

DRAFT ISSUE PRIORITIZATION

Developing priority issues forms the basis of the rest of the planning process. At the March Advisory Committee meeting, watershed issues were brainstormed by meeting participants. These issues were then matched with issues mentioned in public feedback, state agency priorities outlined in letters at the beginning of the planning process, existing water plans and reports such as the Watershed Restoration and Protection Strategy (WRAPS).

In April, the Steering Committee prioritized the issues by Planning Region (Figure 1) to determine where to focus geographically.

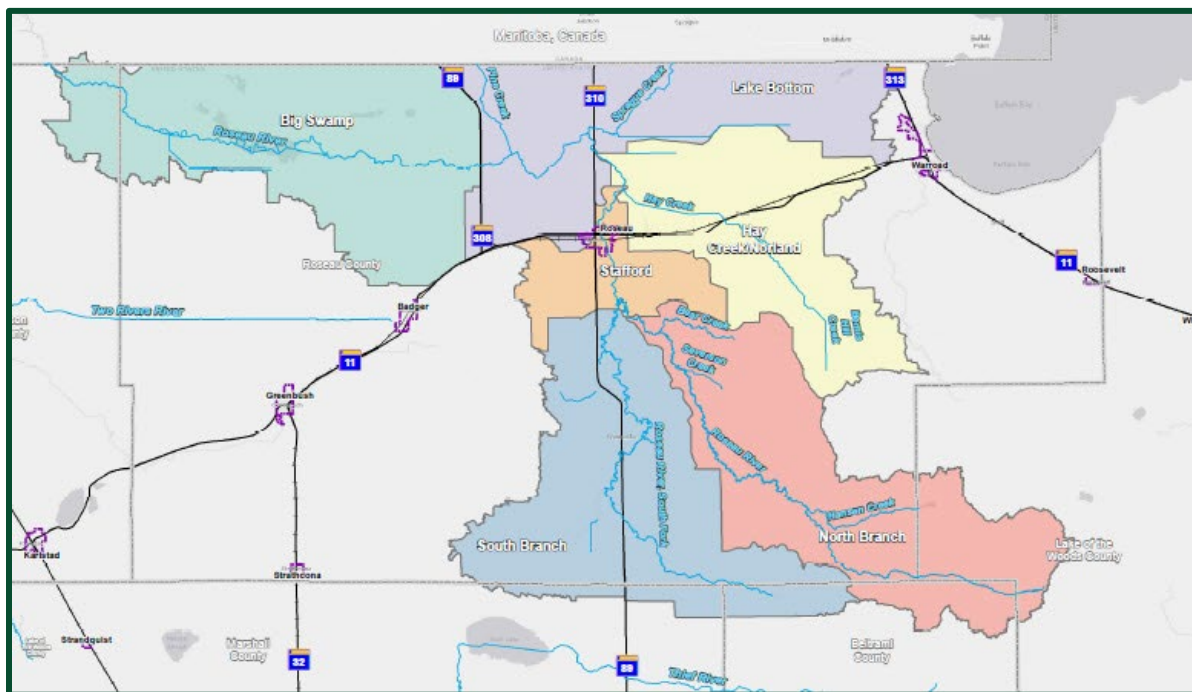




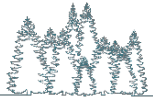


Figure 1. Planning Regions in the Roseau Watershed.

DRAFT issues for Advisory Committee review and discussion are summarized below. Issues are split into Resource Categories for ease in understanding.


