Conclusion and Invitation

This document summarizes the professional opinion on our watershed – the issues that the professionals see as most important. However, this is only part of the equation we also need to establish the priorities of the people who live, work and play in the watershed. This means YOU.

There may be resource/environmental issues that are not included here, but which affect or are important to you. Please let us know what these important issues are and how you would like to see them addressed. We are holding a number of public consultations in the watershed, it is important for you to come out and voice your opinion on which of these issues are most important and should be dealt with first.

If you would like more information on any of the material presented here or on our watershed in general please see our State of the Watershed Report. The State of the Watershed Report and other detailed information is available online at: http://www.lpcd.mb.ca/resourses/Birdtail-Assiniboine_SOW_Final.pdf, or at http://www.uarcd.com/IWMP.htm or at your local Conservation District.

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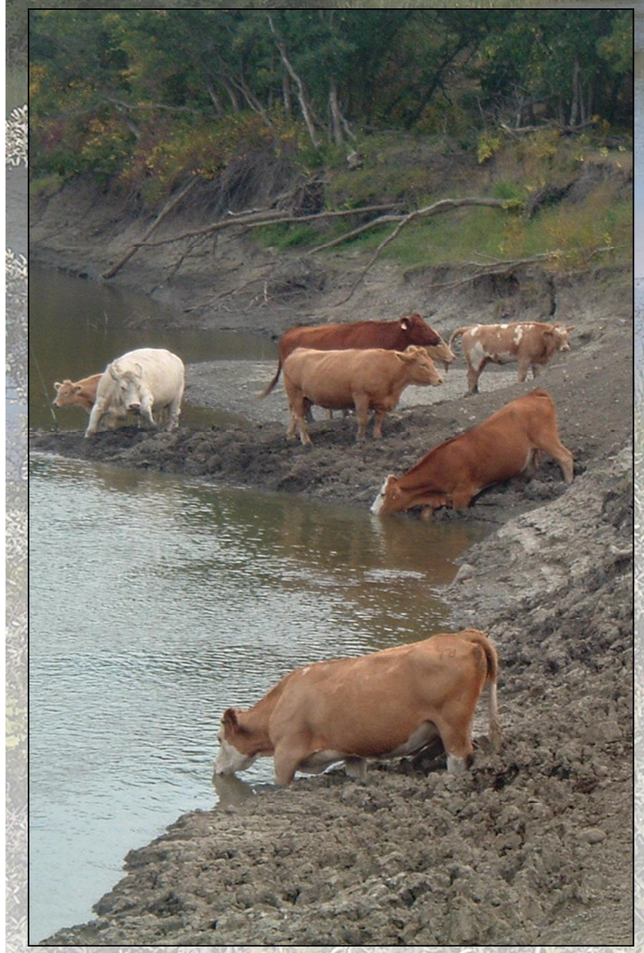
The Birdtail-Assiniboine State of the Watershed

A Summary of Findings outlining the environmental concerns of the watershed in which we live



LPCD and UARCD Conservation Districts

The Lake of the Prairies Conservation District (LPCD) and the Upper Assiniboine River Conservation District (UARCD) were established to address the member rural municipalities concerns about resource management. The conservation districts have a vision to see a landscape capable of supporting our environmental, economic, and social well being now and into the future. We manage by watershed through our sub-district boards. Sub-district boards are committed to offer water management programs which cross municipal boundaries to address watershed issues from top to bottom. Our programs and services are financed on a cost share basis between member municipalities and the Province of Manitoba. This core cost sharing allows us to access funding from other sources. Local people organized, formed and run the Districts. Local initiative allows people living close to the issues the best chance at providing practical solutions to conservation concerns.

