stormwater district and/or high density of impervious cover.

With the help of 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. This is 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.

This data can be downloaded here:
https://www.arcgis.com/home/item.html?id=c04e2842c6b44cb8adb3c48049f7f722

The Resilient and Connected Network (Figure 9) 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)Recognized Biodiversity Value: Sites recognized for their current biodiversity values

3)Climate Flow: Corridors or flow zones that facilitate plant and animal movement for climate adaptation

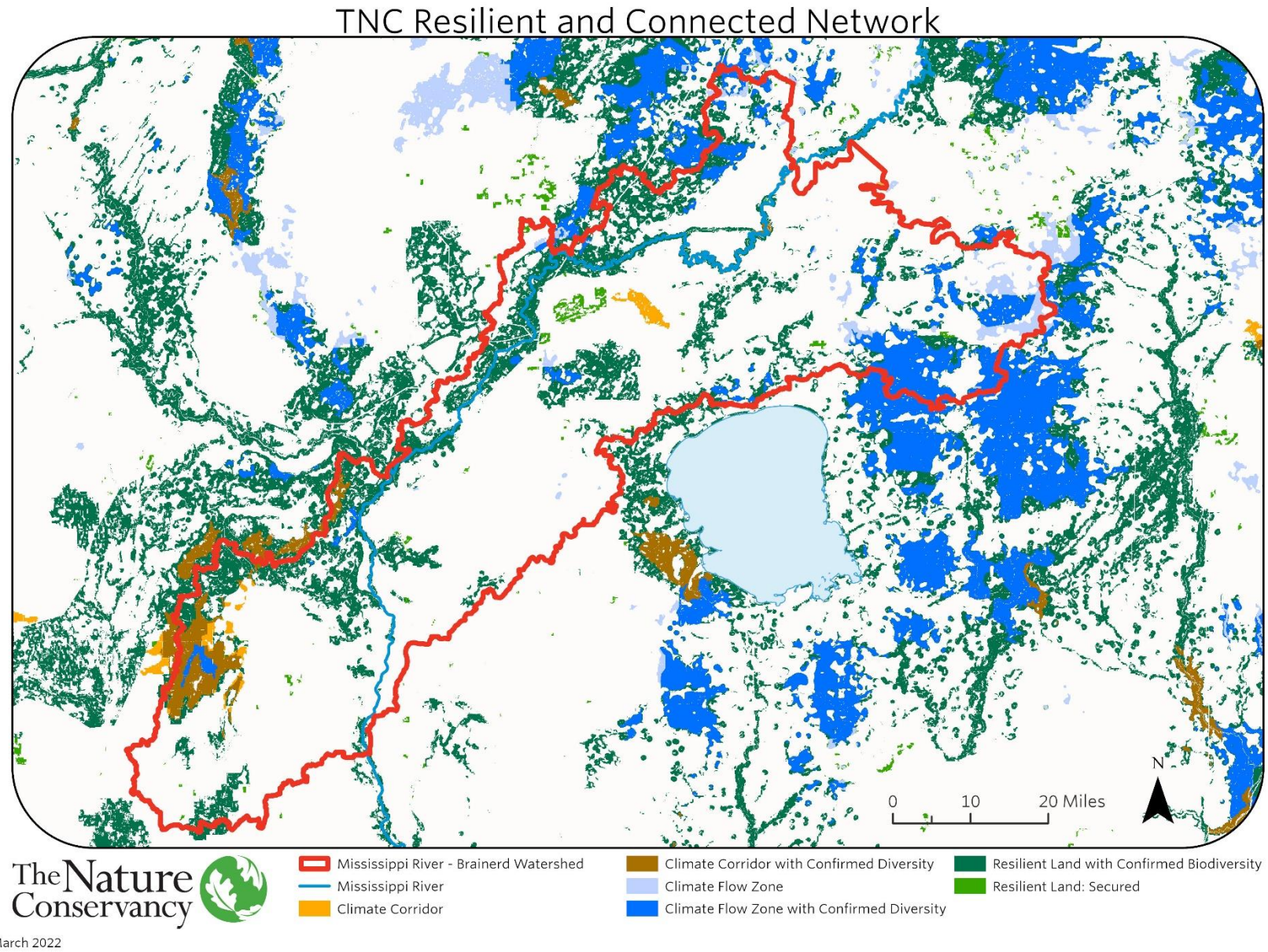

Figure 9: TNC's Resilient and Connected Network.

We ask that the Mississippi River-Brainerd Watershed 1W1P planning work group consider using TNC's Multiple Benefits Analysis, TNC's Restoration Strategy Maps, and TNC's Resilient & Connected Network along with other valuable datasets, as well as critical local knowledge to prioritize areas and locations within the Mississippi River-Brainerd Watershed to conserve. Please feel free to reach out for more information. We are happy to share more detailed methodology, GIS shapefiles, and added information about any of this data to the 1W1P Advisory Committee. We also hope that the planning work group aligns with and utilizes previously developed plans, including the MN Wildlife Action Plan 2015-25. This plan identified 36 Conservation Focus Area, with the Brainerd Lakes Area Conservation Focus Area largely overlapping with the Mississippi River-Brainerd Watershed (Figure 10).