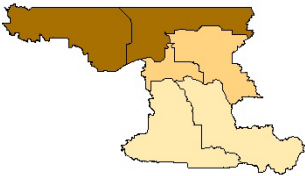

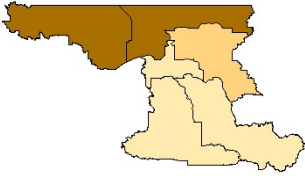

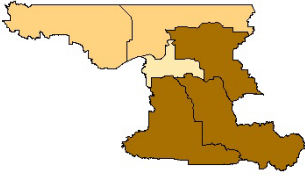

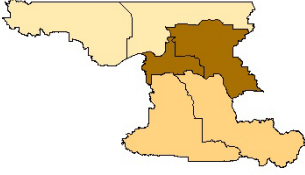
Resource Categories			
			
Surface Water	Agricultural Productivity	Natural Resources	Ground-water

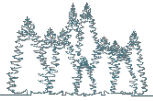



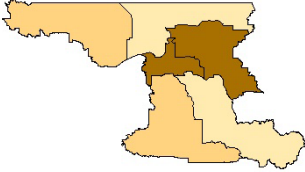

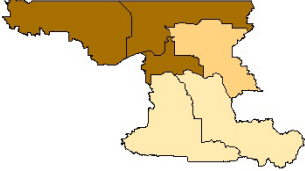

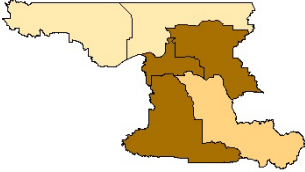

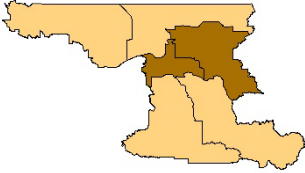

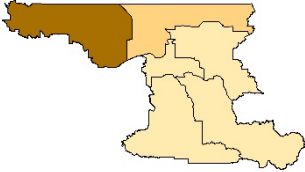
Priority A Issues

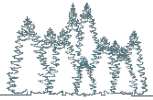
Priority A issues will be the focus of initial implementation efforts during the 10-year plan. Planning regions are prioritized as high, medium, or low based on the prominence of each issue in that planning region.

Planning Region Prioritization Key: ● = high priority ○ = medium priority ○ = low priority

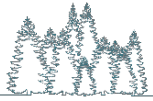
Resource Category	Resource Concern	Issue	Planning Region Prioritization	Description
	Surface Water Quantity	Flooding		Flooding is a common issue in the watershed that can be improved by increasing storage capacity, constructing flood control measures such as levees, clearing excess debris, expanding floodplain connectivity, and replacing undersized culverts.
	Drainage System Management	Inadequate drainage		In some areas of the watershed there is a concern that drainage of croplands could be improved to increase productivity, as well as the removal of woody debris and replacement of undersized culverts which contribute to flooding.
	Drainage System Management	Drainage system instability		Channelization can cause incision and streambank failure leading to sedimentation and other water quality and habitat issues. Maintenance and restoration can mediate these problems.
	Soil Health	Declining health and productivity of soils		Topsoil loss has a major impact on soil health and productivity. Practices such as reduced or no-till and cover cropping can help to retain soil on the land and build soil organic matter.



Resource Category	Resource Concern	Issue	Planning Region Prioritization	Description
	Surface Water Quantity	Altered hydrology		Altered hydrology occurs when water storage on the landscape is reduced due to land use changes, and water is moved across the landscape more quickly, leading to both flashiness and low base flows.
	Surface Water Quality	Excess nutrients		Nitrogen and phosphorus are essential nutrients for plant growth but when there is an excess in the water, they can cause harmful algae blooms and other water quality and habitat issues. These nutrients are the result of both plants breaking down during decomposition, fertilizer application on agricultural land, feedlots, and sewage systems.
	Surface Water Quality	Sediment loading (wind and water erosion)		Sedimentation in streams comes from overland erosion from lands lacking in vegetation. The Roseau River Watershed has multiple turbidity or TSS impairments resulting from too much sediment ending up in streams and fields, which can impact aquatic habitat, recreational opportunities, and agricultural productivity.
	Surface Water Quality	Stream instability and bank erosion		Stream instability and in-channel and bank erosion can occur from upstream erosion, channelization, flashiness or increased runoff, and poor riparian buffers. The issue contributes sediment to waterways and decreases the quality of aquatic habitat.
	Terrestrial Habitat	Preservation of unique natural resources		Unique natural resources in the watershed include calcareous fens, trout in cold-water streams, Roseau Lake, and endangered species and habitats. These features are contained within the DNR Natural Heritage Information System (NHIS) database and are identified by local sources.