This Document is a joint effort between Lake of the Prairies Conservation District and Upper Assiniboine River Conservation District. Please contact your local CD for more information:

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Birdtail-Assiniboine Watershed Committee Representatives

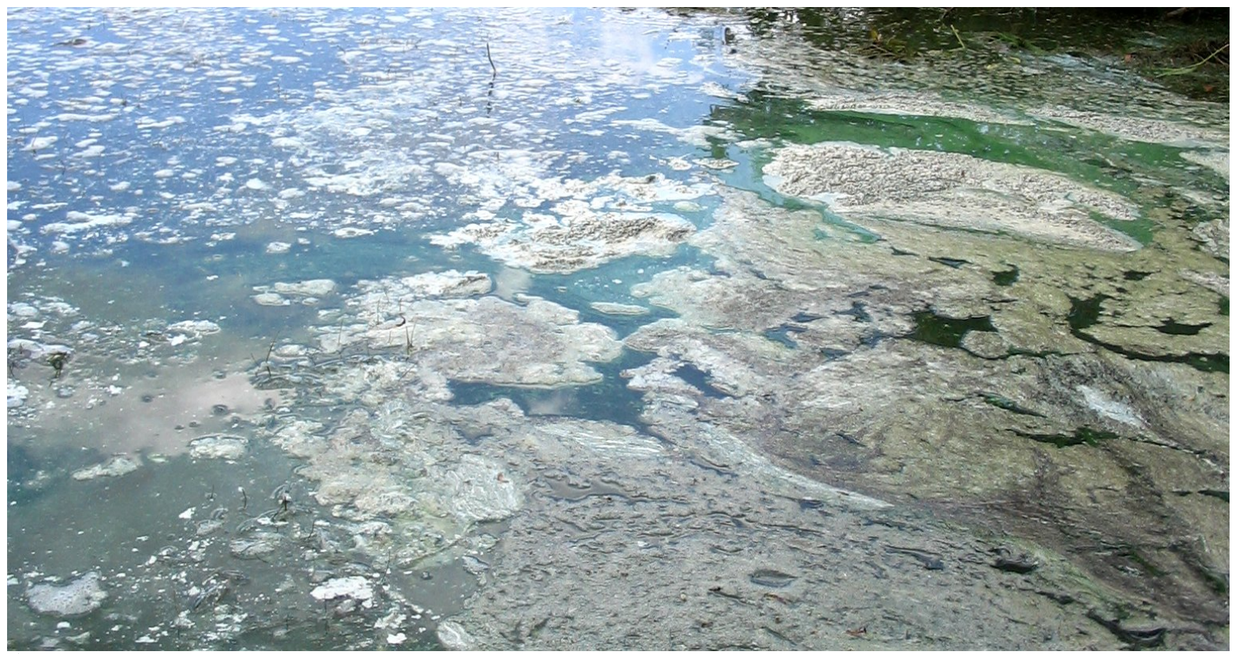
Geordie Daneliuk – Thunder Creek Sub Watershed

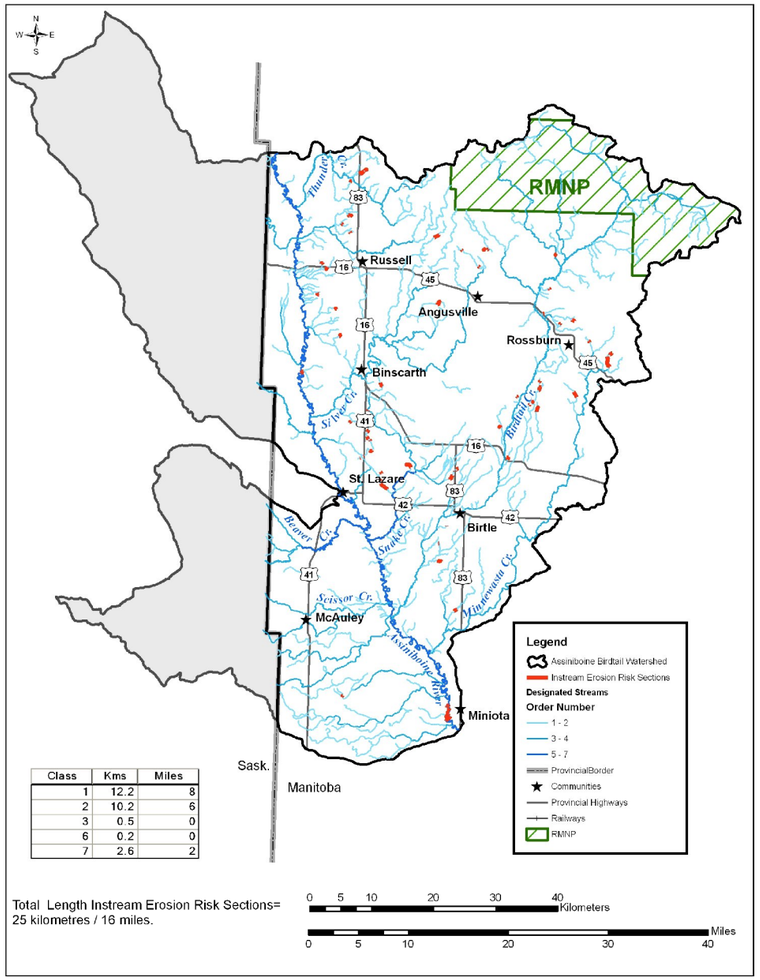
Kelvin Nerbas—Thunder Creek Sub-Watershed

