

DRAFT - SUBJECT TO REVISION DURING PLANNING PROCESS

27-May-15

Resource Category	Resource of Potential Concern		Priority Concern Identification							Recommended Priority for Resource Concern
	Name	Description	Public Concern Rank	Advisory Committee Concern Rank	Planning Work Group Concern Rank	Houston County Water Plan Concern Rank	Mower County Water Plan Concern Rank	Winona County Water Plan Concern Rank	Fillmore SWCD Water Plan Concern Rank	
1. Groundwater: water which is held underground within the pores of rocks and soils and which reaches the ground surface.			A	B	A	A	A	A	B	
	1.1 Drinking Water Supplies (public and private)	Drinking water supplies are water within the subsurface pores of soil and rock (within the aquifer) that are used by humans for drinking water. The susceptibility of the drinking water supply to contamination is driven largely by how quickly and easily water can be transported from the surface to the aquifer and the karst geology of the region.	A	A	A	A	A	A	A	A
	1.2 Springsheds	Springs are groundwater that comes to the surface and the springshed is the area on the landscape which contributes water to the spring. Springsheds are visual evidence of where the groundwater comes to the surface	C	C	C	C	C	C	C	C
	1.3 Surficial-Subsurface Hydrologic Connections	Surficial areas with subsurface connections are those areas where water is quickly and easily transported to the aquifer and sometimes connected to springs. The surface to subsurface connection is driven by thin soil layers that are overly fractured carbonate bedrock. This provides an avenue for infiltrating water to short circuit soil filtration and enter ground water supplies. The land surface which contributes to the rapid movement of water and how it is managed influences the amount and quality of water moving into the aquifer.	A	B	B	B	B	A	A	B
2. Surface Water - water resulting from excess precipitation leaving the landscape and collecting in streams, rivers, creeks, wetlands, lakes and ponds			A	C	A	A	A	A	C	
	2.1 Streams and Rivers	Numerous streams and rivers are found within the Root River 1W1P boundary. The water quality within some of these currently supports the beneficial uses of this water, while others do not. Some of these beneficial uses include swimming, fishing, support of aquatic life, drinking and irrigation. Some creeks, streams and rivers need to have the water quality improved (i.e., restored), while others need water quality maintained at or no less than the current level (protected).	A	C	A	A	A	A	A	A
	2.2 Flooding	Flooding is the inundation of land, homes, building and roads. Flooding causes infrastructure damage, economic loss and has adverse societal consequences in the community. Flooding can also have ecological benefits by maintaining a hydrologic connection between the river and the adjacent (riparian) lands.	A	C	B	A	B	C	B	B
	2.3 Wetlands	Wetlands are frequently saturated lands with multiple potential benefits. The Minnesota Wetland Conservation Act has set the goal of no net loss of wetlands in total acreage and functions. Wetland loss and modification is an ongoing concern and focus of several state and federal agencies, and non-profit organizations.	B	B	C	B	C	B	B	B
3. Landscape Features: visible natural features and characteristics of the landscape, often which are prominent or unique.			B	A	C	B	C	C	A	
	3.1 Riparian Corridors	The riparian corridor is the land area adjacent to a creek, stream, river or similar water body characterized by perennial vegetation. The riparian area boundary is defined by relatively frequent flooding. Preferably the perennial vegetation consists of native plant species. Riparian areas serve important functions including filtering runoff, use by wildlife as habitat and migration and aesthetic enjoyment. Riparian corridors are sometimes subject to regulatory controls (e.g., shoreland ordinance; floodplain requirements).	A	B	C	B	C	C	A	B

