

Habitat (continued)

• **Riparian Management**

Presently, there is little information on the condition of riparian areas in the watershed. As well, there are concerns with the encroachment and elimination of riparian habitat by agricultural and other landscape activities. As a result, nutrient and sediment loading has increased and many waterbodies are experiencing accelerated eutrophication and related problems (algae blooms, summer and winter fish kills). Another riparian concern is the ongoing channelization and drain maintenance in this watershed. The increase in speed and water volumes result in bank erosion on receiving water courses and it is also facilitating the transport of nutrients and sediments. This is exacerbated by the rolling terrain in this watershed.

• **Aquatic Ecosystem Health**

There is concern that natural and human induced changes to the quantity and timing of water flow are altering and impairing the health and sustainability of aquatic and riparian ecosystems. Specifically, some of the streams in our watershed are suffering from periods of low water flow which fall below the historical flows for the stream at specific times of year.

These shortfalls of water influence all components of the ecosystem from highly visible sport fish such as Walleye or Northern Pike down to aquatic insects and micro-organisms. Water flow can vary due to a number of causes including natural variations in weather and long-term shifts in climate. Water flow is also modified by anthropogenic activities such as water withdrawals and land use activities, land drainage and water impoundment, that alter the timing and quantity of water flow.

• **Lake of the Prairies**

Lake of the Prairies is a North American renowned walleye fishery and has a huge economic impact to the area. There are concerns about the potential negative habitat impacts that could result if the proposal to raise the reservoir



Conclusion and Invitation

This document summarizes the Shell River State of the Watershed Report, a health report card on the issues that the “technical experts” see as most important. However, their opinions are only part of the equation; **we also need to determine the concerns and priorities of the people who live, work and play this watershed - which means YOU.**

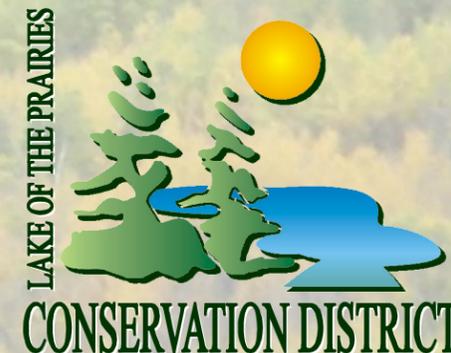
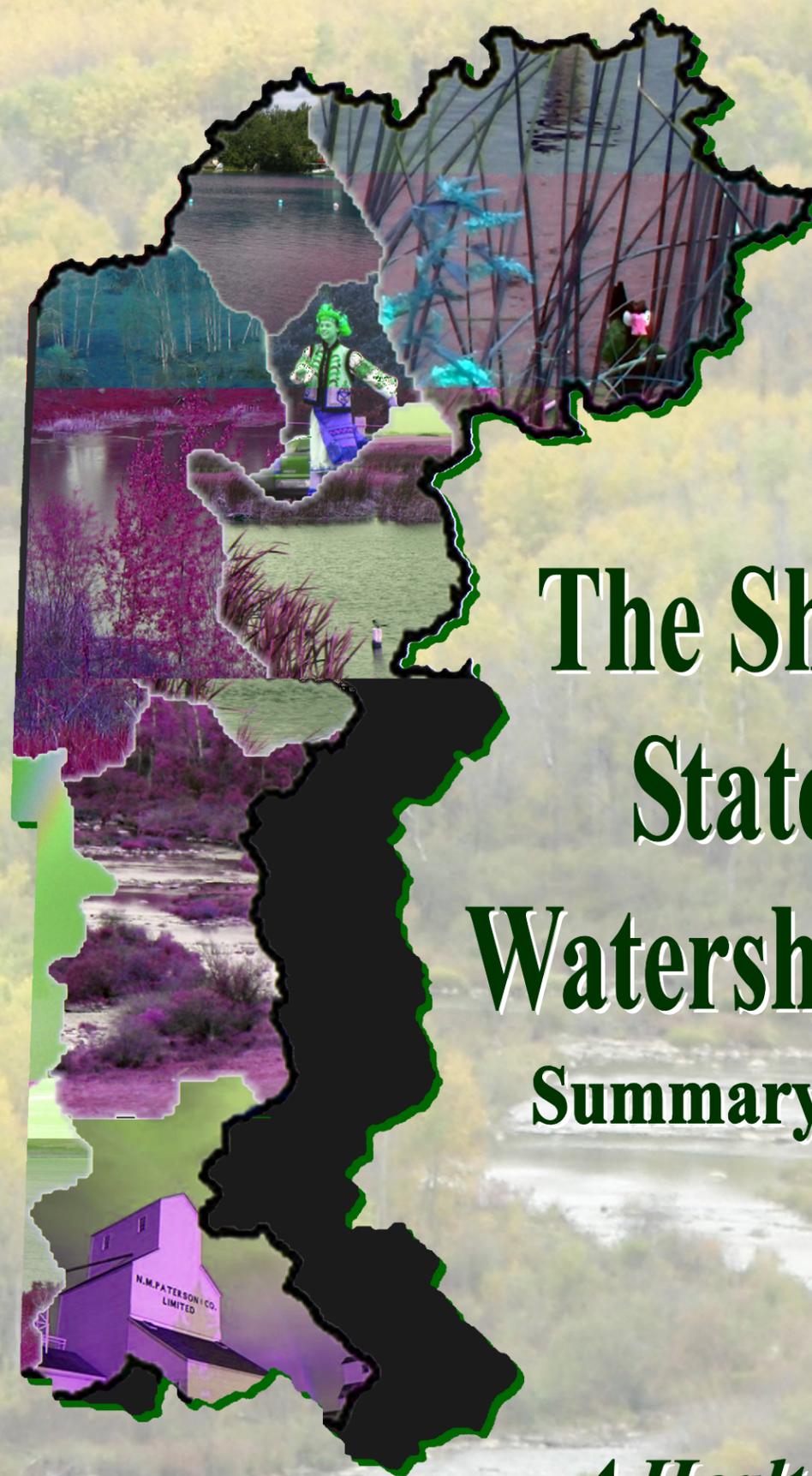
This report is in no way “all inclusive”. There may be other environmental issues which are not identified here, but which are either important to or directly affect you. **We need to know how you would like to see these issues addressed.**

