

August 2, 2022

Becca Reiss
Community Conservationist
North Saint Louis Soil and Water Conservation District
505 3rd St, Ste A
Virginia, MN 55792

RE: MPCA Priority Concerns Rainy River Headwaters – Vermilion River 1W1P 2021-2031

Dear Becca Reiss:

The Minnesota Pollution Control Agency (MPCA) is pleased to provide priority concerns for consideration in the development of the Rainy River Headwaters – Vermilion River One Watershed One Plan (1W1P).

In coordination and cooperation with local, state, federal and tribal agencies, the MPCA has contributed significant time and resources in evaluating water quality issues in the Vermilion River Watershed (VRW) and Rainy River - Headwaters Watershed (RRHW). The products of these efforts are included in a series of reports and are available for consideration during 1W1P development. This information includes: monitoring results and assessments of lakes and streams indicating where water quality goals are being met, problem investigations on impaired waters and waters identified as protection priorities, modeling and calculations to determine the total maximum daily load (TMDL) of pollutant sources to impaired waters and reductions needed to meet water quality goals, and Watershed Protection and Restoration Strategies (WRAPS), including a discussion of priorities and actions that could be implemented to aid in restoration and protection of watershed resources. These reports can be found at the following links:

- [Rainy River - Headwaters Watershed](#)
- [Vermilion River Watershed](#)

Protection and restoration of water resources

The MPCA employs a watershed approach to restoring and protecting Minnesota's rivers, lakes, and wetlands. Money to accelerate efforts to monitor, assess, and restore impaired waters, and to protect unimpaired waters was funded by the Minnesota's Clean Water Legacy Act (CWLA). The purpose of the CWLA is to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation, by providing authority, direction, and resources to achieve and maintain water quality standards for groundwater and surface waters, including the standards required by section 303(d) of the federal Clean Water Act (CWA), United States Code, title 33, section 1313(d), and other applicable state and federal regulations.

In addition to the CWLA, CWA requires states and authorized tribes to adopt water quality standards to protect the nation's waters. These standards define how much of a pollutant can be in a surface water and/or groundwater while still allowing it to meet its designated uses, such as for drinking water, fishing, swimming, irrigation or industrial purposes. Every two years, the MPCA creates a list of waters that do

not meet water quality standards and submits to the U.S. Environmental Protection Agency (EPA) for approval. Minnesota's current list can be found on [Minnesota's Impaired Waters](#) web page.

For this 1W1P planning boundary, there are 262 water quality impairments (not including waters that are impaired by natural sources) with 4 of those impairments from conventional pollutants such as excessive sediment, bacteria, and nutrient loading. The following table summarizes these impairments, and a full list of impairments is attached to this letter (Attachment 1):

Impaired Waters in the RRHW– Vermilion River 1W1P Planning Area *

Impairment Type	Number of Listings	Beneficial Use
Total Suspended Solids (TSS)	2	Aquatic Life
<i>Escherichia Coli</i> (<i>E. coli</i>)	1	Aquatic Recreation
Nutrients	1	Aquatic Recreation
Sulfate	6	Wild Rice Production
Mercury in the water column	1	Aquatic Consumption
Mercury in fish tissue	250	Aquatic Consumption
PCBs in fish tissue	1	Aquatic Consumption

* Source: 2022 Impaired Waters List, summarized for planning purposes. Note that this information does not include impairments caused by natural sources. For more information on impaired waters please see the WRAPS Reports and Minnesota's Impaired Waters webpage.

Priority Concerns in the 1W1P planning boundary

Based on water quality impairments and priority issues identified in the WRAPS reports, the following priority concerns should be included 1W1P development.

Impaired waters restoration:

Blackduck River restoration and protection

The Blackduck River, a coldwater stream in the RRHW, is currently listed as impaired by *E. coli* and TSS. These impairments are affecting aquatic life and aquatic recreation designated uses. Problem investigation during 2017 and 2018 indicated impacts from channelization, road and old rail crossings, forest conversion to pastureland, and cattle are contributing to the impairments.

