

Table 1: Draft Issue Statements, Desired Future Conditions, and Goals for Each Issue Statement

Issue Statement Number	Resource Category	Resource Concern	Issue Statement	Desired Future Condition	10-Year Plan Goal
SW1	Surface Water	Surface water rate and flow, quantity, flooding.	Altered hydrology has modified flow rate and volume and water storage causing flooding, streambank erosion, and low base flow. This risk may be compounded due to the effects of climate change.	Water rate and volume have not increased on average.	<ol style="list-style-type: none"> 1. Infiltration and storage will increase proportionate to land use and climate change. 2. Protect non-contributing (hydrologically landlocked) areas so they continue to not discharge. 3. No increase in rate and volume from new development.
SW2	Surface Water	Surface water quality.	The lakes and streams are threatened or impaired due to excess pollution including E.coli, nutrients, and sediment. These excess pollutants can cause low oxygen and eutrophication, impact aquatic life and recreational use opportunities, and degrade downstream resources.	Lakes and streams are meeting water quality standards (except mercury).	<ol style="list-style-type: none"> 1. ___# (to be determined later, or reference wraps, etc.) of currently impaired lakes and streams meet water quality standards. 2. 5% nutrient reduction to the Rum River (Rum River currently near impairment, but not impaired, 5% is a margin of safety).
SW3	Surface Water	Surface water protection.	There are many high-quality water resources in the Rum River watershed that are threatened by changing land use, altered hydrology, and pollution. Protecting these resources, including cisco lakes, wild rice lakes, the Wild and Scenic Rum River, and others from the threat of degradation is of primary concern.	<ol style="list-style-type: none"> 1) Water quality is the same or better in waters that do meet state standards. 2) The Rum River is a safe drinking water source. 	<ol style="list-style-type: none"> 1. No increase in treatment needed for drinking water. 2. Maintain or enhance watershed-based ecosystems to maintain water quality (metrics TBD). 3. No previously assessed water bodies exceed water quality standards (conventional pollutants: lakes - TP, streams - E. Coli, TP, TSS).
GW1	Groundwater	Groundwater and drinking water quality.	Groundwater and drinking water quality are negatively impacted by human actions, including manure and nitrogen fertilizer application, use of chlorides, land management, non-compliant septic systems, pesticides, and contaminants of public health concern.	Drinking water is free of contamination.	<ol style="list-style-type: none"> 1. Increase decision makers and tech staff and citizen knowledge of where drinking water contaminants exist. 2. Decrease nitrates in vulnerable areas by ___. 3. Decrease non-compliant septic systems by ___. 4. Protect vulnerable areas not developed or without land use that negatively impacts GW.
GW2	Groundwater	Groundwater availability and quantity.	There is a significant increasing groundwater withdrawal trend resulting from expanding communities, agricultural irrigation, and non-crop irrigation. In addition to this increased demand on drinking water sources, there is also concern about the loss of recharge areas and water retention.	Withdrawals = recharge (sustainable rate) in all aquifers.	<ol style="list-style-type: none"> 1. Develop a sustainable groundwater budget by quantifying the amount of water being consumed in the watershed and determine how much water is available for consumption. 2. Increase to ## the number of aquifer monitoring wells to ensure any negative long-term trends are noticed.
GW3	Groundwater	Knowledge and data regarding groundwater.	There is not enough awareness or understanding of groundwater-surface water interaction and the extent to which land management decisions impact groundwater quality and quantity. More information is needed to identify and target vulnerable areas in protecting groundwater resources from pollution.	Every citizen understands their impact on groundwater.	<ol style="list-style-type: none"> 1. Increase decision-makers and technical staff knowledge of vulnerabilities of groundwater-surface water interaction (define spectrum of vulnerabilities). 2. Support the completion of the Mille Lacs County Geologic Atlas.
NR1	Natural Resources	Degraded fish habitat.	Aquatic habitats are threatened by poor water quality resulting from increasing runoff, pollutant loads, and sedimentation.	Watershed lakes, streams and wetlands hold connected and quality habitats	<ol style="list-style-type: none"> 1. Identify, protect, and restore critical spawning areas. 2. Increase connectivity for native aquatic organisms and fish species within the Rum River watershed.

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			Riparian areas lack vegetation and habitat features. There are barriers to fish passage.		
NR2	Natural Resources	Invasive species.	Invasive species threaten the health and quality of upland, wetland, riparian, and aquatic ecosystems and need to be prevented and controlled and their impacts mitigated.	Minimize by x% OR no new infestations.	<ol style="list-style-type: none"> 1. Reduction of current invasive species populations. 2. Prevent new infestations of invasive species.
NR3	Natural Resources	Habitat fragmentation and quality.	Habitat is critical for wildlife, water quality and quality of life. Existing habitat areas have been, or are at risk of being, reduced in size and quality due to fragmentation, pollution, invasive species and lack of management. Habitats with high ecological value, particularly those that provide habitat for rare and endangered species, should be protected.	<p>All current sites of high ecological value are maintained or expanded.</p> <p>No net loss of upland and wetland habitat.</p> <p>Create and protect interconnected hubs and corridors of habitat, particularly where water quality will also benefit.</p>	<ol style="list-style-type: none"> 1. Define, identify, rank, and protect high value areas. 2. Increase habitat acreage, quality, connectivity and resiliency to climate change. 3. Restore degraded habitats (wetlands, uplands, forests, etc.) by X. 4. Increase the use of conservation development that consolidates housing and infrastructure and creates or maintains habitat corridors and complexes.
NR4	Natural Resources	Land use impacts to habitat.	Changes to upland habitats through intensifying land use and resulting pollution from urban, agricultural, and industrial uses negatively impact water quality and habitat. Wetlands, forests, and other ecosystems that can protect water quality should be managed, enhanced, and restored.	No net loss. Ideally a net increase of upland and wetland habitat.	<ol style="list-style-type: none"> 1. Restore degraded habitats (wetlands, uplands, forests, etc.) by X. 2. Increase the use of thoughtful smart development tools throughout the watershed.