Robbie Craig— Brennand/Scissor Creek Sub-Watershed

Oliver Low—Snake Creek Sub-Watershed

Frank Hamilton—Snake Creek Sub-Watershed





Soils

Salinity

Soil salinity is a limitation where plant growth is reduced due to the presence of soluble salts in soil. Most of the area within the Birdtail-Assiniboine watershed has been classified as non-saline or weakly saline. Depending upon management practices and natural variations in climate, these weakly saline areas may or may not pose a problem.

Wind Erosion

Wind erosion removes topsoil, the soil layer best fitted to support life. Any reduction in the quantity of topsoil reduces the soil's ability to support plant life by reducing its ability store water, nutrients and air. The majority of the Birdtail-Assiniboine watershed is at low or negligible risk to wind erosion. There are 16,495 acres of cropland in high or severe erosion risk. It is important to note that this wind erosion risk is based upon bare soil, management practices such as zero till or conversion to permanent cover will significantly reduce the risk of erosion.

Water Erosion

Similar to wind erosion, water erosion removes topsoil with the same resultant decrease in soil productivity. Water which is laden with eroded soil will also have negative consequences for aquatic life and downstream infrastructure such as culverts and drains. Approximately 188,500 acres of cropland are in areas of high to severe water erosion risk; these areas are mainly on steep slopes along the tributaries of the Assiniboine River and along the south edge Riding Mountain. As with wind erosion, appropriate management practices will significantly reduce the risk of erosion.

About 16 miles of waterways that pass through croplands subject to high and severe erosion risk were found to have no riparian cover (see the map above). These areas should be targeted for further investigation and erosion control measures where appropriate.

Habitat

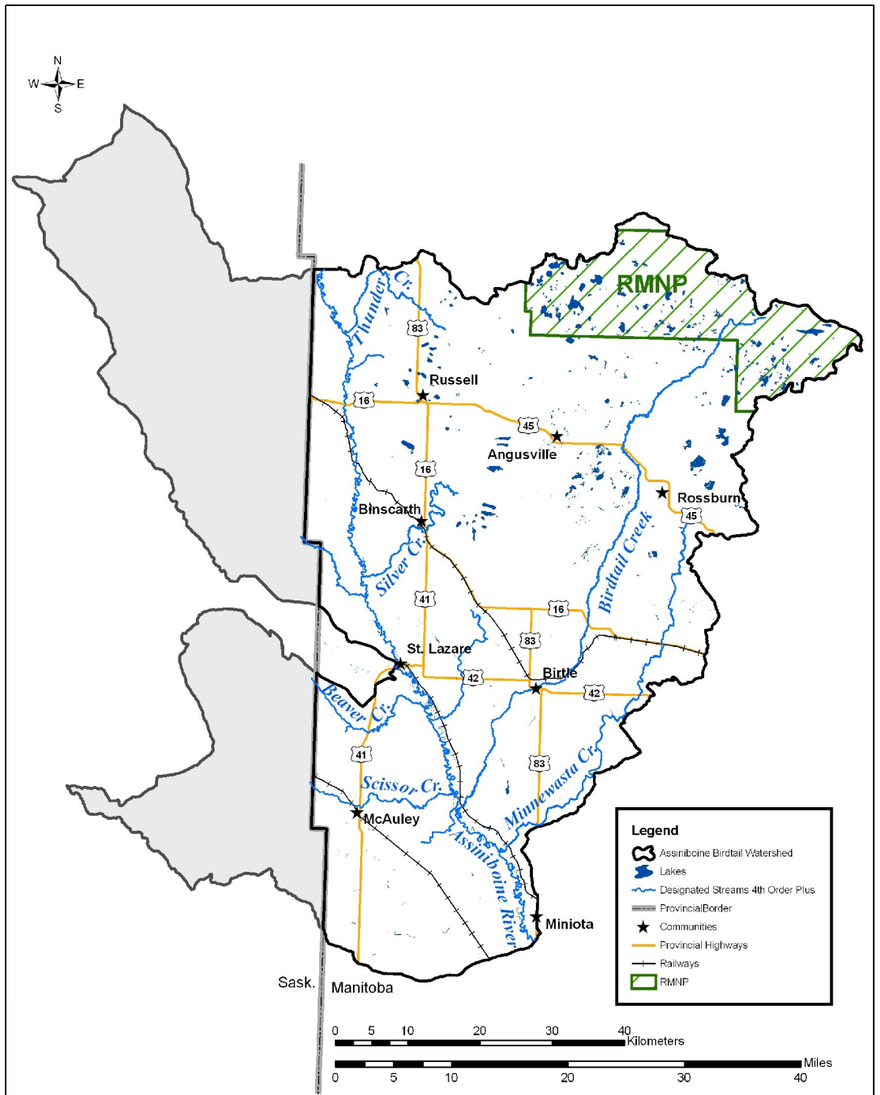
Habitat loss, fragmentation and degradation
Habitat loss continues at a rate greater than current preservation and restoration efforts. Remaining habitat is often degraded or isolated from other habitat areas.

