SECTION 3. PRIORITY ISSUES

Introduction

In order to effectively set goals and identify actions to improve water quality, a thorough and prioritized list of watershed issues is necessary. For purposes of this plan, an "issue" can be defined as a problem, risk, or opportunity related to a resource's condition. A "resource" can be defined as a natural feature on the landscape. It is acknowledged that due to time, staff, and financial constraints, not all affected



resources and issues can be effectively addressed in a ten year plan. Therefore, this section identifies the priority issues that will be the focus of implementation efforts.

This section identifies the process used to identify issues, progress made since the 2017 RLR plan was implemented, and prioritized issues for the following ten years of plan implementation. A geographic prioritization of issues is included, along with a discussion of emerging issues in the watershed.

Issue Development

An overview of the issue development process is shown in Figure 3.1. The updated issues were developed with Advisory and Policy Committee input following review of:

- The 2017 RLR CWMP
- Agency responses to the 60-day plan notification
- The Grand Marais Creek and Red Lake River WRAPS
- Neighboring 1W1P efforts



The 2017 RLR plan included a list of 43 issue statements organized into nine issues of concern. As part of this plan's issue identification effort, none of the nine original issues were lost, rather, many of the issue statements were consolidated and rephrased to better reflect resource conditions and best available data.

Success Since the Previous Plan

Part of the 1W1P process is a midpoint evaluation, which was completed for the RLR in 2024. The intent of this assessment and evaluation was to summarize progress made since approval of the 2017 RLR plan.

The RLR planning parters made great implementation progress in five years. The number of BWSR grant funded best management practices (BMPs) implemented and their estimated sediment reductions are summarized in Table 3.1. BMPs include septic system improvements, erosion control, stormwater retention basins, sediment removal,

conservation cover, well decommissioning, filter strips, grade stabilizations, lined waterways or outlets, forage and biomass planting, streambank and shoreline protection, stream channel stabilization, structures for water control, cooperative weed management areas, and water and sediment control basins.

5,365 tons of sediment reduced *Equivalent to 536 dump trucks*

RLR planning partners recognize that additional work was completed outside of BWSR funded-projects. In example, over 70,000 acres of NRCS practices were implemented in the watershed through CRP, CSP, EQIP, and RCPP programs (some of which likely were done on the same location, meaning they do not cover 70,000 acres in the watershed).

2017 Planning Zone	BMP Count	BMP Acres	BMP Linear Feet	Sediment Reduction (tons/yr)
Lower	105	0	8,600	150
Middle	302	1,975	7,717	5,180
Upper	19	33	1,537	35

Table 3.1. Summary of BMP implementation funded by BWSR from 2017-2022 (does not include NRCS practices).

Planning Regions

The RLR Watershed spans over one million acres with variation in land use, topography, and presence of natural resources. Because of this, issues like stormwater runoff, upland erosion, and wetland habitat may be more prominent in one area of the watershed than another. Planning for this large of an area is more effective when scaled into smaller planning regions. As such, the RLR Watershed was organized into four planning regions: the Grand Marais, Lower, Middle, and Upper.

The Upper Planning Region lies on a plain above the Red River Valley and supports wetlands on the east. The Middle Planning Region consists of gently rolling landscape and beach ridges. The Lower Planning Region sits within the Red River Valley with flat productive cropland, and the Grand Marais Planning Region has a very low gradient and drains directly to the Red River (Figure 3.2).



Figure 3.2. RLR Planning Regions

Issue Statements

Table 3.2 lists the final issues and accompanying issue statement, each placed into a resource category. Many issues may affect more than one resource category but were placed into the most applicable category. The planning region prioritization is shown through icons, with darker red indicating that issue is a high priority in that region. High priority means that the majority of resources (both time and funding) will be spent in these areas. Medium priority areas will be addressed as time, funding, and partnerships allow. Low priority areas will be addressed as opportunties arise.

Planning Region	High Priority	Medium Priority	I ow Priority	Not Applicable
Key:	inghi nonty	moalaint Hority	Low Priority	not rpphoable

Resource Category	Issue	Issue Statement	Prioritization
Surface Water Quality	Nutrient Loading	Excess phosphorus loading may cause river eutrophication and impact downstream Lake Winnipeg.	
	Excess Bacteria	Surface waters impairments due to <i>E. coli</i> impact recreational use of waters.	
	Upland Erosion and Soil Health	Wind and water erosion result in degraded agricultural productivity and sediment transport into surface waters, contributing to water quality impairments and decreasing aquatic habitat quality.	
	Unstable River and Stream Channels	Streambank and in-channel erosion and channel instability impact water quality and habitat.	