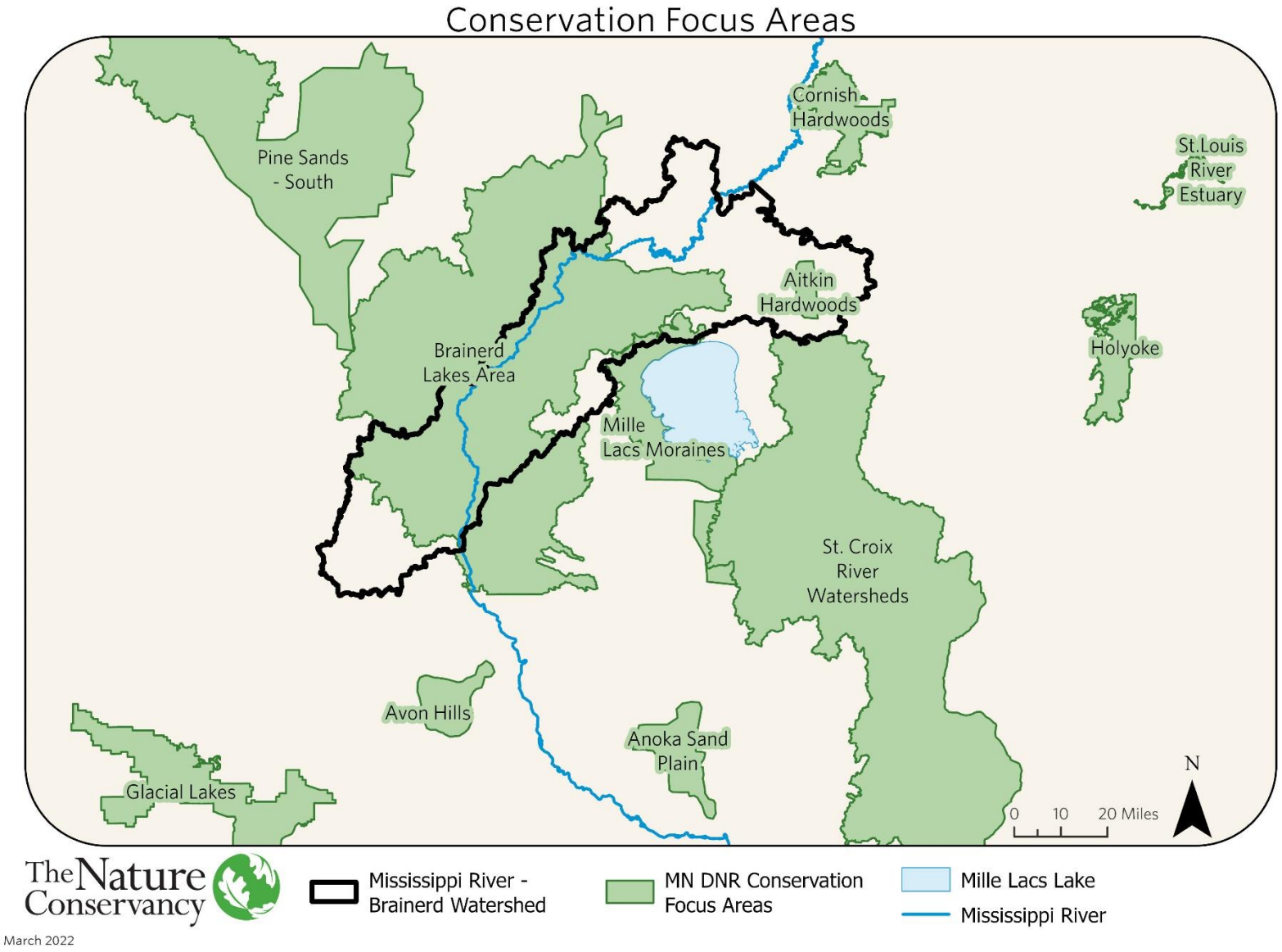

Figure 10: MN DNR Conservation Focus Areas.

Using a targeted systems approach that places an emphasis on sub-watersheds that are unimpaired but at risk of degradation and those that are impaired but closest to the unimpaired threshold, TNC would like the Mississippi River-Brainerd Watershed 1W1P process and resulting plan to address:

1. Protection of existing natural features that provide multiple benefits (e.g. habitat, flooding/erosion control, groundwater quantity and quality, and surface water quantity and quality). Protection should be prioritized along the Mississippi River mainstem and in areas which will maintain healthy waters.
2. Protection and restoration of wetlands to increase storage and infiltration, provide critical habitat, and improve water quality in downstream waterbodies.
3. Collaboration with local tribes to protect and restore wild rice populations throughout the watershed.
4. Protection and restoration of key groundwater recharge areas.
5. Improved water quality in ditch systems, which could involve abandonments of unnecessary ditches, improved buffers, off channel storage and alternative ditch designs that improve aquatic habitat and nutrient attenuation.
6. Forest fragmentation which threatens biological diversity.

Again, thank you for the time and effort that you are putting into developing the Mississippi River-Brainerd Watershed 1W1P. We hope it will provide strong direction for protecting, enhancing, and restoring the Mississippi River-Brainerd Watershed.

Sincerely,

Todd Holman
Mississippi Headwaters Program Director
The Nature Conservancy: Minnesota, North Dakota, South Dakota