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	3.2 Aquatic Habitat for Fish, Macroinvertebrates and Aquatic Life	The riparian corridor is the land area adjacent to a creek, stream, river or similar water body characterized by perennial vegetation. The riparian area boundary is defined by relatively frequent flooding. Preferably the perennial vegetation consists of native plant species. Riparian areas serve important functions including filtering runoff, use by wildlife as habitat and migration and aesthetic enjoyment. Riparian corridors are sometimes subject to regulatory controls (e.g., shoreland ordinance; floodplain requirements).	B	A	C	C	C	C	B	C
	3.3 Trout streams	Trout streams are type of "special" aquatic habitat, designated by the Minnesota Department of Natural Resources. Miles of designated trout streams exist with the Root River 1W1P boundary. Trout streams are important economically, as they are a resource relied upon for recreation and tourism.	C	A	C	C	B	C	C	C
	3.4 Areas of Moderate and High Biodiversity	Many locations within the area, support unique and rare plant and animal species, special assemblages of plants, and or unusual combinations of landscape features, plants and animals. The Minnesota Department of Natural Resources through the Minnesota Biological Survey inventories and maps these areas. Because of their uniqueness, there is a general desire to preserve and protect these locations.	B	A	C	C	C	C	C	C
	3.5 Karst Formations	Karst formations are a unique geological feature within the Root River 1W1P boundary. These formations are basically "holes" in the surficial land surface connected to the underlying subsurface. Karst formations are driven by thin soil layers that cover fractured carbonate bedrock. Their occurrence requires special consideration for safety, zoning, and the placement of urban and agricultural best management and conservation practices. Water entering a karst formation quickly enters the subsurface hydrologic cycle.	B	C	C	B	C	C	B	C
4. Social Capacity: the collective understanding of water related matters within the community and the ability to respond to and resolve water related issues.			C	A	B	B	C	B	A	
	4.1 Public Knowledge and Behavior Relative to Water Issues	The behavioral changes needed to understand the relationship between daily decisions and the affect on water requires knowledge, beginning at an early age and continuing through adulthood. The necessary behavioral changes are most effective when based upon positive relationships and experiences. These positive relationships are often driven by education and outreach efforts that inform and engage citizen's, urban and rural residents, landowners, and farmers to better understand context.	B	A	A	C	C	B	A	B
	4.2 Landowner and Producer Engagement in Water Management	Most land within the Root River 1W1P boundary is privately owned. How these lands are managed affects water resources. Some programs focused on implementing practices to improve water quality and reduce the rate and volume of runoff, go unused for a variety of reasons. Understanding, engaging, and communicating with landowners, agricultural producers and those controlling the land resource is needed to facilitate effective water resources management with the plan area. Increased implementation of practices may result from increased capacity and understanding.	A	A	B	A	C	B	A	A

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	4.3 Connecting Water and the Business Community	Businesses use, rely upon on and can affect the quantity and quality of water. Private sector businesses are found throughout the planning area. These businesses are and integral part of the watershed.	C	C	C	C	B	C	C	C
	4.4 Technology, Tools, and Existing Capabilities	New tools and technology are frequently being developed for use in water resources management. In order to take advantage of these tools, there is often a need to build and maintain the technical capacity to utilize them.	B	C	C	C	C	C	C	C
5. Sustainability of Communities: the endurance, resilience and interconnectedness of systems and processes which support a community, including the economy, culture, politics and ecology			C	B	B	C	B	B	B	
	5.1 Livability	Numerous societal factors effect the livability of the Root River 1W1P area including the ability to make a living (rural and urban economics and equity), and the basic needs for food, shelter and safety. These societal factors have relevance to a persons desire and willingness to live within the area.	B	A	A	B	A	A	C	A
	5.2 Rural Environmental Health	The health of the rural environment is a cornerstone of ensuring a prosperous rural economy. Factors which typify good rural environmental health include using agricultural practices which maintain soil health, the judicious use of fertilizers and pesticides in agricultural operations especially in sensitive environmental settings, and utilizing smart methods to dispose of animal and human wastes. Practices implemented to improve water resources should compliment and be consistent with maintaining and enhancing rural environmental health.	C	A	C	B	C	C	C	C
	5.3 Urban Environmental Health	A number of cities and municipalities are located within the Root River 1W1P area. Factors that typify good urban environmental health include using water judiciously, managing stormwater runoff to prevent downstream flooding and water quality degradation, the judicious use of fertilizers and pesticides, maintaining and protecting natural waterways, and managing wastes in a manner which protects water resources. These factors are important to citizen's quality of life and the maintenance of environmental systems within built environments.	B	C	C	C	C	C	A	C
	5.4 Land Use	The land within the Root River 1W1P boundary area is used for many different purposes. Some of these purposes include living and working, producing agricultural crops, outdoor recreation, enjoying landscape vistas and timber production. How the land is used affects the desirability and livability of the community and is directly linked to the rate and quality of surface runoff.	C	B	C	C	C	B	B	C
6. Water Resources Infrastructure: the natural and man-made systems important for managing the rate, volume and quality of water.										
	6.1 Drainage Systems	A number of culverts and bridges under roads, stormsewer systems within urban areas, and tile, ditch, and drainage systems including the creeks, streams, rivers, and natural waterways have a role in safely conveying water. These are important infrastructure features within the Root River watershed.	A	B	C	C	A	C	B	B
	6.2 Point Sources	Stormwater discharge pipes, the return of water from industrial operations, and wastewater discharges discharged back into rivers and are point sources. These discharges can affect the amount and quality of water.	B	C	C	C	C	C	B	C
	6.3 Water Retention Systems	Ponds, wetlands and surface depressions store water. The design, construction, and management of new and existing water retention systems provides the opportunity to manage water quantity and reduce local and regional flooding, as well as reduce sediment in runoff.	A	B	C	B	C	B	B	B