Conserving Natural Resources for Future Generations

We will be holding several public consultations within the watershed over the coming months to give you an opportunity to voice your opinions and provide input in the integrated watershed management plan.

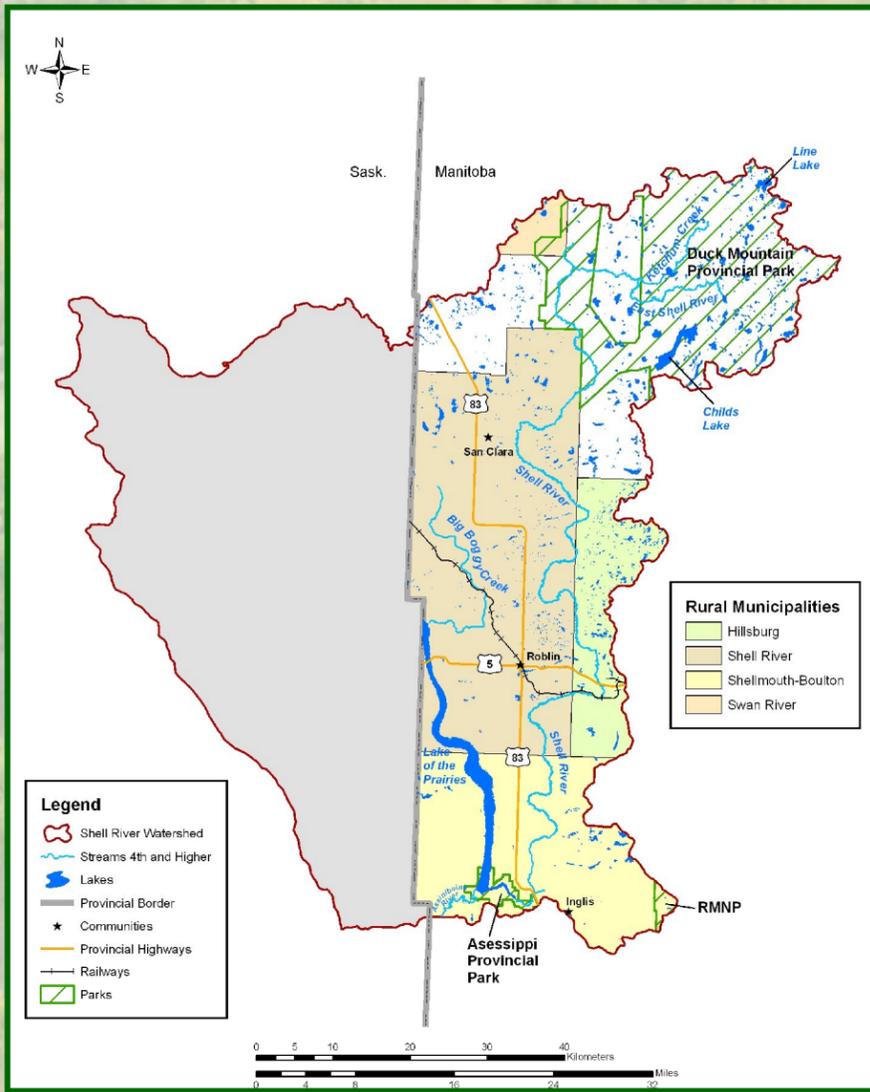
Your attendance and participation is welcomed and encouraged. Please contact our office to obtain meeting dates and locations.