Bank assessments identified a three-mile stretch of stream contributing 30% of total bank erosion in only 11% of the survey length. This stretch occurs alongside and downstream from a 3,750-foot channelized section of the Blackduck River. Channelization is likely contributing to stream instability along this portion of stream and is a major contributor to the TSS impairment. Water quality sampling identified pastured animals as the primary source of *E. coli*. A TMDL study has established restoration strategies and best management practices (BMP) that if implemented would reduce pollutant loading to the river.

Actions to consider include:

- Streambank stabilization and channel restoration to reduce TSS

Implement restoration activities to address stream bank erosion and stream instability. Consider re-meandering the stream channel and reconnecting it to the floodplain in the unstable channelized reach. Ensure restoration activities take a comprehensive approach to addressing stream function and form, are protective of existing infrastructure, produce minimal disturbance to existing vegetation, and are designed by a licensed engineer.

- Pasture and grazing management guidance (TSS and *E. coli* strategy)

Work with the landowner of the ranch to promote and develop a pasture and grazing management plan that benefits the pasture environment and stream ecosystem and reduces pollutant sources to the Blackduck River and its tributaries. Encourage the use of barriers that limit or exclude the animals from entering surface water bodies and enhance vegetative buffers along waterways that include un-grazed native grasses, forbs, trees, and shrubs. Connect the landowner of the ranch with NRCS programs such as Environmental Quality Incentives Program (EQIP) to provide funding for BMP implementation including installation of an alternative water source for livestock. Coordinate with other state and local experts such as the Sustainable Farming Association of Minnesota to maximize environmental and landowner benefits.

- Forest management guidance (TSS strategy)

Encourage adherence to State Forest Management Guidelines and forestry practices that are protective of the stream riparian and water quality. Work with private landowners to develop Forest Stewardship Plans. Emphasize long-lived conifers in critical riparian locations of the watershed and climate change resiliency in species selection. Encourage private and public (intra-agency) communications and collaboration to reduce, or at a minimum prevent an increase in, open lands in the watershed.

- Culvert guidance (TSS strategy)

A culvert inventory was completed for the watershed through a multi-agency effort administered by the Minnesota Department of Natural Resources (DNR). These data have been imported into the DNR's culvert inventory RRHW WRAPS Report MPCA database. Several culverts were identified as being barriers for fish passage and/or contributing to stream bank and channel erosion. Review the inventory data and work with road management entities, both public and private, to prioritize and upgrade culverts with consideration of climate change resiliency in infrastructure design.

- Roadway, motorized trail, and ditch maintenance guidance (TSS strategy)

Assess and prioritize roadways and motorized trails within the watershed for gully, erosion, and pollutant runoff. Assess the state of existing roadside ditches and identify priority locations for ditch management (e.g., re-vegetation, armoring). Encourage roadway and motorized trail design and management practices that are protective of water quality, including low maintenance roads. Develop and implement guidance for public and private road ditch maintenance to minimize un-vegetated channels and associated erosion.

- Remnant railroad piling removal and rail grade/bank stabilization (TSS strategy)

Inventory in-stream railroad pilings and sections of the old railroad grade that abut the stream channel. Prioritize areas for restoration that negatively impact aquatic life and/or water quality

and/or show signs of streambank erosion, sedimentation, and channel instability. Research piling removal methods and removal process impacts on stream stability. Develop recommendations and communicate findings to public and private landowners. Upon future approval of all-terrain vehicle use proposed for sections of the David Dill/Arrowhead Trail, former railroad-stream crossings within the state trail section should be designed to meet permit standards and be protective of stream health and stability.

- Septic system inventory and upgrades (*E. coli* strategy)

Conduct an inventory of Prioritize subsurface sewage treatment system (SSTS) in the Blackduck River Watershed for systems with unknown status, identifying total number of systems and compliance status. Prioritize SSTS according to compliance status; identify all Imminent Threat to Public Health or Safety (ITPHS) systems as high priority for maintenance and replacement. Work with private landowners to achieve compliance.

- Education and outreach (TSS and *E. coli* strategy)

Provide education and outreach for pollutant-reduction activities. Assist private landowners in forest management, pasture management, and grazing planning. Provide information or hands-on workshops to landowners on forest and pasture management activities as well as stream crossing, road, ditch, beaver dam, and stream habitat management.