Loss and Draining of Wetlands
Drainage often occurs without regard for ecological significance of wetlands. Loss of wetlands impacts not only habitat but can also have negative consequences for downstream water quality and quantity.

Riparian Habitat
Riparian areas serve as key wildlife habitat, play an important role in the movement of wildlife, and they help to filter runoff before it enters a water body. Human activities continue to encroach upon and eliminate riparian habitat. Loss of riparian habitat has detrimental effect on wildlife and fish as well as water quality due to the loss of the filtering capacity of riparian areas.

Aquatic Ecosystem Health
There is concern that natural and human induced changes to the quantity and timing of water flow may altering and impairing the health and sustainability of aquatic and riparian ecosystems. Specifically, some of the streams in our watershed suffer from periods of low water flow, which fall below the historical flows.

Birdtail-Assiniboine Watershed
Summary of Resource Management Concerns



Introduction

This document contains a summary of the environmental concerns raised by professionals within their fields. Professional opinion is only part of the equation. You are receiving this document because as a "local expert" we value your opinion and wish to consult you in the process of establishing priority programming in the watershed. As you read through this document please ask yourself "What are the resource and environment issues that concern me the most?"

As integrated watershed planning evolves in Manitoba, UARCD and LPCD are proud to help lead the way. Your input will strengthen this local plan and create a leading example within our province.

The four categories covered in this document are Water, Drinking Water, Habitat and Soils.

Water

Surface Water Management & Drainage

Water is often managed at the scale of an individual's property. This may result in numerous problems: landowners may be flooded, infrastructure damaged, negative impacts on water quality and water quantity as well as cumulative loss of habitat.

Nutrient Enrichment

Nutrient enrichment is one of the most important water quality issues in Manitoba. Excessive levels of nitrogen and phosphorus fuel the production of algae and aquatic plants. Extensive algal blooms can cause changes to aquatic life habitat, reduce essential levels of oxygen, interfere with drinking water treatment facilities, and cause taste and odour problems in drinking water. An indication of the nutrient problem in our province is that since the early 1970's, phosphorous levels in Lake Winnipeg have increased by about 10 % and nitrogen levels by about 13 %.

Ground Water Data

Current lack of data regarding the location of wells (active or abandoned), contribution of groundwater to stream base-flow, aquifer delineation and groundwater quality poses challenges in the understanding and management of groundwater.