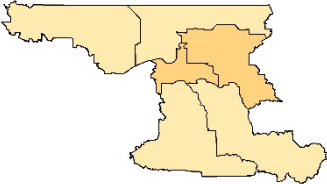

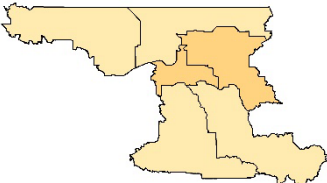

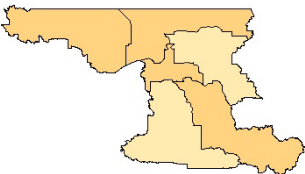
Resource Category	Resource Concern	Issue	Planning Region Prioritization	Description
	Aquatic Habitat	Insufficient instream habitat		Instream habitat can be affected by channelization, sedimentation from erosion, land use changes, low base flow, flashiness, etc. The removal of woody debris also impacts flow regimes and fish and wildlife habitat and life stages.
	Wetlands	Degradation of wetlands/ peatlands		Wetlands in the region have been drained for agriculture, resulting in flashiness and flooding due to a loss of storage and decreased habitat. Invasive species such as cattails overtake existing wetlands and peatlands, further reducing habitat quality.
	Terrestrial Habitat	Loss or degradation of perennial cover and wildlife habitat		Perennial cover refers to areas that are maintained year-round without interference, such as native prairie and forest, which can provide important pollinator and wildlife habitat, filter contaminants, slow flood waters, and provide water storage benefits.

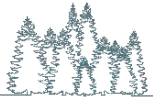



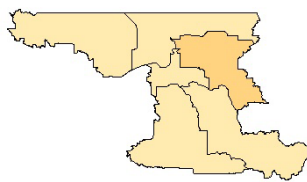

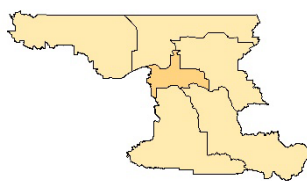
Priority B Issues

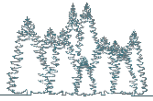
Priority B issues will be addressed during the 10-year plan, likely with additional funding and/or with partners. Planning regions are prioritized as medium or low based on the prominence of each issue in that planning region.

Planning Region Prioritization Key: ● = medium priority ○ = low priority

Resource Category	Resource Concern	Issue	Planning Region Prioritization	Description
	Groundwater Quality	Contamination of public and private water supplies		Potential contaminants include but are not limited to arsenic, <i>E. coli</i> , and nitrate. Sources include failing SSTS, abandoned wells, and land use practices.
	Groundwater Quantity	Changes in groundwater quantity		Concerns include the need for irrigation and drought as a potential emerging concern. The surface-groundwater connection is a concern, with low base flows resulting from inadequate recharge impacting aquatic habitat.
	Aquatic Habitat	Fish passage and connectivity		Barriers to fish passage and instream habitat connectivity include dams, culverts, and bridges. Modification of these barriers can expand fishing, boating, and swimming opportunities



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	Surface Water Quality	Excess bacteria		Bacteria in the water can come from animal or human waste, specifically from leaking septic systems, WWTFs, feedlots, and livestock close to streams, making waters unsafe to swim in and drink from.
	Surface Water Quality	Untreated stormwater runoff (urban)		Stormwater runoff becomes a problem as a result of land use changes. As vegetation is removed and impervious surface increases, water during storm events moves more quickly across the landscape, depositing contaminants such as sediment, nutrients, chloride, and bacteria in waterways, and causing local flooding.



Priority C Issues

It is not anticipated that Priority C issues will be addressed within the 10-year timeframe of this plan but may be addressed through partner groups or the issues may be moved up in priority based upon need in future plan updates.

- Preservation of unique cultural resources
- Limitations of outdoor recreational opportunities