Myrtle Lake restoration

High levels of phosphorus resulting in excessive production of algae are impairing Myrtle Lake. Elevated phosphorus affects the aquatic recreation designated use by fueling nuisance algae blooms. Myrtle Lake had the highest measured Chlorophyll-*a* concentration of any sampled lake in St. Louis County and a significant effort will be required to reduce the amount of TP in the lake. Load reductions are needed from watershed runoff, SSTS, and internal loading.

Actions to consider include:

- Reduce nutrient inputs from watershed runoff

Work with landowners to encourage the protection and maintenance of healthy vegetative buffers along the shoreline and assist with restoration in areas that lack a protective vegetative buffer. Encourage landowners to use lawn management practices that minimize nutrient loading to the lake. Install rain gardens to enhance runoff infiltration and nutrient uptake. Protect healthy buffers on tributaries to the lake. Assess road crossings and roads adjacent to tributaries for erosion, pollutant runoff, and flow restriction, and work with road authorities and landowners to make improvements where appropriate.

- Septic system improvements

Complete an updated inventory of SSTS in the Myrtle Lake Watershed, identifying total number of systems and compliance status. Prioritize SSTS according to compliance status; identify all “imminent threat to public health and safety” systems as high priority for maintenance and replacement. Work with private landowners to achieve compliance.

- Address internal loading

Consider addressing internal loading reductions in addition to external loading reductions. If external loading is not adequately addressed, in-lake treatment efforts will be short-lived. Costs of in-lake treatments such as alum (aluminum sulfate) should consider the longevity of effectiveness as recurring applications may be needed to sustain water quality. Full lake treatments can be costly and tend to be shorter lived on shallow lakes like Myrtle Lake, lasting from one to eleven years. Treatment would likely need to occur across the entire lake basin. Internal loading is likely a major contributor to phosphorus loading, and internal load management may be required to achieve water quality goals.

- Education and outreach

Provide education and outreach for pollution reduction activities. Provide information or hands-on workshops to landowners on septic system maintenance, lawn care, and maintaining healthy vegetative shoreline buffers.

Lake and stream protection candidates:

Ash River protection

The Lower Ash River (-818) is designated as impaired by TSS. Located in glacial lake deposits, these streams flow through the most erodible soils in the RRHW (MPCA 2019). Problem investigation identified contributions to the impairment are likely coming from upstream and remaining suspended in the Lower Ash River. Soils in the surrounding area are some of the most mobile soils within the 1W1P planning area. Additionally, the Ash River Watershed was identified as having the highest rate of forest disturbance of all watersheds contributing water to Voyageurs National Park (23% of the watershed area) by a US Park Service study (Kirschbaum 2017). Protection in the lands surrounding the Upper Ash River (-819) and the restoration and protection in the Blackduck River (-820) should greatly reduce TSS in the Lower Ash River.

Actions to consider include:

- Restoration efforts in the Blackduck River

The Blackduck River is the largest tributary to the Ash and is more developed than the Ash River. Restoration efforts identified to restore the Blackduck River will reduce TSS in the Lower Ash River.

- Forest management and culvert guidance

The strategies under forest management and culvert guidance, described previously for the Blackduck River, can also be applied to the Ash River to provide protection from further degradation.

Dunka River protection

With high-quality coldwater habitat and a naturally reproducing brook trout population, the Lower Dunka River is recommended for a use class change from warmwater to coldwater. As such, more stringent coldwater standards protective of sensitive coldwater species are anticipated to be applied in this reach if the change is approved. Although this area is one of the most developed subwatersheds in the 1W1P area due to mining development, this reach is currently afforded protections by forestland adjacent to the river. The majority of the land is under government or industrial ownership. A proposed

land swap may occur increasing the amount of working school trust lands within this subwatershed. Additionally, an existing mine closure plan projected for some time around 2070, could change the hydrology of the Lower Dunka River, an unnamed tributary to the Lower Dunka, and Langley Creek from current conditions due to changes in drainage areas and mine pit outflow upon pit closure. Future management of this area should consider the possible impacts to the hydrology and biological suitability for coldwater communities in the Dunka River. The MPCA will continue to collaborate with stakeholders to protect the water quality of this watershed.