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The Shell River State of the Watershed Report Summary of Findings

***A Health Report Card
outlining the environmental concerns
of the watershed in which we live***



Shell River State of the Watershed

This health report contains a summary of the natural resource management concerns identified by a group of technical experts who analyzed current conditions, as well as historical data that has been collected over a number of years.

You are receiving this document because as a local expert we value your opinion and wish to consult you in the process of watershed management planning and in establishing priority programming within the CD. As you read through this summary, please ask yourself **“What are the resource and environment issues that concern me the most?”**

As integrated watershed management planning advances in Manitoba, Lake of the Prairies Conservation District is proud to help lead the way. **Your input will strengthen the local plan and create an example within our province that other watershed planners can follow.**

Source Water Protection

• Drinking Water Susceptibility

The Shell River Watershed contains eight public ground water sources; six public ground water sources have a high susceptibility to potential pollutants.



Ground Water

• Data Gaps

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

• Well-head Protection

Previous well surveys by Manitoba and other provinces show that well location, construction and maintenance are important factors in man-made water quality problems. Many of the parameters measured that lead to less than desirable potable water quality such as TDS or hardness, occur naturally and not the result of man’s influence on the environment. However there are local impacts commonly measured in well water throughout the province.

• Abandoned Wells

Wells are often located in areas of convenience, usually in the same general areas as potential contamination sources. Neglected, abandoned or unused wells can act as a direct conduit for contaminants from the surface to enter aquifers.



• Sustainable Groundwater Development

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

Soils

• Water Erosion

Approximately 8,088 acres (3,273 ha) of the watershed are classified as cropland having a severe risk to water erosion.



• Wind Erosion

The majority of the Shell River watershed falls in the low or negligible wind erosion risk categories. Some areas of moderate or high wind erosion risk do occur. Appropriate management practices are important in high risk areas.

Habitat

• Habitat loss, degradation & fragmentation

Various studies and sources indicate a significant portion of wildlife habitat has been lost or degraded, and that this loss continues at a rate greater than current preservation and restoration efforts.



Preserving a mosaic of interconnected habitat in the watershed is the key to maintaining biodiversity.

• Loss and draining of wetlands

Presently draining of wetlands is occurring without regard to ecological significance. In addition to the negative ecological consequences, these uncoordinated drainage activities have negative impacts to water quality and quantity.

The five environmental areas of concern that are addressed in the State of the Watershed Report are **Surface Water, Source Water Protection, Ground Water, Soils and Wildlife and Aquatic Habitat.**

Summary of Resource Management Concerns

Surface Water

• Surface Water Management and Drainage

Historically, water has largely been managed at the farm or individual field scale, often without any form of comprehensive long-term planning. This results in numerous problems including landowner flooding downstream; damage to infrastructure; negative impacts on water quality and quantity; and cumulative loss of natural 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 habitat, reduce essential levels of oxygen in the water, interfere with drinking water treatment facilities, and cause taste and odour problems in drinking water. In addition, some forms of blue-green algae can produce highly potent toxins. **Phosphorus loading is the critical water quality issue in the Shell River watershed.**