Abandoned Wells

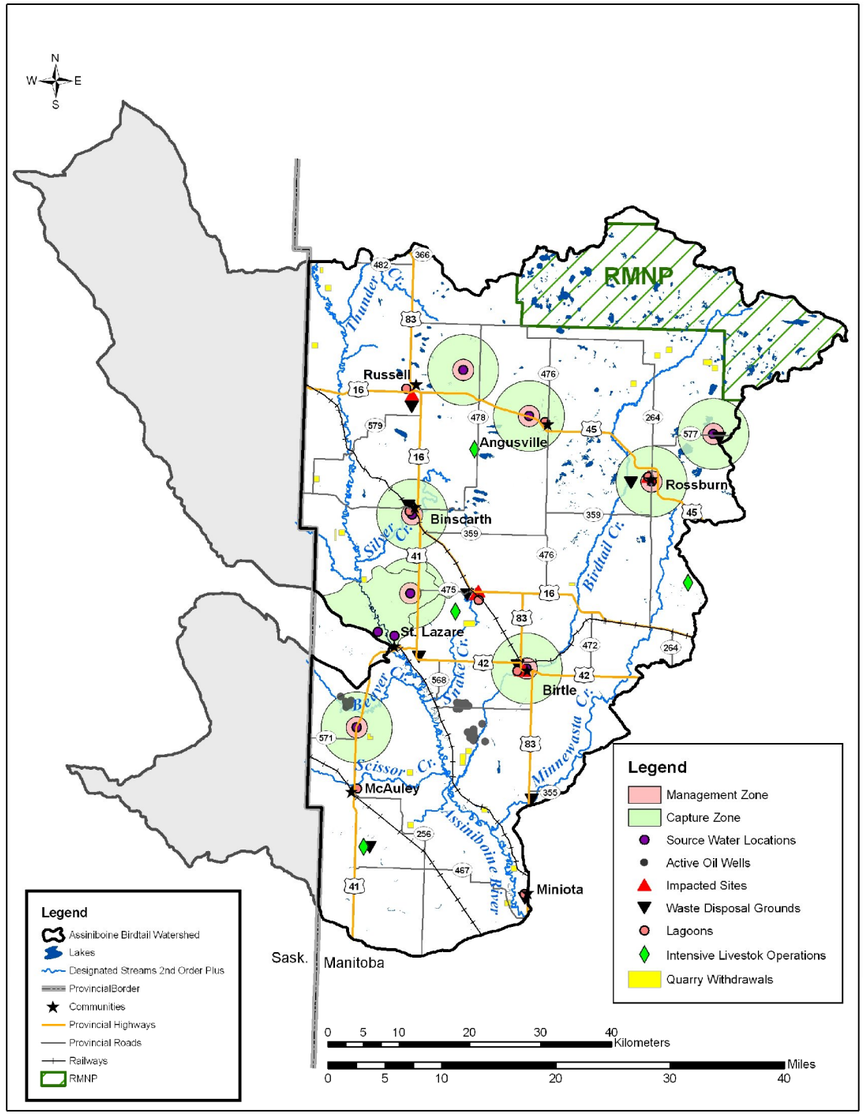
Wells are often located in areas of convenience, in the same general areas as potential contamination sources. Abandoned or unused wells can act as a direct conduit for contaminants from the surface to enter aquifers, they also pose a potential public safety hazard.

Wellhead Protection

Well location, construction and maintenance are often important factors in water quality problems; local impacts are commonly measured in well water throughout the province.

Sustainable Groundwater Development

Sustainable yield values are not available for aquifers in this area – this means that we are unsure how much water we can withdraw from the aquifer without depleting it over time.



Drinking Water Protection

Drinking Waters Exceeding the Guidelines for Canadian Drinking Water Quality

Manitoba's drinking water guidelines were recently modified to better protect public health. St. Lazare is under a boil water advisory because the system exceeds the health-based standard for bacteriological quality.

Drinking Water Susceptibility

There are fourteen public drinking water sources in the watershed. Drinking water sources will vary in quality due to natural processes; however, human activities may also introduce pollutants, bacteria, and pathogens, which may harm human health. The source water protection assessment only indicates the relative susceptibility of the water source to pollution. Thus, a water source, which is rated with a high susceptibility, is not unsafe to drink; it is simply subject to more potential pollutants or is more vulnerable than a moderate or low susceptibility water source.

Most of the public water sources were identified as having a low or moderate susceptibility to potential pollutants. Five water sources were identified as being highly susceptible and should be a priority for protection measures. Binscarth and McAuley's wells were identified as being highly susceptible because they are from unconfined aquifers while St. Lazare's water sources are highly susceptible because they are surface sources which receive only disinfection.