Lakes identified as highest benefit/cost from phosphorus reduction efforts

With a focus on the susceptibility of a lake to phosphorus pollution, the DNR created a database of Lakes of Phosphorus Sensitivity Significance (LPSS) and Lake Benefit Cost Assessment (LBCA) with the intent to support planning, natural resource management, research, and other resource protection-related activities. The sensitivity of a lake to phosphorus inputs was assessed for the lakes of the VRW by estimating the change in water clarity that would result with increased phosphorus loading to the lake. The LBCA index was formulated to rank lakes as they relate to the state’s priority of focusing on “high-quality, high-value lakes that likely provide the greatest return on investment”. The table below identifies the lakes with the highest LBCA. See the WRAPS reports for a more complete assessment ranking. Rankings should be used alongside additional local knowledge of the watershed to further prioritize protection efforts. Actions to consider include septic system improvement, forestland management, and lake management BMPs described in the upcoming section.

RRHW and VRW Lake Prioritization; Highest LBCA from 2019 DNR database of Lakes of Phosphorus Sensitivity

Major Watershed	WID	Lake Name	LPSS Priority Class	LBCA Priority Class
Rainy River - Headwaters	69-0190-00	Big	Highest	Highest
	69-0118-00	Burntside	Highest	Highest
	16-0356-00	Gunflint	Highest	Highest
	69-0066-00	Little Long	Highest	Highest
	38-0810-00	Cedar	Highest	Highest
	38-0529-00	Snowbank	Higher	Highest
Vermilion River	69-0285-03	Eagles Nest #3	Highest	Highest
	69-0841-00	Pelican	Higher	Highest
	69-0378-01	Vermilion	Higher	Highest

1W1P boundary-wide protection considerations

The RRHW has many outstanding qualities that can be targeted for specific protections. These include wild rice, coldwater fisheries, drinking water, and popular outdoor recreation destinations for swimming and fishing. The following protection-focused management strategy themes can provide guidance in selecting protection targets for 1W1P.

Forestland Management

The land cover in the 1W1P planning area is predominantly forest and wetlands, with a majority of the area undeveloped. Protection strategies specific to forestland management are important to maintaining and protecting water resources from excess nutrients and sediment. Current forest management activities in the region, especially on public lands, have successfully protected waterbodies and should be maintained.

Forestland management should be targeted around lakes with phosphorus sensitivity, coldwater lakes and streams, and drinking water lakes. Forestland risks include the percentage of young forest in a catchment, which can identify areas of disturbance including forest harvest, forest fires, and tree loss from insect damage and disease. Forest practices may include promotion of forest species and age class diversity as well as choosing tree species resilient to climate change.

Actions to consider include:

- Maintain existing forest cover - prevent new losses and maintain at least 75% forested watersheds surrounding coldwater lakes and streams
- Reforestation on non-forested land and after cutting
- Maintain forested riparian zones and convert short lived species to conifers and other long-lived species to promote diverse mature forests, as applicable
- Terrestrial invasive species prevention and mitigation
- Prescribed burning to promote healthy forests
- Roads and trails improvement
- Implement DNR's Private Managed Forest Program and encourage enrollment of private land in 2c Managed Forest Lands or Sustainable Forest Incentive Act (SFIA)
- Forest erosion control on harvested lands
- Encourage easements and practices that reduce parcelization.
- Prepare and adjust for pests, invasive species, and other effects of climate change by considering underplanting and replacement species