Table 3.2. Final priority issue statements

Resource Category	Issue	Issue Statement	Prioritization
	Stormwater Runoff	Stormwater runoff contributes sediment and other pollutants (e.g. chlorides) to receiving surface waters.	
Hydrology	Altered Hydrology	Altered hydrology causes variability of flows affecting timing, water quantity, water quality, and erosion.	
	Drainage System Instability	Drainage system and outlet instability influence surface water quality.	
	Drainage System Inadequacy	Drainage system and outlet inadequacy contribute to flood damages.	C. C
	Flood Damage Reduction and Resiliency	Increased runoff volume and flooding cause economic and ecological impacts on the landscape.	C.
A A	Wetland and Upland Habitat	Protection and restoration of wetland and upland habitat is needed to improve ecological and recreational quality.	
Habitat Management	Shoreland and Riparian Management	Removal or degradation of native riparian vegetation has increased sediment and nutrient loads into streams.	Along riparian corridor

Resource Category	Issue	Issue Statement	Prioritization
Groundwater and Drinking Water	Groundwater Contaminants	Groundwater quality is vulnerable to contamination.	See Figure 4.5 for a map of vulnerable DWSMAs and pollution sensitivity.
	Groundwater Supplies	Groundwater sustainability is vulnerable to overuse and loss of recharge.	
	Source Water Protection	Thief River Falls and East Grand Forks communities (including Grand Forks) rely on the Red Lake River for drinking water, which is vulnerable to contamination and exacerbated by flooding issues.	



Emerging Issues

Emerging issues are those that planning partners want recognized as impacting the watershed, but either do not fit into the issue framework or are emerging and lack data. Some emerging issues will be addressed during implementation and partners will look for opportunities for education and outreach on emerging issues.



Environmental Justice



The MPCA has developed a statewide map showing areas of concern related to environmental justice. It shows where at least 35% of the population is living under 200% of the federal poverty level, tribal areas, where at least 40% of people have limited English proficiency, or areas where 40% of the population are people of color. As of 2024, 20% of the

RLR is an area of concern for poverty, 15% is tribal land (Red Lake Reservation), and 10% is an area of concern for people of color. Knowledge of environmental justice areas helps plan partners implement the watershed plan through a lens of equity. To read more, visit https://www.pca.state.mn.us/about-mpca/environmental-justice.

Climate



Minnesota's climate has been changing with increased variability and extremes in precipitation and temperature. This has profound impacts on the environment and people, as growing seasons shift, ice cover shortens, and flooding worsens. The RLR recieves an additional 2.6 inches of annual precipitation post-1997 than the rest of the 20th century,

contributing to an increase in flooding (DNR, 2023). The ability to withstand extreme weather events is understood as resiliency, which is a valuable lens through which to view projects through when planning for the future. Resilency to a changing climate can be built into planning, infrastructure, and projects. Work planned in Section 5 to address priority issues identified in this section will enhance watershed resiliency.

Contaminants of Emerging Concern (CEC)



Contaminants of emerging concern (CEC) refer to a class compounds created by humans for pharmaceuticals, personal care products, industrial use, and more. These were produced throughout the past century without testing on the health or environmental effects of each compound. Recent

concern over the fate and impacts of CEC in the environment has led to a re-examining

of the extent of the problem. There is much we do not know about CEC, and current research seeks to understand the concentrations present in the environment.

CEC of special importance are endocrine disruptors, which alter normal hormone functions and have been linked to reproductive harm to organism and human health at low concentrations. BPA (an endocrine disruptor) and Per- and Polyfluoroalkyl Substances (PFAS) chemicals are CECs that have grown in the public awareness due to dangerous health impacts including reproductive harm and cancer.

CEC are introduced to Minnesota's surface water through wastewater treatment plant effluent (where they are not treated), stormwater runoff, and industrial discharge. A study on the presence of CEC in Minnesota lakes found antibiotics, disinfectants, antidepressants, DEET, and BPA in the water, with all lakes tested having at least one CEC (MPCA, 2021). The effect these may be having on aquatic life, or on humans, is poorly understood. Continued monitoring and research into the presence and impact of CEC will be done by MDH and MPCA.

Chloride Management



Road salt (typically sodium chloride) is applied on roads as an anti-icer to prevent ice formation and as a de-icer to melt it. **Sodium chloride does not degrade in the environment, contributing to the problem of steadily rising salinity of surface waters.** In addition to contaminating surface waters, road salt corrodes infrastructure, degrades soil structure,

and can be toxic to roadside vegetation. Salt can infiltrate through soil and reach groundwater supplies, where high concentrations of chloride gives drinking water an undesirable taste and high sodium concentrations may be unhealthy.

No waterbodies in the RLR are on the MPCA's impaired waters list due to chloride, but chloride concentrations in surface waters are rising throughout Minnesota and reducing its presence is still important. While application of road salt is important for winter road safety, the many environmental impacts means it is vital to reduce the amount of salt applied to roads to only use the necessary amount. The MPCA offers Smart Salt training for salt applicators that helps to decrease over application of salt.

