DEPARTMENT OF NATURAL RESOURCES

Northeast Regional Headquarters
1201 East Hwy 2
Grand Rapids, MN 55744

August 4, 2022

Becca Reiss
North St. Louis SWCD
505 3rd St. South, Ste A
Virginia, MN 55792

Subject: Department of Natural Resources priority concerns for the Rainy River Headwaters and Vermilion River One Watershed, One plan

Dear Ms. Reiss,

Thank you for inviting the Minnesota Department of Natural Resources (DNR) to provide input as you and other local partners begin developing a Comprehensive Watershed Management Plan for the Rainy River Headwaters and Vermilion River Watershed. I am writing on behalf of DNR Commissioner Sarah Strommen to share our priorities and express our support.

Attached are priorities we encourage you to address in your plan—keys to protecting and improving the health of the watershed. A plan centered on these priorities will help sustain water resources in ways that enhance the quality of life for all who live, work and enjoy the outdoors in this watershed.

The DNR can supply scientific data and information related to the attached priorities. We also offer tools and services that can help stakeholders get to know the watershed and explore water resource values.

Our lead staff person for this One Watershed One Plan (1W1P) project is Kimberly Boland, Area Hydrologist, 218-735-3963, kim.boland@state.mn.us, based at the DNR office in Eveleth. Please contact Kim if you have questions or want more information about the attached priorities or the types of technical support we can provide.

Also feel free to contact me directly if needed. As the Northeast Regional Director, I am committed to ensuring that DNR staff in the region are organized to support 1W1P planning efforts and the resulting plans. We greatly value the opportunity to contribute to the process and hope the information we provide is helpful.

Sincerely,

Shelly Patten
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Shelly Patten
Northeast Regional Director

cc: Kim Boland (DNR), Darrell Schindler (DNR), Cliff Bentley (DNR), Barb Weisman (DNR), Erin Loeffler (BWSR), Amy Mustonen (MPCA), Chris Parthun (MDH)

DNR Priorities for the Rainy River Headwaters and Vermilion River Watershed

The priority resource concerns and opportunities below were identified in consultation with an interdisciplinary team of natural resource management specialists from multiple DNR Divisions whose work areas include this watershed. The priorities relate most closely to four of the many high-level issues that Comprehensive Watershed Management Plans are expected to consider: water quality, flood damage reduction, water storage and retention, and habitat and outdoor recreation.

High-Level Priority Issue	Priority Resource Concerns & Opportunities
Water Quality	• **Stream Stability**: Increased annual precipitation and more intense rainfall events are impacting hydrology, water quality and infrastructure in the Rainy Headwaters and Vermilion watersheds. Annual precipitation in both watersheds has increased 12% since the early 1960s due to climate change. Erosion from unstable stream banks and ditched channels within the watershed can contribute to water quality impairments (sediment). To help manage the increase in precipitation, consider updating stormwater systems and water crossings to ensure they continue to operate effectively in the face of increased runoff events. Also consider restoring stream systems to clean up sediment-impaired streams and make them more resilient, while also benefitting aquatic and riparian habitat. *The DNR can provide field survey data to help target efforts to restore stream systems, and can also provide guidance throughout a project. The DNR can also help identify water crossings where repairing or replacing the infrastructure using "geomorphic design" would improve resiliency.* • **Wild rice**: These watersheds include areas of significant natural wild rice production. Wild rice requires high-quality water, which can be impacted by increased runoff from precipitation and poor land use practices within shoreland areas. Wild rice production could benefit from protection through increased education for the public and for landowners in and around wild rice production areas about best management practices (BMPs) for shorelines, such as having septic systems updated and checked to reduce excess phosphorus loading, and other BMPs that reduce runoff and thereby reduce changes in water chemistry. One example where education could make a difference is Pelican Lake—a high-use recreational lake with robust aquatic plant life that makes it attractive to waterfowl during fall migration. The thriving presence of other aquatic vegetation masks the fact that wild rice in the lake has generally declined over time due to climate change and impacts from on-water recreation and surrounding land uses such as development and land-clearing activities that introduce sediment and nutrients.
Flood Damage Reduction	• **Floodplain connectivity**: With precipitation increasing and increases to high flow events, floodplains are being inundated more frequently. It is beneficial for watercourses to have access to their floodplains during high-water events. Currently some watercourses have reduced access to their floodplains. We recommend assessing subwatersheds to identify reaches where reconnecting the stream to the floodplain (or to meanders) is feasible and would increase storage capacity. Also consider updating floodplain and shoreland zoning rules, to help improve floodplain management. *DNR regional staff can help assess subwatersheds for floodplain connectivity. DNR*