Culverts and connectivity

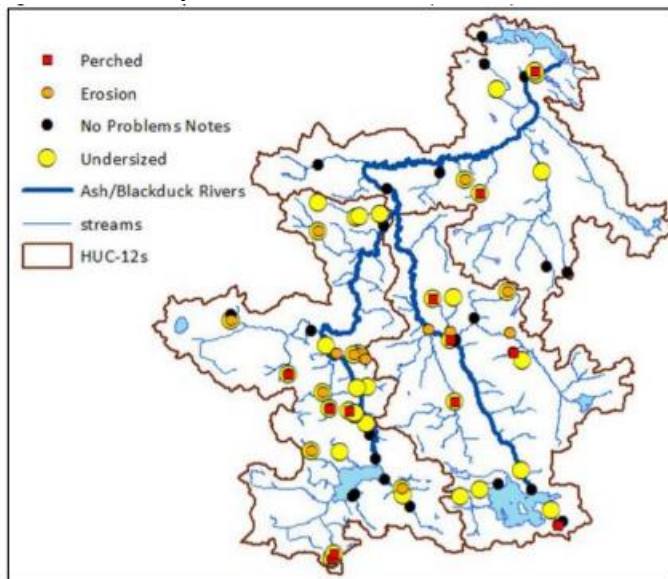
Limiting stream connectivity can negatively impact aquatic life by limiting fish access to upstream and downstream reaches. Longitudinal connectivity is particularly important for cold and cool water species that need to be able to access cold water refugia in warm summer months. Restriction of fish passage in streams is often caused by improperly aligned or undersized culverts. These can also contribute to channel instability, restricted flow resulting in low dissolved oxygen (DO), and increased erosion impacting water quality. In collaboration with the DNR, Lake County SWCD performed a culvert survey. A desktop analysis was performed to identify priority culverts for replacement to enhance connectivity for coldwater reaches, targeting the longest stream lengths that would be gained. If chosen for replacement, these should be verified in the field ahead of implementation. Additionally, culvert surveys were performed in the Ash River Watershed to identify culverts that could be contributing to TSS impairments.

The table and figure below indicate the locations of the possible targets for culvert replacement.

DNR top 10 scoring culverts in the Lake County portion of the RRHW for connectivity prioritization for brook trout resiliency (MCPA 2022)

River	Road name	Score	Northing	Easting
Hill Creek	Forest Road	34.5	5281030	618387
Arrowhead Creek	Forest Road 367	33.3	5281610	625765
West Camp Creek	Northwest Rd	31.8	5285270	622832
Arrowhead Creek	Sawbill Landing	31.2	5280560	624980
Camp Creek	Northwest Rd	30.3	5284500	624672
Inga Creek	Bomber Rd	29.9	5286550	617110
Scott Creek	Wanless Rd	29.5	5277440	634196
Arrowhead Creek	Dumbbell Rd	29.1	5284660	625742
Camp E Creek	Deep Lake Rd	28.2	5283460	607853
Unnamed Creek	Cramer Rd	27.9	5286150	641925

Culvert inventory results for the Ash River Watershed in Saint Louis County (MPCA 2019)



Actions to consider include:

- Build upon current culvert surveys
- Modify or replace poorly set culverts and fish passage barriers. Accurately size and position culverts.

Drinking water protection

The RRHW/VRWs contribute to two community public water supplies and 34 noncommunity public water supplies that use surface water or groundwater under the direct influence of surface water as a source for drinking water. The City of Ely relies on water from Burntside Lake for its drinking water and is therefore dependent on the ongoing restoration and protection of the watershed to supply clean and drinkable water to their citizens. The City of International Falls, while not in the watershed, relies on the

Rainy River for its drinking water and likewise benefits from restoration and protection of surface water in the RRHW and VRW.

Algal blooms have impacted Lake Kabetogama, a noncommunity Public Water Supply. These blooms can contain harmful cyanobacteria species that create cyanotoxins that can lead to illness in humans and animals if water containing those toxins is consumed.

Actions to consider include

- forestland and lake management practices that provide protection from elevated nutrient concentrations
- septic system improvements
- stormwater runoff control

Lake management

Lake resources within the RRHW and the VRW support diverse habitats for plant and animal species that are important to aquatic life, have strong cultural significance, and provide recreational opportunities. Some lakes harbor sensitive coldwater species of fish, are drinking-water sources, or harbor wild rice. These outstanding qualities are afforded much protection by the undeveloped nature of the watersheds. Continued forest protections will result in continued water quality protections. Additionally, cold water lakes and wild rice waters can be protected through easements, forestland management, education, and water level management.