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	floodplain and land use experts can help update floodplain and shoreland zoning rules. • **Culverts**: Improperly sized culverts throughout the watershed can contribute to flooding and costly repairs or replacements. The DNR has a guide that can be shared with local transportation departments to encourage proper culvert design when old or damaged culverts are replaced. Consider completing a comprehensive culvert inventory using the MN DNR Culvert Inventory Application to help collect and store the data, and prioritizing the repair or replacement of culverts that are causing connectivity issues (preventing floodplain access and fish passage, for example). *The DNR can help assess culverts and help prioritize them regarding floodplain connectivity, infrastructure resiliency and fish passage. The DNR can also help implement stream channel and aquatic habitat restorations using natural channel design principles to improve hydrologic function, sediment transport and aquatic habitat.*
Water Storage & Retention	• **Peatlands and wetlands**: Restoring peatlands and wetlands can improve watershed health by storing and retaining water, reconnecting surface and ground waters and providing plant and wildlife habitat. Consider identifying ditches that could feasibly be abandoned to restore peatlands, and areas where restoring wetlands would improve watershed health. *The DNR and other appropriate local partners can collaborate on ditch abandonment, peatland and wetland restoration projects in areas where wetlands have been significantly altered.*
Habitat & Outdoor Recreation	• **Fish habitat**: In general, these watersheds have healthy fish populations but improvements in connectivity, hydrologic conditions and habitat could enhance overall fish populations. Increases in precipitation have increased flows at all intervals (low, middle, high), impacting fisheries and other aquatic life as well as stream channel stability. Poor quality habitat in altered or channelized reaches can also negatively impact fish communities. Consider stream restoration projects and projects at lake outlets to improve habitat connectivity and thereby improve fish populations. *DNR Fisheries can help identify priority areas for improving fish habitat via channel stability, stream restoration and repair or replacement of structures impeding habitat connectivity. The DNR can also help design updated lake outlet control structures utilizing step-pools and rock-rapid weirs to maintain lake levels while also allowing aquatic life to move freely within the watershed.* • **Public land management**: These watersheds encompass Wildlife Management Areas, Scientific and Natural Areas, State Forests and other county, state and federal public lands. These intact habitat areas help protect water quality and provide public recreational opportunities (e.g., hunting, fishing, ATV and UTV riding, berry picking). Many other recreational areas within the watershed are experiencing trail expansions and improvements to help increase recreational uses. *Addressing problem areas on existing trails such as undersized or perched water crossings and increasing buffer areas along waterways; utilizing BMPs for new trail*

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	developments or avoiding trail development along waterbodies can help protect water quality, increase habitat and can increase recreational value. • **LGU-DNR coordination within and around DNR-managed lands**: Most of the state-managed lands that fall within these watersheds are School Trust Lands for which the DNR has fiduciary responsibilities to public schools or local governments. The DNR manages these lands for a variety of purposes including, but not limited to, natural resource conservation, recreation and commercial uses. The DNR recommends taking these State lands and their various management objectives into consideration during the planning process, and leveraging them to benefit goals of the Comprehensive Watershed Management plan when possible. *To achieve common goals within and around these DNR-managed areas, we encourage LGUs to coordinate with the DNR regarding planned activities near state land, so DNR can help achieve the desired common goals.*