Coldwater fish are threatened by two main causes: climate change and reduced DO caused by eutrophication. Climate change can warm the waters and reduce the size of cool, well-oxygenated areas of the lake, which reduce suitable habitat for these fish. Eutrophication is caused by the addition of nutrients such as phosphorus from surrounding lands impacted by humans, enhancing algae growth. The decay of the additional plant material utilizes oxygen and lowers DO. Protecting lakes with cold water fisheries by maintaining or increasing forest cover in the watershed and limiting runoff from developed areas will help these fish continue to survive in these lakes. Fisheries research from the DNR indicates that keeping at least 75% of a lakeshed forested is crucial to maintaining habitat for cold water fish species such as lake trout, cisco, and lake whitefish (Jacobson et al. 2016).

Actions to consider include:

- Enforce shoreland management regulations as property develops and redevelops and discourage variances that increase shoreland run-off or reduce riparian vegetation
- Encourage voluntary actions to mitigate the impacts of past development
- Proactively protect beneficial uses by taking positive actions to halt or minimize the spread of Aquatic Invasive Species (AIS)
- Encourage formation and organization of lake associations
- Promote volunteer water monitoring
- Maintenance of adequate water levels during low flow periods

- Protect and restore wild rice waters through ordinances, easements, water level management, and education

Recreational Management

The RRHW includes the BWCAW, VNP, and the SNF. In addition, the watershed is a popular recreation destination including fishing, boating, canoeing, hiking, hunting, camping, and OHV trail use. Recreational management strategies can be targeted to areas with high recreational use such as lakes and rivers, ATV trails, and campsites. Encouraging mindful recreation to reduce potential environmental impacts to land and water resources is recommended.

Septic System Improvement

Septic system improvement should be considered to protect waters that are at risk of contamination from fecal bacteria and additional nutrient inputs that could boost algal productivity.

- Septic system maintenance and improvement
- Continue to enforce septic system ordinances
- Increase inspections and conduct inventory to support prioritization

Stormwater runoff control

The RRHW does not have large urban areas, but there are developed areas including Ely and focused around lakes and streams. Because of this localized stormwater focus, the criteria used to target these practices include identifying waterbodies at risk to additional nutrient inputs and that have high disturbance or development density in their catchment.

Actions to consider include:

- Outreach to promote smart salting practices, encourage rain barrels, and increase awareness of stormwater impacts to water quality
- Enhanced road salt management
- Implement stormwater BMPs to reduce runoff from built structures
- Consider bioretention, biofiltration, and rain garden plantings
- Promote permeable surfaces and pavements as replacements for impervious pavement

Streambank and gully protection

Stream instabilities caused by poorly set culverts, channelization, or other alterations to stream channels can contribute excessive amounts of sediment to a stream, degrading water quality. Streambank and gully protection should be targeted around streams that are impaired by TSS, altered, designated as coldwater, or a high priority for protection based on high quality biologic communities.

Actions to consider include:

- Replace culverts contributing to stream instability
- Re-meander channelized stream reaches, reconnect to floodplains
- Maintain riparian herbaceous cover and improve quality of existing cover

Mining lands management

Some mining features and gravel pits exist within the watershed. In addition, wild rice, a native grain with both ecological and cultural importance, has been identified in waters in the RRHW/VRW in surveys from the DNR, 1854 Treaty Authority, and the MPCA. It is an important food source for waterfowl and wildlife, and several Native American cultures consider wild rice to be a sacred component of their culture. It grows in shallow water in small lakes and slow-flowing streams. Wild rice is vulnerable to changes in water levels and the addition of sulfate, which can negatively impact wild rice stands. Sulfate is typically found in low concentrations in natural streams but can become elevated due to sulfate discharges in wastewater from permitted activities such as mining in sulfide bearing rocks.

In 2021, the EPA added several waters to Minnesota's 2020 Impaired Waters List as impaired for sulfate, including six waterbodies in the VRW. These waterbodies exceed the sulfate standard of 10 mg/L applicable to waters used for production of wild rice (Minn. R. 7050.0224). The listings represent an important step toward resolving the long-standing issue of implementing the existing standard after a state law prohibited the agency from enforcing the current standard (Laws of Minnesota 2017, ch. 93, article 2, section 149) and an administrative law judge rejected a 2018 proposal to revise the standard. The MPCA is currently working to determine the next steps to address sulfate impairments throughout the state and is committed to implementing the existing wild rice water quality standard to ensure these waters are restored.

Actions to consider include:

- Maintain riparian buffers.
- Promote mine and gravel pit reclamation upon closure through reducing steep slopes and establishing native vegetation, including tree cover. Ensure this is completed in ways that will not negatively impact water resources.
- Support studies to better understand potential impacts of permitted activities on groundwater and surface waters, including the conditions most likely to have negative impacts on aquatic life and wild rice.

Environmental Justice

The MPCA is committed to making sure that pollution does not have a disproportionate impact on any group of people – the principle of environmental justice. There are several tools available to determine where underserved communities could receive the most benefit from implementation efforts. Please consider engaging our assistance in identifying these areas. See the MPCA website [MPCA and environmental justice | Minnesota Pollution Control Agency \(state.mn.us\)](https://www.mn.gov/EnvironmentalJustice) for more information regarding environmental justice.

Becca Reiss
Page 12
August 2, 2022

Again, thank you for the opportunity to provide input on the watersheds' resource concerns. If we may be of further assistance, please contact me by email at amy.mustonen@state.mn.us or by phone at 218-302-6638.

Sincerely,



This document has been electronically signed.

Amy Mustonen
Environmental Specialist
Watershed Division

AM:jdf

References cited:

Jacobson, Peter C. et. al. 2016. A fish habitat conservation framework for Minnesota lakes. Fisheries 41(6): 302-317.

Kirschbaum, A. 2017. Landsat-based Monitoring of Landscape Dynamics at Voyageurs National Park, 1995-2013

Minnesota Pollution Control Agency (MPCA). 2019. Rainy River - Headwaters Stressor Identification Report. Document number wq-ws5-09030001a.

Minnesota Pollution Control Agency (MPCA). 2022. Rainy River - Headwaters Watershed Restoration and Protection Strategy Report. Document number wq-ws4-87a.

Attachment 1: Rainy River – Headwaters and Vermilion River Watershed Impaired Waters Summary

Affected designated use	Pollutant or stressor	Water body name	Water body type	AUID	Year added to List	Use Class	County	Watershed name	TMDL target completion year	EPA category
Aquatic Recreation	Nutrients	Myrtle	Lake	69-0749-00	2018	2B	St. Louis	Vermilion River	Completed 2022	4A
	Escherichia coli (<i>E. coli</i>)	Blackduck River	Stream	09030001-820	2018	1B, 2Ag	St. Louis	Rainy River - Headwaters	Completed 2022	4A
Aquatic Life	Total suspended solids (TSS)	Blackduck River	Stream	09030001-820	2018	1B, 2Ag	St. Louis	Rainy River - Headwaters	Completed 2022	4A
		Ash River	Stream	09030001-818	2018	1B, 2Ag	St. Louis	Rainy River - Headwaters	2028	5
Wild Rice Production	Sulfate	East Vermilion	Lake	69-0378-01	2020	1C, 2Bd	St. Louis	Vermilion River	2033	5
		Little Sandy	Lake	69-0729-00	2020	2B	St. Louis	Vermilion River	2033	5
		Pike Bay	Lake	69-0378-03	2020	1C, 2Bd	St. Louis	Vermilion River	2033	5
		Pike River	Stream	09030002-503	2020	2Bg	St. Louis	Vermilion River	2033	5
		Sand River	Stream	09030002-501	2020	2Bg	St. Louis	Vermilion River	2033	5
		Sandy	Lake	69-0730-00	2020	2B	St. Louis	Vermilion River	2033	5
Aquatic Consumption	PCBs in fish tissue	Ojibway	Lake	38-0640-00	1998	1B, 2A	Lake	Rainy River - Headwaters	2035	5
	Mercury in water column	Hustler	Lake	69-0343-00	1998	1B, 2A	St. Louis	Rainy River - Headwaters	2035	5
	Mercury in fish tissue	See the Impaired Waters List for more information on the 250 lakes and streams that fall under this category								